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(NASA-CR-151793) TEST RESULTS FROM THE NASA/ROCKWELL INTERNATIONAL SPACE SHUTTLE INTEGRATED VEHICLE TEST USING A 0.0175 SCALE MODEL (60-OTS) CONDUCTED IN THE AEDC-VKF TUNNEL A (IH85), VOLUME 1 (Chrysler Corp.) 00/16

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TEST RESULTS FROM THE NASA/ROCKWELL INTERNATIONAL SPACE SHUTTLE INTEGRATED VEHICLE TEST USING A 0.0175-SCALE MODEL (60-OTS) CONDUCTED IN THE AEDC-VKF TUNNEL A (IH85)

by

J. W. Foust
Shuttle Aerosciences
Rockwell International, Space Systems Group

Prepared under NASA Contract Number NAS9-13247

by

Data Management Services
Chrysler Corporation Huntsville Electronics Division/
Slidell Engineering Office
Slidell, La. 70458

for

Engineering Analysis Division

Johnson Space Center
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Houston, Texas

WIND TUNNEL TEST SPECIFICS:

Test Number:	AEDC SWTA V41A-W5
NASA Series Number	IH85
Model Number:	60-OTS
Test Dates:	April 19 - 26, 1978
Occupancy Hours:	65

FACILITY COORDINATOR:

L. Trimmer
AEDC - VKF/SH
Arnold Air Force Station
Tullahoma, Tennessee 37389

Phone: (615) 455-2611, Ext. 555

PROJECT ENGINEERS:

J. W. Cummings
Mail Code AD38
Rockwell International
Space Systems Group
12214 Lakewood Boulevard
Downey, CA 90241

Phone: (213) 922-4620

K. W. Nutt
AEDC - VKF/SH
Arnold Air Force Station
Tullahoma, Tennessee 37389

Phone: (615) 455-2611, Ext. 575

DATA MANAGEMENT SERVICES:

Prepared by: Liaison--D. W. Hersey
Operations--G. W. Klug

Approved: J. L. Glynn
J. L. Glynn, Manager
Data Operations

Concurrence: N. D. Kemp
N. D. Kemp, Manager
Data Management Services

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ABSTRACT

Test IH85 was conducted in the AEDC-VKF Supersonic Wind Tunnel A to obtain convective heat-transfer rate distributions on the Space Shuttle Integrated Vehicle during simulated first-and second-stage conditions of the flight profile. The test model was a 0.0175-scale model (60-OTS) of the Rockwell International Vehicle 5 configuration. Model configurations tested included the Integrated Vehicle and the Orbiter/External Tank with the Solid Rocket Boosters removed. The tests were conducted at Mach numbers 3 and 4 using the thin-skin thermocouple technique. Simulated unit Reynolds numbers were 3.7×10^6 at Mach 3 and 4.1×10^6 at Mach 4. The model was tested at angles of attack of 0, ± 5 and -10 degrees and at sideslip angles of 0, ± 3, ± 4.5, ± 5, ± 7.5 and ± 9 degrees.

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PLOTTED COEFFICIENT SCHEDULES:

A) HI/HU or H/REF vs. X/LT

B) HI/HU vs. β

C) HI/HU or H/REF vs. X/L

INTRODUCTION

Test IH85 was conducted in the 40-inch Supersonic Wind Tunnel (A) at the von Karman Gas Dynamics Facility (VKF) during the period April 19 through 26, 1978, under ARO Project Number V41A-W5. Data were recorded at Mach numbers 3 and 4 at freestream unit Reynolds numbers of 3.7×10^6 and 4.1×10^6 per foot, respectively. The model angle-of-attack varied from -10 to 5 degrees with model yaw angles varying from -9 to 9 degrees. Two model configurations, the OTS configuration composed of the fully integrated model with the orbiter, external tank (ET) and both solid rocket boosters (SRB); and the OT configuration consisting of the orbiter and the external tank, were tested.

The objective of the test was to obtain updated supersonic heat-transfer rate distributions on the Space Shuttle Vehicle configuration VC72-000002F during simulated first- and second-stage conditions. Data were recorded from instrumentation on the orbiter, external tank and both solid rocket boosters.

Data were obtained for 79 various operating conditions using as many as ten instrumentation configurations. A total of 338 runs or data groups were obtained for the test operating/instrumentation matrix (see Tables I and II).

NOMENCLATURE

PLOT SYMBOL	MNEMONIC	DEFINITION
a_1, a_2, a_3		constants used to calculate R, defined in context
ALPHA	PREBEND	sting prebend angle, degrees
ALPHA, α_s	SECTOR	tunnel sector angle, degrees
b		model wall thickness, inches
c_p		model wall specific heat, BTU/lbm-^oR
C.R.		center of rotation
$\frac{dTw}{dt}$	DTWDT	derivative of model wall temperature with respect to time, ^oR/sec.
h_i	HI	heat transfer coefficient in an interference flow field, BTU/ft^2-sec-^oR
h_{REF}	HREF	reference heat transfer coefficient, based on 1-foot full scale radius sphere, based on Fay-Riddell theory, BTU/ft^2-sec-^oR $8.17173 \sqrt{P_{o1}} \; \mu_o^{.4} \left[1 - P_\infty / P_{o1}\right]^{.25} \times \left[0.2235 + 1.35 \times 10^{-5} (T_o + 560)\right] / \sqrt{R_N} \, T_o^{.15}$
h_u	HU	heat transfer coefficient in an undisturbed flow field, BTU/ft^2-sec^oR
$h(T_o)$	H	heat transfer coefficient, $\dot{q}/[T_o - TW]$, BTU/ft^2-sec-^oR
$h(.95T_o)$	H(.95TO)	heat transfer coefficient, $\dot{q}/[.95T_o - Tw]$, BTU/ft^2-sec-^oR
$h(RT_o)$	H	heat transfer coefficient, $\dot{q}/[RT_o - Tw]$, BTU/ft^2-sec-^oR
M_∞	MACH	freestream Mach number
M_e		Mach number at the edge of boundary layer

NOMENCLATURE (Continued)

PLOT SYMBOL	MNEMONIC	DEFINITION
L_o	L	orbiter reference length, inches
L_S	L	SRB reference length, inches
L_T	L	ET reference length, inches
OTS	OTS	mated space shuttle vehicle, orbiter, tank, and SRB
	OT	space shuttle orbiter and external tank configuration
P_o	PO	stagnation pressure, psia
P_{o_1}		stagnation pressure downstream of a normal shock, psia
P_∞	PS	freestream static pressure, psia
$\dot{q}$	QDOT	heat transfer rate, BTU/ft^2-sec
q_∞	Q(PSI)	freestream dynamic pressure, psi
r	R	recovery factor
R		analytical temperature ratio, TAW/T_o
R_N		reference nose radius, scaled from 1-foot full scale, ft.
RE/FT	RN/L	unit Reynolds number, million per foot
SFR	STN NO	theoretical stagnation point Stanton number for a scaled 1-foot full-scale radius sphere from Fay-Riddell theory, $h_{REF} / \left(32.174\ P_\infty\ V_\infty\ (0.2235 + 0.0000135\{T_o + 560\})\right)$
SRB		solid rocket booster
t		time, sec.
T_i		initial time, sec.
T	T	temperature, ^oR.

NOMENCLATURE (Continued)

PLOT SYMBOL	MNEMONIC	DEFINITION
T_e		temperature at edge of boundary layer, ^oR
T_o	TO	tunnel stilling chamber temperature, ^oR
Tw	TW	model wall temperature, ^oR
Tw_i		initial model wall temperature, ^oR
T_∞		freestream static temperature, ^oR
T_{aw}	TAW	adiabatic wall temperature, ^oR
T/C NO.	T/C NO.	thermocouple number
V_∞	V	freestream velocity, ft/sec
w		model wall density, lbm/ft^3
X_o	XO	orbiter longitudinal coordinate, inches
X_s	XS	SRB longitudinal coordinate, inches
X_T	XT	ET longitudinal coordinate, inches
X/L	X/L	longitudinal position as a fraction of fuselage reference length
Y		lateral coordinate, inches
YAW	YAW	model yaw angle, degrees
Z		vertical coordinate, inches
α_m	ALPHA	model angle-of-attack, degrees
β	BETA	model angle-of-sideslip, (β = - YAW), degrees
γ		ratio of specific heat of air
δ		local model surface angle to freestream flow, degrees
δ_{BF}	BDFLAP	body flap deflection angle, degrees

NOMENCLATURE (Concluded)

PLOT SYMBOL	MNEMONIC	DEFINITION
δ_e	ELEVON	elevon deflection angle, degrees
δ_{SB}	SPDBRK	speed brake deflection angle, degrees
ϵ		combination of model roll angle and θ or ψ, degrees
θ	THETA	external tank angular measurement, degrees
λ		local model deflection angle, degrees
μ	MU	viscosity, lb-sec/ft^2
ρ	RHO	density of air, slug/ft^3
ϕ	PHI	orbiter angular measurement, degrees
ψ		solid rocket booster angular measurement, degrees

SUBSCRIPTS

e	local condition at edge of boundary layer
i	initial condition
O	orbiter
S	SRB
T	ET
∞	freestream condition
o	stagnation condition

REMARKS

Test IH85 operating conditions and run schedule are presented in Tables I and II, respectively. Table I presents tunnel conditions and model attitude conditions. Table II presents data groups for each set of test operating conditions.

The majority of material in the text of this report was taken directly from Reference 5.

CONFIGURATIONS INVESTIGATED

The 60-OTS model is a 0.0175-scale thin-skin thermocouple model of the Rockwell International Vehicle 5 configuration. A sketch of the Space Shuttle Integrated model is shown in Figure 1. The model was constructed of 17-4 PH stainless steel with a nominal skin thickness of 0.030 inch at the instrumented areas. All thermocouples were spot-welded to the thin-skin inner surface.

Data were obtained for the orbiter, external tank, and both the right and left SRB (as viewed by the pilot). Two model configurations were investigated during this test. The fully integrated model with the orbiter, external tank, and both the right and left SRB was designated the OTS configuration. The OT configuration consisted of only the orbiter and external tank combination with the forward and aft SRB attachments installed on the external tank. The model configurations are listed under the model headings in the tabulated data.

The spike nose tip (10-degree sharp cone) was installed on the external tank, Figure 2. The external tank reference length of 32.295 inches in model scale is based on the tank length with the nipple nose attached. This reference length was retained for consistent values of X/L.

The inboard elevons on the orbiter were deflected down 10 degrees throughout the test. Outboard elevons, orbiter speed brakes, and the body flap were set at zero deflection.

Boundary layer trips were used on the orbiter and on each SRB to

generate a turbulent boundary layer. The trips consisted of 0.020-inch-diameter balls spaced on 0.060-inch centers around a form fitted steel strip. The trips were located at an X/L of 0.04 on the orbiter nose and 0.19 on the nose of each SRB. The nose shape on the external tank effectively tripped the boundary layer.

The installation of the OTS configuration in Tunnel A is illustrated in Figure 3.

Nomenclature used to describe model 60-OTS components of the Vehicle 5 configuration are as follows:

Component	Definition
B_{62}	fuselage
C_{12}	canopy
E_{52}	elevon
F_{10}	body flap
M_{16}	OMS pods
R_{18}	rudder
V_8	vertical tail
W_{116}	wing
T_{38}	external tank (spike nose)
S_{26}	booster solid rocket motor

Dimensional data for each model component are presented in Table III.

Model configuration drawings can be found in Reference 1.

INSTRUMENTATION

Tunnel A stilling chamber pressure is measured with a 15-, 60-, 150-, or a 300-psid transducer referenced to a near vacuum. Based on periodic comparisons with secondary standards, the accuracy (a bandwidth which includes 95 percent of the residuals, i.e., 2σ deviation) of these transducers is estimated to be within ±0.2 percent of reading or ±0.015 psi, whichever is greater. Stilling chamber temperature is measured with a copper-constantan thermocouple with an accuracy of ±3°F based on repeat calibrations (2σ deviation).

The model temperatures were measured with over 1000 iron-constantan thermocouples with an estimated uncertainty of ±0.5 percent. During each tunnel injection, data from a maximum of 97 thermocouples can be recorded. Twelve sets of thermocouples were required to accommodate the large number of thermocouples on this test. These sets are called Constant Sets in the tabulated data. A list of the twelve Constant Sets is given in Table IV. This list includes all of the thermocouples that were installed for the test. Several of the listed thermocouples were determined to be inoperative and these have been omitted from the tabulated data. A total of three Constant Sets could be connected at one time. A three-position selector switch was used to select the desired Constant Set for each injection. A new series of three Constant Sets could be readily connected using quick-disconnect thermocouple plugs with 15 thermocouples per plug.

The dimensional locations of the thermocouples at each position are

given in Table IV. The angular reference system for the thermocouples is shown in Figure 1. It is important to note that the top centerline of the external tank and both SRB's is the 0-degree location. This agrees with the reference system used in the IH72 test.

TEST FACILITY DESCRIPTION

The VKF Tunnel A is a closed-circuit, continuous-flow, variable-density wind tunnel, and is equipped with a model injection system which allows removal of the model from the test section while the tunnel remains in operation. A description of the tunnel and air-flow calibration information may be found in Reference 2.

Tunnel A has a 40- by 40-inch test section and an automatically driven flexible-plate-type nozzle which provides Mach numbers from 1.5 to 6.0. The tunnel operates at maximum stagnation pressures ranging from 29 psia at Mach = 1.5 to 200 psia at Mach = 6.0. Minimum operating pressures range from about one-tenth to one-twentieth of the maximum at each Mach number. The stagnation temperature can be varied from an average minimum of about 540 to a maximum of 750°R, depending upon Mach number and pressure level.

TEST PROCEDURE

The 60-OTS model was sting mounted through the orbiter base. The external tank and SRB's were suspended beneath the orbiter by an adapter which attached to the back of the orbiter sting.

All instrumentation leads passed through the model stings and were routed externally along the main sting for approximately 3 feet to allow for model roll.

In the VKF continuous-flow wind tunnel (A), the model is mounted on a sting support mechanism in an installation tank directly underneath the tunnel test section. The tank is separated from the tunnel by a pair of fairing doors and a safety door. When closed, the fairing doors, except for a slot for the pitch sector, cover the opening to the tank, and the safety door seals the tunnel from the tank area. After the model is prepared for a data run, the personnel access door to the installation tank is closed, the tank is vented to the tunnel flow, the safety and fairing doors are opened, and the model is injected into the airstream. After the data are recorded, the model is retracted into the tank, and the sequence is reversed with the tank being vented to atmosphere to allow access to the model in preparation for the next run.

The initial step prior to recording the test data was to cool the model uniformly to approximately 60°F with cooled high pressure air. This was accomplished by providing chilled air from a vortex generator (Hilsch vortex tube, Reference 3) to a retractable cooling manifold. With the model attitude set at zero pitch the cooling manifold was positioned

around the model. Once the cooling cycle was complete the cooling manifold was retracted, and the model attitude was established prior to tunnel injection. The model was then injected into the tunnel. When the model reached tunnel centerline, the model was immediately translated forward to clear an area of tunnel-induced shock impingement. The thermocouple outputs were scanned approximately 15 times per second starting prior to model injection into the airstream and continuing about 5 seconds after the model reached centerline. After each injection, the cooling cycle was repeated to cool the model to an isothermal state.

DATA REDUCTION

Equations and Methods

The reduction of thin-skin thermocouple data normally involves only the calorimetric heat balance which in coefficient form is:

$$H(TAW) = wbc_p \frac{dTW/dt}{TAW-TW} \tag{1}$$

For this test a value of 0.95 TO was selected for TAW and equation (1) can be written:

$$H(0.95TO) = wbc_p \frac{dTW/dt}{0.95TO-TW} \tag{2}$$

Radiation and conduction losses are neglected in this heat balance, and data reduction simply requires evaluation of dTW/dt from the temperature data and determination of model material properties. For the present tests, radiation effects were negligible; however, conduction effects can be significant in several regions of the models. To permit identification of these regions and to improve evaluation of the data, the following procedure was used:

Separation of variables and integration of equation (2) assuming constant w, b, c_p, and TO yields

$$\frac{H(0.95TO)}{wbc_p}(t - t_i) = \ln\left[\frac{0.95TO - TW_i}{0.95TO - TW}\right] \tag{3}$$

Differentiation of equation (3) with respect to time gives:

$$\frac{H(0.95TO)}{wbc_p} = \frac{d}{dt} \ln\left[\frac{0.95TO - TW_i}{0.95TO - TW}\right] \tag{4}$$

Since the left side of equation (4) is a constant, plotting

$$\ell n \left[\frac{0.95TO - TW_i}{0.95TO - TW}\right]$$

versus time will give a straight line if conduction is negligible. Thus, deviation from a straight line can be interpreted as conduction effects.

The data were evaluated in this manner, and generally a linear portion of the curve was used for all thermocouples. A linear least-square curve fit of $\ell n \left[(0.95TO-TW_i)/(0.95TO-TW)\right]$ versus time was applied to the data. The data reduction time was delayed for all thermocouples that were influenced by the tunnel-induced shock until they had cleared this region. The thermocouples on the external tank and both SRB's with an X/L greater than 0.9 were reduced starting 3.9 seconds after centerline. The thermocouples with an X/L greater than 0.2 on the external tank and an X/L greater than 0.113 on each SRB but not exceeding an X/L of 0.9 were reduced starting at 2.6 seconds after centerline. The remaining thermocouples on the external tank and each SRB were reduced starting at centerline. The thermocouples on the orbiter with an X/L greater than 0.055 were reduced starting at 2.6 seconds after centerline. All other thermocouples on the orbiter were reduced starting at centerline. The curve fit extended for a time span which was a function of the heating rate, as shown on the following list.

Range	No. of Points (Fit Length)
$\frac{dTW}{dt} > 32$	5
$16 < \frac{dTW}{dt} \leq 32$	7
$8 < \frac{dTW}{dt} \leq 16$	9
$4 < \frac{dTW}{dt} \leq 8$	13
$2 < \frac{dTW}{dt} \leq 4$	17
$1 < \frac{dTW}{dt} \leq 2$	25
$\frac{dTW}{dt} \leq 1$	41

The above time spans were adequate to keep the evaluation of the right side of equation (4) within the linear region. The linearity of the fit was substantiated by visual inspection of the cases in question. This visual check of the data was done on the VKF graphics terminal. Strictly speaking, the value of c_p for the material was not constant, and the following relation

$c_p = 0.0797 + (5.556 \times 10^{-5})$ TW, (17-4 PH stainless steel) Btu/lbm°R (5)

was used with the value of TW at the midpoint of the curve fit. The maximum variation of c_p over any curve fit was less than 1.2 percent. The value of density used for 17-4 PH stainless steel was

$$w = 490.0 \text{ lbm/ft}^3$$

Adiabatic Wall Temperature

The maximum available tunnel stagnation temperature for each Mach number tested is listed in Table I. With these relatively low stagnation temperatures, the difference between the model wall temperature and recovery temperature was generally small in regions of peak heating. This small temperature difference causes the calculation of the heat-transfer coefficient to be very sensitive to deviations from the actual adiabatic wall temperature. Two values of the heat-transfer coefficient have been calculated based on an assumed constant recovery temperature, namely H(TO) and H(0.95TO). To account for changes in the recovery temperature a third value of the heat-transfer coefficient has been tabulated based on an analytical temperature ratio, R = TAW/TO.

The analytical method for determining R was developed by Rockwell International and has been used to calculate H(RTO). In this method, the following relationships were assumed:

$$R = \frac{TAW}{TO} \tag{6}$$

and

$$TAW = T_e \left(1 + \frac{\gamma - 1}{2} r M_e^2\right) \tag{7}$$

$$r = 0.898 \text{ for turbulent flow}$$

with r being the recovery factor and the subscript e identifying local properties at the boundary-layer edge. From these relationships, the temperature ratio can be defined as:

$$R = \frac{1 + 0.2\ r\ M_e^2}{1 + 0.2\ M_e^2} \tag{8}$$

which is a function of the recovery factor and the local Mach number. The local Mach number can be written

$$M_e = M_e\ (M_\infty,\ \delta) \tag{9}$$

where ∞ identifies the freestream property and δ is the local surface angle of attack.

The local Mach number can be approximated by using tangent cone flow theory and was used in equation (8) to give R as a function of M_∞ and δ. Calculations of R were made for several values of M_∞ and δ, and the results were curve fit by Rockwell International. The following equation resulted:

$$R(M_\infty,\ \delta) = a_1 + a_2 \cdot (\sin\ \delta)^{a_3} \tag{10}$$

where a_1, a_2, a_3 are constants for a particular Mach number. The values of a_1, a_2, a_3 used for this test are:

M_∞	a_1	a_2	a_3
3.0	0.9345	0.1004	2.165
4.0	0.922	0.1004	1.965

Standard matrix techniques, Reference 4, were used to derive the following relations for δ, as applicable to the model geometry.

where:

$$\delta = \arcsin(\sin\lambda \cos\alpha_s + \cos\lambda \cos\epsilon \sin\alpha_s), \text{ deg.} \quad (11)$$

$$\epsilon = \text{roll model} + (\theta + 180), \text{ deg.; for external tank}$$

$$\epsilon = \text{roll model} + (\psi + 180), \text{ deg.; for left SRB}$$

$$\epsilon = \text{roll model} + (180 - \psi), \text{ deg.; for right SRB}$$

Additional information would have been required pertaining to the directional cosines at each thermocouple location to calculate δ on the orbiter. This would be necessary since the orbiter model is not symmetrical about the axial centerline. However, this additional information was not available so a modified approach was selected. The equations for calculating δ for the various thermocouples on the orbiter model are shown in Table V.

The method used to calculate the analytical temperature ratio, R has been applied to all of the data. The method represents a simplified approach to present a more realistic evaluation of TAW. However, in regions of separated flow or complex interaction, the values calculated for R may no longer apply and should be used with extreme care.

Uncertainty of Measurements

The accuracy of the basic measurements (P_o and T_o) was discussed in the Instrumentation section. Based on repeat calibrations, these errors were found to be:

$$\frac{\Delta P_o}{P_o} = 0.002 = 0.2\%, \quad \frac{\Delta T_o}{T_o} = 0.005 = 0.5\%$$

Uncertainties in the basic tunnel parameters P_o and T_o and the two-sigma deviation in Mach number, determined from test section flow calibrations, were used to estimate uncertainties in the other freestream properties, using the Taylor series method of propagation, i.e.,

$$(\Delta F)^2 = \left(\frac{\partial F}{\partial X_1}\Delta X_1\right)^2 + \left(\frac{\partial F}{\partial X_2}\Delta X_2\right)^2 + \left(\frac{\partial F}{\partial X_3}\Delta X_3\right)^2 \ldots + \left(\frac{\partial F}{\partial X_n}\Delta X_n\right)^2 \quad (12)$$

where ΔF is the absolute uncertainty in the dependent parameter $F = F(X_1, X_2, X_3 \ldots X_n)$ and X_n is the independent parameter (or basic measurement). ΔX_n is the uncertainty (error) in the independent measurement (or variable).

The computed uncertainties in the tunnel freestream conditions are summarized in the following table.

Uncertainty, (±) percent of actual value

M_∞	M_∞	P_∞	q_∞	RE/FT
3.0	0.6	2.6	1.4	1.2
4.0	0.4	2.4	1.5	1.2

The uncertainty in model angle of attack (α_m), as determined from tunnel sector calibration and consideration for possible sting deflections, is estimated to be ±0.5 degrees.

Estimated uncertainties in w, b, c_p in equation (2) combined with computed uncertainties for (dTW/dt)/(0.95TO-TW) in the Taylor series

method of error propagation gave the following uncertainties in the heat-transfer coefficient for the listed range of values:

$H(0.95T_0)$, $\frac{Btu}{ft^2\text{-}sec\,^{\circ}R}$	Uncertainty, percent (±)
10^{-2}	9.5
10^{-3}	11
10^{-4}	12

The data were deleted from the results for thermocouples which consistently exceeded the above quoted uncertainties.

REFERENCES

1. P. L. Lemoine, "Pretest Information for Testing the 0.0175-Scale Thin-Skin Thermocouple Model 60-OTS in the AEDC VKF "A" Hypersonic Wind Tunnel, Test IH85," Rockwell International Space Division Report SD78-SH-0082, dated March 13, 1978.

2. Test Facilities Handbook (Tenth Edition), "von Karman Gas Dynamics Facility," Arnold Engineering Development Center, dated May, 1974.

3. R. Hilsch, "The Use of the Expansion of Gases in a Centrifugal Field as a Cooling Process," The Review of Scientific Instruments, Vol. 18, No. 2, dated February, 1947.

4. L. L. Trimmer and E. L. Clark, "Transformation of Axes Systems by Matrix Methods and Applications to Wind Tunnel Data Reduction," AEDC-TDR-63-224, dated October, 1963.

5. K. W. Nutt, "Test Results from the NASA/Rockwell International Space Shuttle Integrated Vehicle Test (IH85) Conducted in the AEDC-VKF Tunnel A," AEDC-TSR-78-V15, dated June, 1978.

TABLE I.

TEST : IH85 (V41A-W5)

DATE :

TEST CONDITIONS

MACH	HREF, BTU / FT^2-sec-^{o}R	REYNOLDS NUMBER (per unit length)	TOTAL PRESSURE (pounds/sq. in.)	STAGNATION TEMPERATURE (degrees Fahrenheit)
3.01	0.055	3.7×10^6	37	260
4.02	0.050	4.1×10^6	70	260

BALANCE UTILIZED: NONE

	CAPACITY:	ACCURACY:	COEFFICIENT TOLERANCE:
NF			
SF			
AF			
PM			
RM			
YM			

COMMENTS:

TABLE II

JEV

TEST: IH85 (V41A-W5)

DATA SET/RUN NUMBER COLLATION SUMMARY

DATE: 5/9/78

DATA SET IDENTIFIER	CONFIGURATION	α	β	MACH	E.T. 111	E.T. 122	E.T. 133	E.T. 211	R-SRB 222	ϕ 233	311	322	333	411
R4L-01	ØTS	0	-5	3.01					225					
02			-3		33	232	35	12		13				
03			0		25	230	28	3	220	5				
04			3		29	231	32	9		11				
05			5						224					
06		-5	-5						223					
07			0						221					
08			5						222					
09		5	-5						228					
10			0						226					
11			5						227					

TEST RUN NUMBERS

1 7 13 19 25 31 37 43 49 55 61 67 75 76

COEFFICIENTS IDVAR (1) IDVAR (2) NDV

α OR β SCHEDULES

PAGE 1 of 6

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TABLE II (Continued)

JEK

TEST: IH85 (V41A-W5)

DATA SET/RUN NUMBER COLLATION SUMMARY

DATE: 5/9/78

DATA SET IDENTIFIER	CONFIGURATION	α	β		Mach				E. T.											TEST RUN NUMBERS
									111	122	133	511	522							
R4L-12	ØT	0	-5		3.01				240	241	242	372	373							
13			-3						265	266	267	389	390							
14			0						234	235	236	368	369							
15			3						262	263	264	387	388							
16			5						237	238	239	370	371							
17		-5	-5						259	260	261	385	386							
18			-3									397	398							
19			0						253	254	255	381	382							
20			3									395	396							
21			5						256	257	258	383	384							
22		5	-5						249	250	251	378	379							
23			-3						402			393	394							
24			0						243	244	245	374	375							
25			3						268 399	400	401	391	392							
26			5						246	247	248	376	377							

1 7 13 19 25 31 37 43 49 55 61 67 75 76

COEFFICIENTS IDVAR (1) IDVAR (2) NDV

α OR β SCHEDULES

PAGE 2 of 6

TABLE II (Continued)

JEV

TEST: IH85 (V41A-W5)

DATA SET/RUN NUMBER COLLATION SUMMARY

DATE: 5/9/78

DATA SET IDENTIFIER	CONFIGURATION	α	β	MACH	E.T. 111	E.T. 122	E.T. 133	E.T. 211	R-SRB 222	Ø 233	SRB's 311	SRB's 322	SRB's 333	SRB's 411
R4L-27	ØTS	0	-9	4.02					105					
28			-7.5		63	64	65	100		102	177	178	179	211
29			-5						95					
30			-4.5		56	57	58	92		93				
31			-3						96		171	172	173	209
32			0		47	48	49	84	85	86				
33			3		50	51	52	87	88	89	168	169	170	208
34			4.5		53	54	55	90		91				
35			5						94					
36			7.5		59	60	61	97	98/101	99	174	175	176	210
37			9						103	104				
38		-5	-9						134					
39			-7.5		165	166	167	129	130	131	205	206	207	219
40			-5						124					
41			-4.5		159	160	161	121		122				
42			-3						118		198/	199	200	217
43			0						114					

TEST RUN NUMBERS

1 7 13 19 25 31 37 43 49 55 61 67 75 76

COEFFICIENTS IDVAR (1) IDVAR (2) NDV

α OR β SCHEDULES

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TABLE II (Continued)

JEV

TEST: IH85 (V41A-W5) | DATA SET/RUN NUMBER COLLATION SUMMARY | DATE: 5/9/78

DATA SET IDENTIFIER	CONFIGURATION	α	β		MACH				E.T. 111	122	133	211	R-SRB 222	Φ 233	SRB's 311	322	333	411
R4L-44	ΦTS	-5	3		4.02				153	154	155	115	116	117	192	196/	197/	216
45			4.5						156	157	158	119		120				
46			5										123					
47			7.5						162	163	164	126	127	128	201	202	203	218
48			9										132	133				
49		5	-9										149					
50			-7.5						78	79	80	144	145	146	189	190	191	215
51			-5										139					
52			-4.5						72	73	74	136		137				
53			-3										111		183	184	185	213
54			0										106					
55			3						66	67	68	107	108	110	180	181	182	212
56			4.5						69	70	71	112		135				
57			5										138					
58			7.5						75	76	77	141	142	143	186	187	188	214
59			9										147	148				

TEST RUN NUMBERS

1 7 13 19 25 31 37 43 49 55 61 67 75 76

COEFFICIENTS | IDVAR (1) | IDVAR (2) | NDV

α OR β SCHEDULES

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TABLE II (Continued)

JEV

TEST: IH85 (V41A-W5)

DATA SET/RUN NUMBER COLLATION SUMMARY

DATE: 5/9/78

DATA SET IDENTIFIER	CONFIGURATION	α	β		Mach				E.T. 111	122	133	511	522					
R4L-60	ØT	0	-5		4.02				276	277	278	327	328					
61			-3									366	367					
62			0						270	271	272	323	324					
63			3									364	365					
64			5						273	274	275	325	326					
65		-5	-5						320	321	322	350	353					
66			-3						314	315	316	346	347					
67			0						295	299	300	342	343					
68			3						301	302	303	344	345					
69			5						317	318	319	348	349					
70		5	-5						291	292	293	338	341					
71			-3						285	286	287	333	334					
72			0						279	280	281	329	330					
73			3						282	283	284	331	332					
74			5						288	289	290	336	337					

TEST RUN NUMBERS

1 7 13 19 25 31 37 43 49 55 61 67 75 76

COEFFICIENTS IDVAR (1) IDVAR (2) NDV

α OR β SCHEDULES

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TABLE II (Concluded)

JEV

TEST: IH85 (V41A-W5)

DATA SET/RUN NUMBER COLLATION SUMMARY

DATE: 5/9/78

DATA SET IDENTIFIER	CONFIGURATION	α	β		Mach				E. T. 111	122	133	511	522					
R4L - 75	ϕT	-10	-5		4.02				310	311	312	358	359					
76			-3									362	363					
77			0						304	305	306	354	355					
78			3									360	361					
79			5						307	308	309	356	357					

TEST RUN NUMBERS

1 7 13 19 25 31 37 43 49 55 61 67 75 76

COEFFICIENTS IDVAR (1) IDVAR (2) NDV

α OR β SCHEDULES

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TABLE III. MODEL DIMENSIONAL DATA

MODEL COMPONENT: BODY - B_{62}

GENERAL DESCRIPTION: Configuration 140C orbiter fuselage, MCR 200-R4. Similar to 140A/B fuselage except aft body revised and improved midbody-wing-boot fairing, X_o = 940 to X_o = 1040.

MODEL SCALE: 0.0175

DRAWING NUMBER: VL70-000140C, -000202C, -000205A
VL70-000200B, -000203

DIMENSIONS:	FULL SCALE	MODEL SCALE
Length (IML: FWD Sta X_o = 238), In.	1290.3	22.58
Length (OML: FWD Sta X_o = 235), In.	1293.3	22.63
Max. Width (At X_o = 1528.3), In.	264.0	4.62
Max. Depth (At X_o = 1464), In.	250.0	4.38
Fineness Ratio	4.899	4.899
Area, Ft^2		
Max.Cross-Sectional	340.885	0.104

TABLE III. MODEL DIMENSIONAL DATA (Continued)

MODEL COMPONENT: CANOPY - C_{12}

GENERAL DESCRIPTION: Configuration 140C orbiter canopy. Vehicle cabin No. 31 updated to MCR 200-R4. Used with fuselage B_{62}.

MODEL SCALE: 0.0175

DRAWING NUMBER: VL70-000140C, -000202B, -000204

DIMENSIONS:	FULL SCALE	MODEL SCALE
Length (X_o = 434.643 to 578), In.	143.357	2.508
Max. Width (At X_o = 513.127), In.	152.412	2.667
Max. Depth (Z_o = 501 to 449.39), In.	51.61	0.903

TABLE III. MODEL DIMENSIONAL DATA (Continued)

MODEL COMPONENT: **ELEVON - E_{52}**

GENERAL DESCRIPTION: **Elevon for configuration 140C. Hingeline at X_o = 1387, elevon split line X_w = 312.5, 6.0", beveled edges, and centerbodies.**

MODEL SCALE: 0.0175

DRAWING NUMBER: **VL70-000140C, -006089, -006092**

DIMENSIONS:	FULL SCALE	MODEL SCALE
Area, Ft^2	210.0	0.064
Span (equivalent), In.	349.2	6.111
Inb'd equivalent chord, In.	118.0	2.065
Outb'd equivalent chord, In.	55.19	0.966
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	0.2096	0.2096
At Outb'd equiv. chord	0.4004	0.4004
Sweep Back Angles, degrees		
Leading Edge	0.0	0.0
Trailing Edge	- 10.056	- 10.056
Hingeline	0.0	0.0
Area Moment **(Product of area & $\bar{c}$), Ft^3**	1587.25	0.008
Mean Aerodynamic Chord, In.	90.7	1.587
Hingeline dihedral (origin at Z_o = 261.3509), deg.	5.229	5.229

TABLE III. MODEL DIMENSIONAL DATA (Continued)

MODEL COMPONENT: **BODY FLAP - F_{10}**

GENERAL DESCRIPTION: **Configuration 140C body flap. Hingeline located at X_o = 1532, Z_o = 287.**

MODEL SCALE: 0.0175

DRAWING NUMBER: **VL70-000140C, -355114**

DIMENSIONS:	FULL SCALE	MODEL SCALE
Length (X_o = 1525.5 to X_o = 1613), In.	87.50	1.531
Max. Width (At L.E., X_o = 1525.5), In.	256.00	4.480
Max. Depth (X_o = 1532), In.	19.798	0.346
Area - Ft^2		
Max. Cross-Sectional (At H.L.)	35.196	0.011
Planform	135.00	0.041
Base (X_o = 1613)	4.89	0.0015

TABLE III. MODEL DIMENSIONAL DATA (Continued)

MODEL COMPONENT: OMS POD - M_{16}

GENERAL DESCRIPTION: Configuration 140C orbiter OMS Pod - short pod.

MODEL SCALE: 0.0175

DRAWING NUMBER: VL70-008401, -008410

DIMENSIONS:	FULL SCALE	MODEL SCALE
Length (OMS Fwd Sta X_o = 1310.5), In.	258.50	4.524
Max. Width (At X_o = 1511), In.	136.8	2.394
Max. Depth (At X_o = 1511), In.	74.70	1.307
Fineness Ratio	2.484	2.484
Area - Ft^2		
Max. Cross-Sectional	58.864	0.018

TABLE III. MODEL DIMENSIONAL DATA (Continued)

MODEL COMPONENT: **RUDDER - R_{18}**

GENERAL DESCRIPTION: **The rudder is a secondary movable airfoil at the trailing edge of the vertical fin that imparts yaw forces. This dimensional data was calculated from the OML master dimensions.**

MODEL SCALE: 0.0175

DRAWING NUMBER: **Vehicle 5 Configuration MCR 200, Rev. 7**

DIMENSIONS:	FULL SCALE	MODEL SCALE
Area, Ft^2	97.84	0.030
Span (equivalent), In.	198.614	3.476
Inb'd equivalent chord, In.	91.07	1.699
Outb'd equivalent chord, In.	50.80	0.889
Ratio movable surface chord/ total surface chord		
At Inb'd equiv. chord	0.400	0.400
At Outb'd equiv. chord	0.400	0.400
Sweep Back Angles, degrees		
Leading Edge	34.833	34.833
Trailing Edge	26.249	26.249
Hingeline	34.833	34.833
Area Moment **(Product of Area & $\bar{c}$), Ft^3**	593.889	0.032
Mean Aerodynamic Chord, In.	72.840	1.275

TABLE III. MODEL DIMENSIONAL DATA (Continued)

MODEL COMPONENT: VERTICAL TAIL - V_8

GENERAL DESCRIPTION: Configuration 140C orbiter vertical tail (Identical to configuration 140A/B vertical tail).

MODEL SCALE: 0.0175

DRAWING NUMBER: VL70-000140C, -000146B

DIMENSIONS:	FULL SCALE	MODEL SCALE
TOTAL DATA		
Area (Theo.), ft^2 Planform	413.253	0.127
Span (Theo.), in.	315.72	5.350
Aspect Ratio	1.675	1.675
Rate of Taper	0.507	0.507
Taper Ratio	0.404	0.404
Sweep Back Angles, degrees		
Leading Edge	45.000	45.000
Trailing Edge	26.25	26.25
0.25 Element Line	41.13	41.13
Chords:		
Root (Theo.) WP	268.50	4.699
Tip (Theo.) WP	108.47	1.898
MAC	199.81	3.497
Fus. Sta. of .25 MAC	1463.35	25.609
W.P. of .25 MAC	635.52	11.122
B.L. of .25 MAC	0.0	0.0
Airfoil Section		
Leading Wedge Angle, deg.	10.00	10.00
Trailing Wedge Angle, deg.	14.92	14.92
Leading Edge Radius	2.00	2.00
Void Area	13.17	0.0040
Blanketed Area	0.0	0.0

TABLE III. MODEL DIMENSIONAL DATA (Continued)

MODEL COMPONENT: WING - W_{116}

GENERAL DESCRIPTION: Configuration 5. NOTE: Identical to W_{114} except airfoil thickness. Dihedral angle is along trailing edge of wing. Geometric twist = 0.

MODEL SCALE: 0.0175 DRAWING NO.: VL70-000140A, -000200

DIMENSIONS:	FULL SCALE	MODEL SCALE
TOTAL DATA		
Area (Theo.), ft^2		
Planform	2690.0	0.824
Span (Theo.), in.	936.68	16.392
Aspect Ratio	2.265	2.265
Rate of Taper	1.177	1.177
Taper Ratio	0.200	0.200
Dihedral Angle, degrees	3.500	3.500
Incidence Angle, degrees	0.500	0.500
Aerodynamic Twist, degrees		
Sweep Back Angles, degrees		
Leading Edge	45.000	45.000
Trailing Edge	- 10.056	- 10.056
0.25 Element Line	35.209	35.209
Chords:		
Root (Theo.) B.P.0.0.	689.24	12.062
Tip, (Theo.) B.P.	137.85	2.412
MAC	474.81	8.309
Fus. Sta. of .25 MAC	1136.83	19.895
W.P. of .25 MAC	290.58	5.085
B.L. of .25 MAC	182.13	3.187
EXPOSED DATA		
Area (Theo.), ft^2	1751.50	0.536
Span, (Theo.), in. BP108	720.68	12.612
Aspect Ratio	2.059	2.059
Taper Ratio	0.245	0.245
Chords		
Root BP108	562.09	9.837
Tip 1.00 b/2	137.85	2.412
MAC	392.83	6.875
Fus. Sta. of .25 MAC	1185.98	20.755
W.P. of .25 MAC	294.30	5.150
B.L. of .25 MAC	251.77	4.406
Airfoil Section (Rockwell Mod NASA) XXXX-64		
Root b/2 =	0.113	0.113
Tip b/2 =	0.120	0.120
Data for (1) of (2) Sides		
Leading Edge Cuff		
Planform Area, ft^2	113.18	0.035
Leading Edge Intersects Fus M.L. @ Sta	500.00	8.750
Leading Edge Intersects Wing @ Sta	1024.00	17.920

TABLE III. MODEL DIMENSIONAL DATA (Continued)

MODEL COMPONENT: EXTERNAL TANK - T_{38}

GENERAL DESCRIPTION: Spike nose configuration.

MODEL SCALE: 0.0175

DRAWING NUMBER: VC72-000002F (Shuttle Config. Drawing)
VC78-000002E (ET Drawing)

DIMENSIONS:	FULL SCALE	MODEL SCALE
Length	1850.525	32.384
Max. Width	331.00	5.792
Max. Depth		
Fineness Ratio	5.687	5.687
Area - Ft^2		
Max. Cross-Sectional	594.678	0.1821

TABLE III. MODEL DIMENSIONAL DATA (Concluded)

MODEL COMPONENT: BOOSTER SOLID ROCKET MOTOR - S_{26}

GENERAL DESCRIPTION: The BSRM is an external propulsion system which is jettisoned and recoverable after burnout. The BSRM's can be refurbished and reused after recovery.

MODEL SCALE: 0.0175

DRAWING NUMBER: SRB Drawing - VC77-000002G, VC77-000003F
Shuttle Config. - VC72-000002F

DIMENSIONS:	FULL SCALE	MODEL SCALE
Length	1789.60	31.318
Max. Width tank Dia., In.	146.00	2.555
Max. Depth, aft shroud dia., In.	208.20	3.643
Fineness Ratio	8.596	8.596
W.P. of BSRM centerline	400.0	
F.S. of BSRM nose	743.0	
B.P. of BSRM centerline	250.5	

TABLE IV. THERMOCOUPLE CONSTANT SETS
EXTERNAL TANK
CONSTANT SET 111

CH. NO.	T/C	X/L	θ
1	615	.38	0
2	616	.385	
3	617	.39	
4	618	.395	
5	619	.40	
6	620	.405	
7	621	.41	
8	622	.415	
9	623	.42	
10	624	.425	
11	625	.43	
12	626	.44	
13	627	.445	
14	628	.45	
15	629	.455	
16	630	.46	
17	631	.47	
18	632	.48	
19	633	.49	
20	634	.50	
21	635	.55	

CH. NO.	T/C	X/L	θ
22	636	.60	0
23	637	.65	
24	638	.70	
25	639	.75	
26	640	.80	
27	641	.85	
28	642	.86	
29	643	.87	
30	644	.88	
31	645	.89	
32	646	.90	
33	648	.926	
34	649	.95	
35	650	.35	11.25
36	651	.36	
37	652	.37	
38	653	.375	
39	654	.38	
40	655	.385	
41	656	.39	
42	657	.395	

TABLE IV. THERMOCOUPLE CONSTANT SETS (Continued)

EXTERNAL TANK
CONSTANT SET 111

CH. NO.	T/C	X/L	θ
43	658	.40	11.25
44	659	.405	
45	660	.41	
46	676	.85	
47	677	.86	
48	678	.87	
49	679	.88	
50	680	.89	
51	681	.90	
52	682	.91	
53	683	.926	
54	684	.95	
55	685	.33	17
56	686	.34	
57	687	.35	
58	688	.36	
59	689	.37	
60	690	.375	
61	691	.50	
62	692	.60	
63	693	.70	

CH. NO.	T/C	X/L	θ
64	694	.80	17
65	695	.87	
66	696	.926	
67	OPEN		
68	OPEN		
69	699	.05	29.8
70	700	.07	
71	701	.10	
72	702	.15	
73	703	.20	
74	704	.30	
75	705	.35	
76	706	.375	
77	707	.50	
78	708	.60	
79	709	.70	
80	710	.80	
81	711	.87	
82	712	.926	
83	OPEN		
84	OPEN		

TABLE IV. THERMOCOUPLE CONSTANT SETS (Continued)
EXTERNAL TANK
CONSTANT SET 111

CH. NO.	T/C	X/L	θ
85	715	.05	37.7
86	716	.07	↓
87	717	.10	↓
88	718	.15	↓
89	719	.20	↓
90	720	.30	↓
91	721	.35	↓
92	722	.375	↓
93	723	.50	↓
94	724	.60	↓
95	725	.70	↓
96	726	.80	↓
97	727	.87	↓

TABLE IV. THERMOCOUPLE CONSTANT SETS (Continued)
EXTERNAL TANK
CONSTANT SET 122

CH. NO.	T/C	X/L	θ
1	728	.926	37.7
2	OPEN		
3	OPEN		
4	2181	.01	180
5	2182	.015	
6	2183	.02	
7	2184	.025	
8	2185	.03	
9	843	.30	292.5
10	844	.33	
11	845	.35	
12	846	.37	
13	847	.40	
14	848	.45	
15	849	.50	
16	850	.55	
17	851	.60	
18	852	.65	
19	853	.70	
20	854	.75	
21	855	.80	

CH. NO.	T/C	X/L	θ
22	856	.90	292.5
23	857	.84	305.4
24	858	.85	
25	859	.86	
26	860	.87	
27	861	.88	
28	862	.89	
29	863	.90	
30	864	.91	
31	865	.926	
32	866	.80	309.3
33	867	.81	
34	868	.82	
35	869	.83	
36	870	.04	315
37	871	.05	
38	872	.06	
39	888	.85	
40	889	.86	
41	890	.87	
42	891	.88	

TABLE IV. THERMOCOUPLE CONSTANT SETS (Continued)

EXTERNAL TANK

CONSTANT SET 122

CH. NO.	T/C	X/L	θ
43	892	.89	315
44	893	.90	
45	894	.91	
46	895	.926	
47	896	.95	
48	897	.42	322.3
49	898	.435	
50	899	.45	
51	900	.50	
52	901	.60	
53	902	.70	
54	903	.80	
55	904	.87	
56	905	.42	330.2
57	906	.435	
58	907	.45	
59	908	.50	
60	909	.60	
61	910	.70	
62	911	.80	
63	912	.87	

CH. NO.	T/C	X/L	θ
64	913	.935	330.2
65	914	.945	
66	915	.04	337.5
67	916	.05	
68	917	.06	
69	918	.07	
70	919	.08	
71	920	.10	
72	921	.15	
73	922	.20	
74	923	.42	
75	924	.435	
76	925	.45	
77	926	.85	
78	927	.86	
79	928	.87	
80	929	.88	
81	930	.89	
82	931	.90	
83	932	.91	
84	963	.455	348

TABLE IV. THERMOCOUPLE CONSTANT SETS (Continued)
EXTERNAL TANK
CONSTANT SET 122

CH. NO.	T/C	X/L	θ
85	964	.46	348
86	965	.47	↓
87	966	.48	
88	967	.49	
89	968	.85	
90	969	.86	
91	970	.87	
92	971	.88	
93	972	.89	
94	973	.90	
95	974	.91	
96	975	.926	
97	976	.95	

TABLE IV. THERMOCOUPLE CONSTANT SETS (Continued)

EXTERNAL TANK

CONSTANT SET 133

CH. NO.	T/C	X/L	θ
1	2186	.02	0
2	2187	.025	↓
3	2188	.03	↓
4	985	.04	270
5	986	.05	↓
6	987	.06	↓
7	988	.07	↓
8	989	.08	↓
9	990	.10	↓
10	991	.15	↓
11	992	.20	↓
12	993	.01	39
13	994	.025	↓
14	OPEN		
15	995	.03	39
16	OPEN		
17	OPEN		
18	OPEN		
19	2000	.435	23.07
20	2001	.569	↓
21	2002	.703	↓
22	2003	.836	↓
23	2004	.899	↓
24	OPEN		
25	2005	.476	31.43
26	2006	.511	↓

CH. NO.	T/C	X/L	θ
27	2007	.546	31.43
28	2008	.581	↓
29	2009	.616	↓
30	2010	.651	↓
31	OPEN		
32	OPEN		
33	OPEN		
34	2014	.686	31.43
35	2015	.720	↓
36	2016	.756	↓
37	2017	.790	↓
38	2018	.825	↓
39	2019	.860	↓
40	2020	.895	↓
41	2021	.441	326.9
42	2022	.476	↓
43	2023	.511	↓
44	2024	.547	↓
45	2025	.582	↓
46	2026	.617	↓
47	2027	.652	↓
48	2028	.687	↓
49	2029	.723	↓
50	2030	.758	↓
51	2031	.793	↓
52	2032	.828	↓

TABLE IV. THERMOCOUPLE CONSTANT SETS (Continued)
EXTERNAL TANK
CONSTANT SET 133

CH. NO.	T/C	X/L	θ
53	2033	.864	326.9
54	2034	.899	↓
55	2035	.934	↓
56	2036	.250	45
57	2037	.300	↓
58	2038	.325	↓
59	2039	.350	↓
60	2040	.375	↓
61	2041	.400	↓
62	2042	.420	↓
63	2043	.425	↓
64	2044	.430	↓
65	2045	.435	↓
66	2046	.44	↓
67	2047	.45	↓
68	2048	.47	↓
69	2049	.55	↓
70	2050	.60	↓
71	2051	.65	↓
72	2052	.75	↓
73	2053	.80	↓

CH. NO.	T/C	X/L	θ
74	2054	.83	45
75	2055	.84	↓
76	2056	.85	↓
77	2057	.86	↓
78	2058	.87	↓
79	2059	.88	↓
80	2060	.89	↓
81	2061	.90	↓
82	2062	.91	↓
83	2063	.926	↓
84	2064	.935	↓
85	2065	.945	↓
86	2066	.25	36.32
87	2067	.30	↓
88	2068	.325	↓
89	2069	.35	↓
90	2070	.375	↓
91	2071	.40	↓
92			
93			
94			
95			
96			
97			

TABLE IV. THERMOCOUPLE CONSTANT SETS (Continued)

EXTERNAL TANK

CONSTANT SET 211

CH. NO.	T/C	X/L	θ
1	2089	.937	352.2
2	2088	.937	289.4
3	2087	.937	250.6
4	2090	.355	29.8
5	2091	.360	↓
6	2092	.365	↓
7	2093	.370	↓
8	2094	.355	23.08
9	2095	.360	↓
10	2096	.365	↓
11	2097	.370	↓
12	2098	.355	20.98
13	2099	.360	↓
14	2100	.365	↓
15	2101	.370	↓
16	2102	.355	17.0
17	OPEN		
18	2104	.400	330.2
19	2105	.405	↓
20	2106	.410	↓
21	2107	.400	326.8

CH. NO.	T/C	X/L	θ
22	2108	.405	326.8
23	2109	.405	324.5
24	2110	.410	324.5
25	2111	.410	315
26	2112	.835	309.3
27	2113	.820	305.4
28	2114	.830	↓
29	2115	.835	↓
30	2116	.820	301.5
31	2117	.830	↓
32	2118	.835	↓
33	2119	.840	↓
34	2120	.85	↓
35	2121	.86	↓
36	2122	.87	↓
37	2123	.88	↓
38	2124	.89	↓
39	2125	.90	↓
40	OPEN		
41	2127	.925	301.5
42	2128	.935	301.5

TABLE IV. THERMOCOUPLE CONSTANT SETS (Continued)

EXTERNAL TANK

CONSTANT SET 211

CH. NO.	T/C	X/L	θ
43	2129	.82	292
44	2130	.83	↓
45	2131	.84	↓
46	2132	.85	↓
47	2133	.86	↓
48	2134	.87	↓
49	2135	.88	↓
50	2136	.89	↓
51	2137	.91	↓
52	2138	.926	↓
53	2139	.93	↓
54	2140	.926	299.4
55	2141	↓	270
56	2142	↓	258
57	2143	↓	250.6
58	2144	↓	247.5
59	2145	.93	289.4
60	2146	↓	270
61	2147	↓	258
62	2148	↓	250.6
63	2149	↓	247.5

CH. NO.	T/C	X/L	θ
64	2150	.935	270
65	2151	.935	258
66	2152	.926	33.75
67	2153	.926	31.75
68	2154	.926	23.07
69	OPEN		
70	OPEN		
71	OPEN		
72	2158	.926	355.2
73	OPEN		
74	2160	.926	345.2
75	2161	↓	335
76	2162	↓	330.2
77	2163	↓	326.9
78	2164	↓	324.5
79	OPEN		
80	2166	.441	31.43
81	2167	.425	337.5
82	2168	↓	345.6
83	2169	↓	354
84	2170	↓	5.63

TABLE IV. THERMOCOUPLE CONSTANT SETS (Continued)

EXTERNAL TANK

CONSTANT SET 211

CH. NO.	T/C	X/L	θ
85	2171	.425	17
86	2172	.430	337.5
87	2173	↓	345.6
88	2174	↓	354
89	2175	↓	5.63
90	2176	↓	17
91	600	.04	0
92	601	.05	↓
93	602	.06	↓
94	603	.07	↓
95	604	.08	↓
96	605	.10	↓
97	606	.15	↓

TABLE IV. THERMOCOUPLE CONSTANT SETS (Continued)
EXTERNAL TANK AND RIGHT SRB
CONSTANT SET 222

CH. NO.	T/C	X/L	θ/ψ*
1	607	.20	0
2	608	.21	↓
3	609	.22	↓
4	610	.30	↓
5	611	.35	↓
6	612	.36	↓
7	613	.37	↓
8	614	.375	↓
9	1478	.937	263
10	1500	.953	0
11	1501	.965	↓
12	1502	.975	↓
13	1503	.985	↓
14	1504	.995	↓
15	1505	.953	24
16	1506	.967	23
17	1507	.980	22
18	1508	.994	21
19	1509	.954	30
20	1510	.953	36
21	1511	.967	323

CH. NO.	T/C	X/L	ψ
22	1512	.980	322
23	1513	.994	321
24	1514	.953	315
25	1515	.953	306
26	1516	.967	308
27	1517	.980	308
28	1518	.994	308
29	1519	.953	234
30	1520	.965	230
31	1521	.975	230
32	1522	.985	230
33	1523	.953	225
34	1524	.967	225
35	1525	.953	216
36	1526	.965	217
37	1527	.975	218
38	1528	.985	219
39	1529	.995	220
40	1530	.954	210
41	1531	.953	156
42	1532	.967	157

* θ Applies through Channel 8, ψ starts with Channel 9

TABLE IV. THERMOCOUPLE CONSTANT SETS (Continued)
EXTERNAL TANK AND RIGHT SRB
CONSTANT SET 222

CH. NO.	T/C	X/L	ψ
43	1533	.980	158
44	1534	.994	159
45	1535	.953	204
46	1536	.967	203
47	1537	.980	202
48	1538	.994	201
49	1539	.954	210
50	1540	.953	216
51	1541	.967	217
52	1542	.980	218
53	1543	.994	219
54	1544	.953	320
55	1545	.965	320
56	1546	.985	320
57	1547	.975	322.5
58	1548	.985	322.5
59	1549	.954	330
60	1550	.995	340
61	1551	.985	345
62	1552	.995	345
63	1553	.985	350
64	1554	.995	350

CH. NO.	T/C	X/L	ψ
65	1555	.953	355
66	1556	.985	355
67	1557	.964	330.7
68	1558	.978	330.7
69	1559	.982	320
70	1560	.954	324
71	1561	.975	324
72	1562	.954	336
73	1563	.982	334
74	1564	.975	336
75	1565	.982	340
76	1566	.954	342
77	1567	.964	342
78	1568	.975	342
79	1569	.982	350
80	1570	.975	353
81	OPEN		
82	OPEN		
83	OPEN		
84	1574	.971	11
85	1575	.978	11
86			

TABLE IV. THERMOCOUPLE CONSTANT SETS (Continued)
EXTERNAL TANK AND RIGHT SRB
CONSTANT SET 222

CH. NO.	T/C	X/L	ψ
87			
88			
89			
90			
91			
92			
93			
94			
95			
96			
97			

TABLE IV. THERMOCOUPLE CONSTANT SETS (Continued)

ORBITER

CONSTANT SET 233

CH. NO.	T/C	X/L	ϕ
1	OPEN		
2	227	.60	157.5
3	228	.65	↓
4	229	.70	↓
5	230	.75	↓
6	234	.40	135
7	238	.60	↓
8	239	.65	↓
9	240	.70	↓
10	241	.75	↓
11	242	.80	↓
12	392	.60	114
13	393	.65	
14	394	.70	
15	395	.75	
16	OPEN		
17	7	.05	0
18	8	.06	↓
19	9	.07	↓
20	10	.08	↓
21	11	.09	↓

CH. NO.	T/C	X/L	ϕ
22	12	.10	0
23	207	.10	20
24	208	.10	24.5
25	13	.12	0
26	14	.13	↓
27	15	.14	↓
28	16	.15	↓
29	17	.16	↓
30	18	.17	↓
31	19	.18	↓
32	299	.843	
33	300	.843	
34	301	.843	
35	302	.862	
36	OPEN		
37	304	.862	
38	305	.862	
39	306	.862	
40	308	.881	
41	309	.881	
42	310	.881	

TABLE IV. THERMOCOUPLE CONSTANT SETS (Continued)
ORBITER
CONSTANT SET 233

CH. NO.	T/C	X/L	ϕ
43	311	.881	
44	OPEN		
45	312	.881	
46	315	.920	
47	316	.920	
48	317	.920	
49	318	.920	
50	319	.920	
51	320	.939	
52	321	.939	
53	322	.939	
54	323	.939	
55	325	.939	
56	327	.978	
57	328	.978	
58	329	.978	
59	330	.978	
60	331	.978	
61	332	.997	
62	333	.997	
63	334	.997	
64	335	.997	
65	337	1.01	
66	338	1.01	
67	339	1.01	
68	OPEN		
69	183	.45	180
70	185	.55	180
71	187	.65	180
72	OPEN		
73	190	.80	180
74	506	.868	---
75	509	.847	
76	515	.839	
77	521	.858	
78	522	.870	
79	523	.837	
80	527	.861	
81	534	.830	
82	538	.868	
83	542	.833	
84	20	.19	0

TABLE IV. THERMOCOUPLE CONSTANT SETS (Continued)

ORBITER

CONSTANT SET 233

CH. NO.	T/C	X/L	ϕ
85	21	.20	0
86	23	.25	↓
87	24	.30	↓
88	25	.35	↓
89	26	.40	↓
90	27	.45	↓
91	28	.50	↓
92	29	.55	↓
93	OPEN		↓
94	32	.70	↓
95	33	.75	↓
96	36	.90	↓
97	OPEN		

TABLE IV. THERMOCOUPLE CONSTANT SETS (Continued)

LEFT SRB
CONSTANT SET 311

CH. NO.	T/C	X/L	ψ
1	1000	.115	0
2	1001	.20	↓
3	1002	.225	↓
4	1003	.25	↓
5	1004	.30	↓
6	1005	.40	↓
7	1006	.50	↓
8	1007	.55	↓
9	1008	.60	↓
10	1009	.65	↓
11	1010	.70	↓
12	1011	.75	↓
13	1012	.80	↓
14	1013	.875	↓
15	1014	.925	↓
16	1015	.939	↓
17	1016	.953	355
18	1017	.967	↓
19	1018	.980	↓
20	1019	.994	↓
21	1020	.115	45

CH. NO.	T/C	X/L	ψ
22	1021	.143	45
23	1022	.171	↓
24	1023	.20	↓
25	1024	.30	↓
26	1025	.40	↓
27	1026	.50	↓
28	1027	.55	↓
29	1028	.60	↓
30	1029	.65	↓
31	1030	.70	↓
32	1031	.80	↓
33	1032	.875	↓
34	1033	.925	↓
35	1034	.953	50
36	1035	.967	↓
37	1036	.980	↓
38	1037	.994	↓
39	1038	0	90
40	1039	.002	↓
41	1040	.008	↓
42	1041	.050	↓

TABLE IV. THERMOCOUPLE CONSTANT SETS (Continued)

LEFT SRB

CONSTANT SET 311

CH. NO.	T/C	X/L	ψ
43	1042	.10	90
44	1043	.12	
45	1044	.127	
46	1045	.134	
47	1046	.173	
48	1047	.180	
49	1048	.186	
50	1049	.193	
51	1050	.20	
52	1051	.25	
53	1052	.30	
54	1053	.40	
55	1054	.50	
56	1055	.60	
57	1056	.70	
58	1057	.75	
59	1058	.80	
60	1059	.875	
61	1060	.925	
62	1061	.953	
63	1062	.967	

CH. NO.	T/C	X/L	ψ
64	1063	.980	90
65	1064	.994	90
66	1065	.115	135
67	1066	.143	
68	1067	.171	
69	1068	.20	
70	1069	.30	
71	1070	.50	
72	1071	.60	
73	1072	.70	
74	1073	.80	
75	1074	.953	
76	1124	.177	315
77	1125	.20	
78	1126	.30	
79	1127	.50	
80	1128	.60	
81	1129	.70	
82	1130	.80	
83	1131	.875	
84	1132	.925	

TABLE IV. THERMOCOUPLE CONSTANT SETS (Continued)
LEFT SRB
CONSTANT SET 311

CH. NO.	T/C	X/L	ψ
85	1133	.953	315
86	1134	.967	↓
87	1135	.980	↓
88	1136	.994	↓
89	1200	.043	65
90	1201	.05	↓
91	1202	.057	↓
92	1203	.063	↓
93	1204	.090	↓
94	1205	.10	↓
95	1206	.05	35
96	1207	.09	↓
97	1208	.10	↓

TABLE IV. THERMOCOUPLE CONSTANT SETS (Continued)
LEFT AND RIGHT SRB*
CONSTANT SET 322

CH. NO.	T/C	X/L	ψ
1	1209	.05	5
2	1210	.09	5
3	1211	.10	5
4	1212	.043	335
5	1213	.05	↓
6	1214	.057	↓
7	1215	.063	↓
8	1216	.090	↓
9	1217	.10	↓
10	1220	.965	4.38
11	1221	.975	↓
12	1222	.985	↓
13	1223	.995	↓
14	1224	.965	20
15	1225	.975	↓
16	1226	.985	↓
17	1227	.995	↓
18	1228	.965	40
19	1229	.975	↓
20	1230	.985	↓
21	1231	.995	↓

CH. NO.	T/C	X/L	ψ
22	1232	.724	0
23	1233	.724	225
24	OPEN		
25	1235	.724	315
26	1236	.724	330
27	1237	.724	135
28	1238	.74	180
29	1239	.74	225
30	OPEN		
31	1241	.74	315
32	1242	.74	0
33	1243	.74	135
34	1244	.75	225
35	1245	.75	315
36	1246	.75	135
37	1247	.771	180
38	1248	.771	225
39	OPEN		
40	1250	.771	315
41	1251	.771	0
42	1252	.771	135

* Thermocouples on Left SRB (Channels 1-83), Right SRB (Channels 84-97)

TABLE IV. THERMOCOUPLE CONSTANT SETS (Continued)
LEFT AND RIGHT SRB*
CONSTANT SET 322

CH. NO.	T/C	X/L	ψ	CH. NO.	T/C	X/L	ψ
43	1253	.932	180	64	1274	.953	302
44	1254	.932	225	65	1275	.953	342
45	OPEN			66	1276	.953	198
46	1256	.932	315	67	1277	.953	238
47	1257	.932	0	68	1278	.967	302
48	1258	.932	45	69	1279	.967	342
49	1259	.932	135	70	1280	.967	198
50	1260	.939	180	71	1281	.967	238
51	1261	.939	225	72	1282	.98	302
52	OPEN			73	1283	.98	342
53	1263	.939	315	74	1284	.98	198
54	1264	.939	45	75	1285	.98	238
55	1265	.939	135	76	1286	.994	302
56	1266	.953	138	77	1287	.994	342
57	1267	.953	162	78	1288	.994	198
58	1268	.967	138	79	1289	.994	238
59	1269	.967	162	80	1290	.12	76
60	1270	.98	138	81	1291	.127	↓
61	1271	.98	162	82	1292	.134	↓
62	1272	.994	138	83	1293	.173	↓
63	1273	.994	162	84	1300	.025	180

* Thermocouples on Left SRB (Channels 1-83), Right SRB (Channels 84-97)

TABLE IV. THERMOCOUPLE CONSTANT SETS (Continued)
LEFT AND RIGHT SRB*
CONSTANT SET 322

CH. NO.	T/C	X/L	ψ
85	1302	.075	180
86	1305	.025	270
87	1307	.075	270
88	1311	.025	0
89	1313	.075	5
90	1314	.110	5
91	1316	.075	20
92	1317	.090	↓
93	1318	.100	↓
94	1319	.110	↓
95	1321	.075	35
96	1322	.110	35
97	1323	.110	65

* Thermocouples on Left SRB (Channels 1-83), Right SRB (Channels 84-97)

TABLE IV. THERMOCOUPLE CONSTANT SETS (Continued)
LEFT AND RIGHT SRB*
CONSTANT SET 333

CH. NO.	T/C	X/L	ψ
1	1324	.10	76
2	1326	.025	90
3	1328	.06	↓
4	1329	.075	↓
5	1330	.10	104
6	1332	.025	135
7	1334	.075	↓
8	1335	.10	↓
9	1336	.136	263
10	1344	.939	263
11	1345	.115	270
12	1346	.136	277
13	1347	.30	↓
14	1348	.75	↓
15	1349	.815	↓
16	1350	.837	↓
17	1351	.884	↓
18	1352	.894	↓
19	1354	.939	↓
20	1355	.74	337.5
21	1356	.75	337.5

CH. NO.	T/C	X/L	ψ
22	1362	.765	0
23	1363	.815	↓
24	1364	.837	↓
25	1365	.884	↓
26	1366	.907	↓
27	1368	.74	22.5
28	1369	.75	↓
29	1372	.925	↓
30	1373	.932	↓
31	1374	.939	↓
32	1375	.74	45
33	1376	.75	45
34	1383	.74	67.5
35	1384	.75	67.5
36	1386	.141	76
37	1387	.148	↓
38	1388	.155	↓
39	1389	.162	↓
40	1390	.25	↓
41	1393	.74	90
42	1394	.765	90

* Thermocouples on the RIGHT SRB (Channels 1-91), LEFT SRB (Channels 92-95)

TABLE IV. THERMOCOUPLE CONSTANT SETS (Continued)
LEFT AND RIGHT SRB*
CONSTANT SET 333

CH. NO.	T/C	X/L	ψ
43	1395	.771	90
44	1396	.815	
45	1397	.837	
46	1398	.884	
47	1399	.894	
48	1400	.907	
49	1401	.917	
50	1402	.932	
51	1403	.939	
52	1404	.120	104
53	1405	.127	
54	1406	.134	
55	1407	.141	
56	1408	.148	
57	1409	.155	
58	1410	.162	
59	1411	.173	
60	1412	.180	
61	1413	.186	
62	1414	.193	
63	1415	.200	

CH. NO.	T/C	X/L	ψ
64	1416	.250	104
65	1417	.740	112.5
66	1418	.750	112.5
67	1420	.925	
68	1421	.932	
69	1422	.939	
70	1423	.40	135
71	1425	.98	225
72	1426	.994	225
73	1430	.953	4.25
74	1431		15.6
75	1432		20
76	1433		24.4
77	1434		35.6
78	1435		40
79	1436		77.5
80	1437	.967	
81	1438	.98	
82	1439	.994	
83	1440	.953	112.5
84	1441	.967	

* Thermocouples on the RIGHT SRB (Channels 1-91) LEFT SRB (Channels 92-95)

TABLE IV. THERMOCOUPLE CONSTANT SETS (Continued)
LEFT AND RIGHT SRB*
CONSTANT SET 333

CH. NO.	T/C	X/L	ψ
85	1442	.98	112.5
86	1443	.994	112.5
87	1444	FWD	SEP
88	1445	MOTORS	
89	1446		↓
90	1447		
91	1448		
92	1294	.18	76
93	1295	.186	↓
94	1296	.193	
95	1297	.20	
96			
97			

* Thermocouples on the RIGHT SRB (Channels 1-91) LEFT SRB (Channels 92-95)

TABLE IV. THERMOCOUPLE CONSTANT SETS (Continued)
RIGHT SRB
CONSTANT SET 411

CH. NO.	T/C	X/L	ψ
1	1449	FWD. MOTORS	SEP.
2	1450		
3	1451		
4	1452		
5	1453		
6	1454		
7	1455		
8	1456		
9	1457		
10	1458		
11	1459		
12	1460		
13	1461		
14	1462		
15	1463	.2	277
16	1464	.4	
17	1465	.5	
18	1466	.6	
19	1467	.7	
20	1468	.9	
21	1469	.921	

CH. NO.	T/C	X/L	ψ
22	1470	.928	277
23	1471	.937	277
24	1477	.928	263
25	1479		90
26	1480		
27	1481		
28	1482		
29	1483		
30	1484		95
31	1485		
32	1486		
33	1487		
34	1488		
35	1489		112
36	1490		
37	1491		
38	1492		
39	1493		
40	1494		140
41	1495		
42	1496		

TABLE IV. THERMOCOUPLE CONSTANT SETS (Continued)

RIGHT SRB
CONSTANT SET 411

CH. NO.	T/C	X/L	ψ
43	1497		140
44	1498		↓
45	1499		150
46	1298	.008	180
47	1299	.015	↓
48	1301	.05	↓
49	1303	.10	↓
50	1304	.008	270
51	1306	.05	↓
52	1308	.10	↓
53	1309	.11	335
54	1310	.008	0
55	1325	.015	90
56	1327	.04	90
57	1331	.008	135
58	1333	.05	135
59	1337	.30	263
60	1338	.75	↓
61	1339	.815	↓
62	1340	.837	↓
63	1341	.884	↓
64	1342	.894	263
65	1343	.907	263
66	1353	.907	277
67	1357	.765	337.5
68	1358	.771	↓
69	1359	.925	↓
70	1360	.932	↓
71	1361	.939	↓
72	1367	.724	22.5
73	1370	.765	↓
74	1371	.771	↓
75	1377	.765	45
76	1378	.771	↓
77	1379	.815	↓
78	1380	.837	↓
79	1381	.884	↓
80	1382	.907	↓
81	1385	.771	67.5
82	1391	.55	90
83	1392	.65	90
84	1419	.771	112.5

TABLE IV. THERMOCOUPLE CONSTANT SETS (Continued)
RIGHT SRB
CONSTANT SET 411

CH. NO.	T/C	X/L	ψ
85	1424	.925	135
86	1472	.2	263
87	1473	.4	↓
88	1474	.5	
89	1475	.6	
90	1476	.7	
91			
92			
93			
94			
95			
96			
97			

TABLE IV. THERMOCOUPLE CONSTANT SETS (Continued)
EXTERNAL TANK
CONSTANT SET 511

CH. NO.	T/C	X/L	θ
1	2089	.937	352.2
2	2088	.937	289.4
3	2087	.937	250.6
4	2090	.355	29.8
5	2091	.360	↓
6	2092	.365	↓
7	2093	.370	↓
8	2094	.355	23.08
9	2095	.36	↓
10	2096	.365	↓
11	2097	.37	↓
12	2098	.355	20.98
13	2099	.36	↓
14	2100	.365	↓
15	2101	.37	↓
16	2102	.355	17
17	OPEN		
18	2104	.40	330.2
19	2105	.405	↓
20	2106	.41	↓
21	2107	.40	326.8

CH. NO.	T/C	X/L	θ
22	2108	.405	326.8
23	2109	.405	324.5
24	2110	.41	324.5
25	2111	.41	315
26	2112	.835	309.3
27	2113	.820	305.4
28	2114	.830	↓
29	2115	.835	↓
30	2116	.820	301.5
31	2117	.830	↓
32	2118	.835	↓
33	2119	.840	↓
34	2120	.85	↓
35	2121	.86	↓
36	2122	.87	↓
37	2123	.88	↓
38	2124	.89	↓
39	2125	.90	↓
40	OPEN		
41	2127	.925	301.5
42	2128	.935	301.5

TABLE IV. THERMOCOUPLE CONSTANT SETS (Continued)
EXTERNAL TANK
CONSTANT SET 511

CH. NO.	T/C	X/L	θ
43	2129	.82	292
44	2130	.83	↓
45	2131	.84	↓
46	2132	.85	↓
47	2133	.86	↓
48	2134	.87	↓
49	2135	.88	↓
50	2136	.89	↓
51	2137	.91	↓
52	2138	.926	↓
53	2139	.930	↓
54	2140	.926	299.4
55	2141	↓	270
56	2142	↓	258
57	2143	↓	250.6
58	2144	↓	247.5
59	2145	.93	289.4
60	2146	↓	270
61	2147	↓	258
62	2148	↓	250.6
63	2149	↓	247.5

CH. NO.	T/C	X/L	θ
64	2150	.935	270
65	2151	.935	258
66	2152	.926	33.75
67	2153	.926	31.75
68	2154	.926	23.07
69	OPEN		
70	OPEN		
71	OPEN		
72	2158	.926	355.2
73	OPEN		
74	2160	.926	345.2
75	2161	↓	335
76	2162	↓	330.2
77	2163	↓	326.9
78	2164	↓	324.5
79	OPEN		
80	2166	.441	31.43
81	2167	.425	337.5
82	2168	↓	345.6
83	2169	↓	354
84	2170	↓	5.63

TABLE IV. THERMOCOUPLE CONSTANT SETS (Continued)
EXTERNAL TANK
CONSTANT SET 511

CH. NO.	T/C	X/L	θ
85	2171	.425	17
86	2172	.430	337.5
87	2173		345.5
88	2174		354
89	2175		5.63
90	2176		17
91	661	.415	11.25
92	662	.42	
93	663	.425	
94	664	.43	
95	665	.44	
96	666	.45	
97	667	.455	

TABLE IV. THERMOCOUPLE CONSTANT SETS (Continued)
EXTERNAL TANK
CONSTANT SET 522

CH. NO.	T/C	X/L	θ
1	668	.46	11.25
2	669	.47	
3	670	.48	
4	671	.49	
5	672	.50	
6	673	.60	
7	674	.70	
8	675	.80	
9	812	.40	258
10	813	.23	270
11	814	.24	
12	815	.25	
13	816	.27	
14	817	.29	
15	818	.30	
16	819	.31	
17	820	.32	
18	821	.325	
19	822	.33	
20	823	.335	
21	824	.34	

CH. NO.	T/C	X/L	θ
22	825	.345	270
23	826	.35	
24	828	.36	
25	829	.365	
26	830	.37	
27	831	.375	
28	832	.38	
29	833	.39	
30	834	.40	
31	835	.50	
32	836	.60	
33	837	.70	
34	838	.80	
35	839	.90	
36	840	.23	292.5
37	841	.25	
38	842	.27	
39	873	.07	315
40	874	.08	
41	875	.10	
42	876	.15	

TABLE IV. THERMOCOUPLE CONSTANT SETS (Continued)

EXTERNAL TANK
CONSTANT SET 522

CH. NO.	T/C	X/L	θ
43	877	.20	315
44	878	.35	↓
45	879	.40	↓
46	880	.50	↓
47	881	.55	↓
48	882	.60	↓
49	883	.65	↓
50	884	.70	↓
51	885	.75	↓
52	886	.80	↓
53	887	.84	↓
54	933	.926	337.5
55	934	.415	343.1
56	935	.42	↓
57	936	.425	↓
58	937	.43	↓
59	938	.44	↓
60	939	.445	↓
61	940	.45	↓
62	941	.50	↓
63	942	.60	↓

CH. NO.	T/C	X/L	θ
64	943	.70	343.1
65	944	.80	↓
66	945	.35	348
67	946	.36	↓
68	947	.37	↓
69	948	.375	↓
70	949	.38	↓
71	950	.385	↓
72	951	.39	↓
73	952	.395	↓
74	953	.40	↓
75	954	.405	↓
76	955	.41	↓
77	956	.415	↓
78	957	.42	↓
79	958	.425	↓
80	959	.43	↓
81	960	.44	↓
82	961	.445	↓
83	962	.45	↓
84	2072	.42	36.32

TABLE IV. THERMOCOUPLE CONSTANT SETS (Concluded)
EXTERNAL TANK
CONSTANT SET 522

CH. NO.	T/C	X/L	θ
85	2073	.425	36.32
86	2074	.43	↓
87	2075	.435	↓
88	2076	.45	↓
89	2077	.60	↓
90	2078	.65	↓
91	2079	.25	33.75
92	2080	.30	↓
93	2081	.375	↓
94	2082	.40	↓
95	2083	.43	↓
96	2084	.45	↓
97	2085	.60	↓

TABLE V. EQUATIONS FOR CALCULATING LOCAL SURFACE ANGLE OF ATTACK ON THE ORBITER MODEL

ORBITER THERMOCOUPLE NUMBERS	EQUATION FOR CALCULATING δ
1 - 168 501 - 548	$\delta = \lambda + \alpha_m$
169 - 201 231 - 280	$\delta = \lambda - \alpha_m$
202 - 230 281 - 292 340 - 396	$\delta = \lambda + YAW$
293 - 339	$\delta = \lambda$

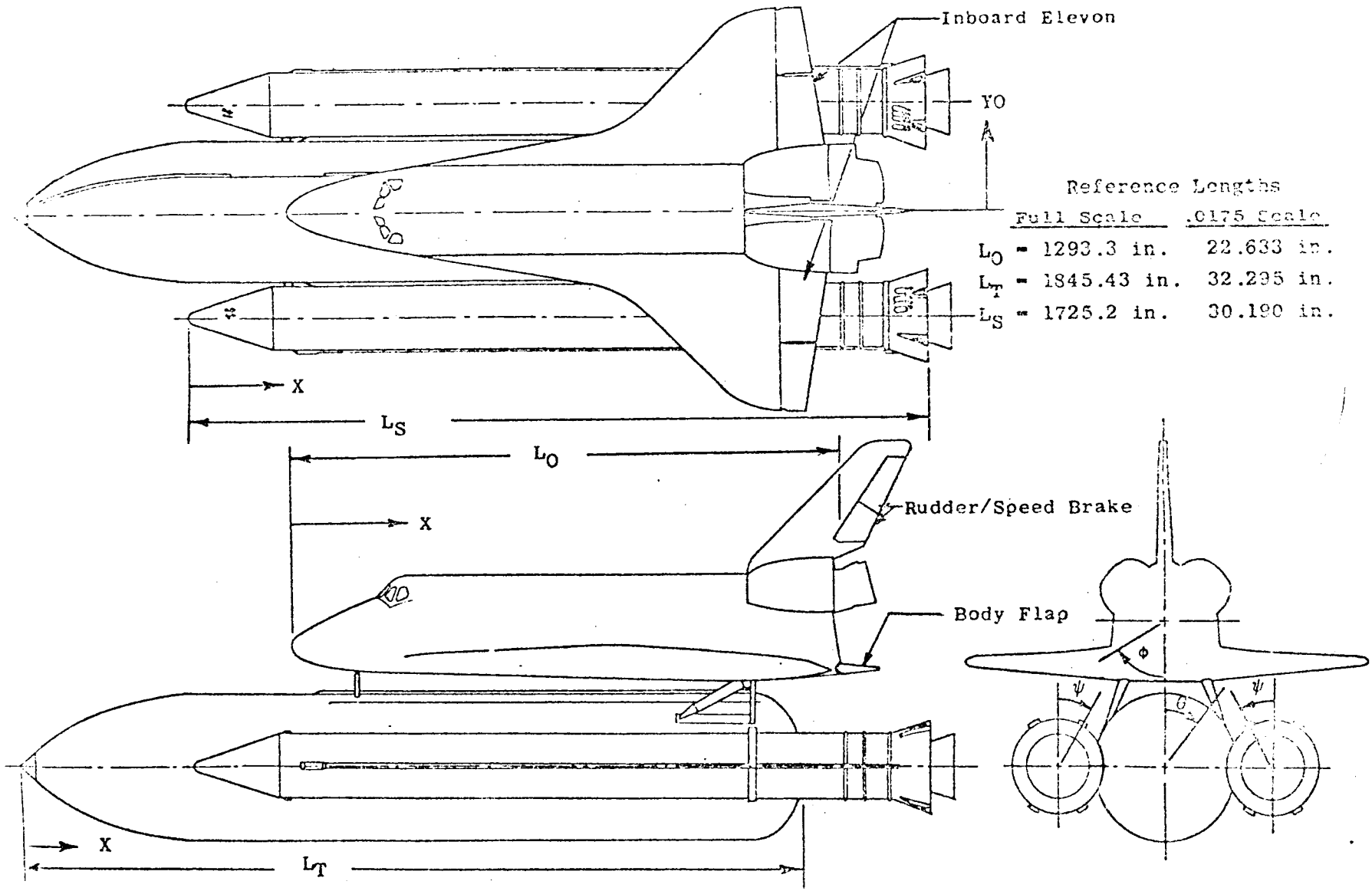

Figure 1. Sketch of the space shuttle integrated model.

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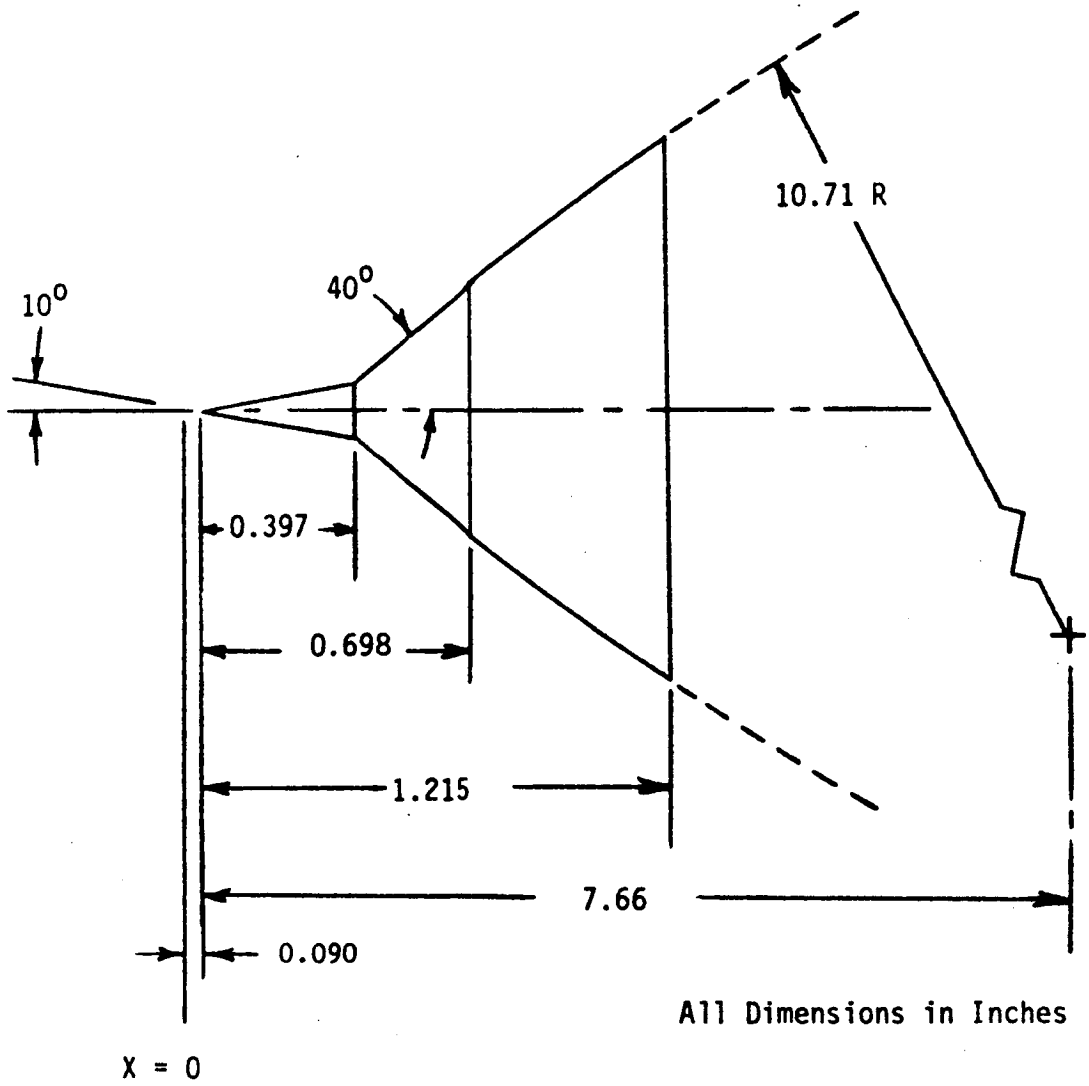

Figure 2. External tank nose tip configuration.

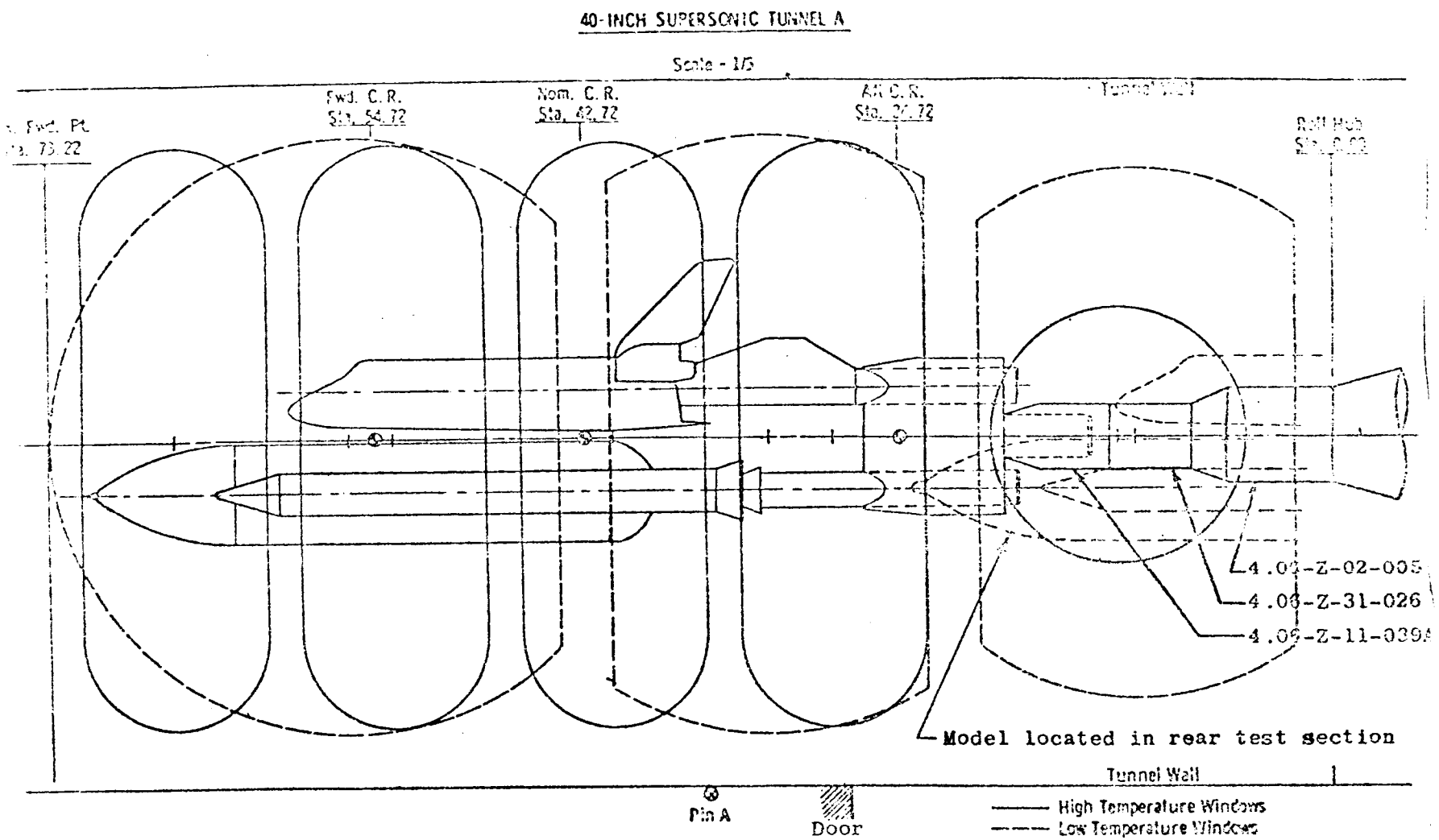

Figure 3. Model installation in Tunnel A.

DATA FIGURES

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT02)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	-3.000
(X4LT02)	◇	IH85 (W.L. TEST) OTS/ET = V4LT02/C9NT05=	HI/HU	3.010	.000	-3.000
(Y4LT02)	△	IH85 (W.L. THEORY) OTS/ET = V4LT02/A9NT05=	HI/HU	3.010	.000	-3.000

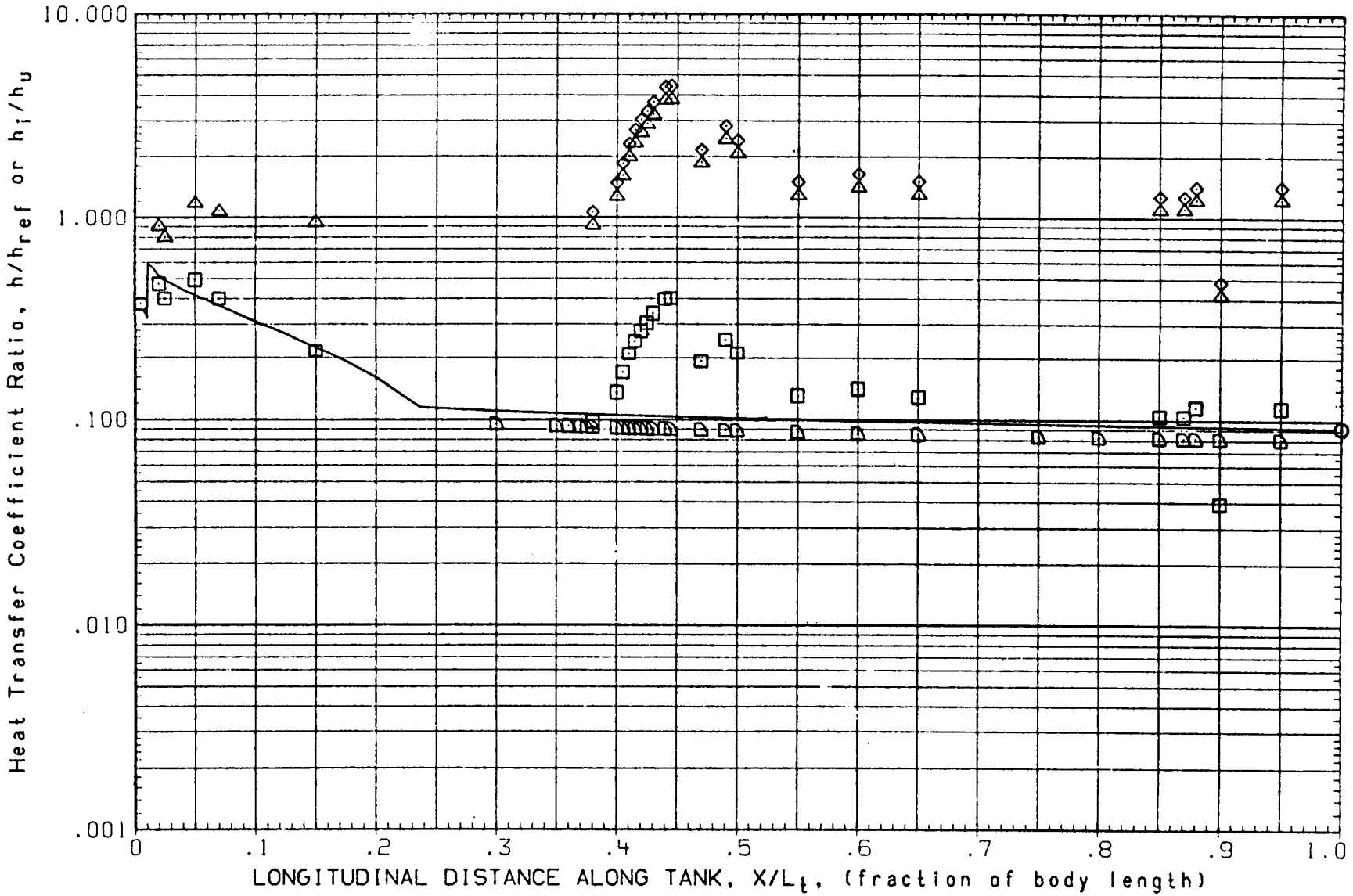

FIG. 4-1 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/L < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = .000

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OF POOR QUALITY

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT05)	○	DATA NOT AVAILABLE	3.010	.000	-3.000
(C9NT05)	⬡	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	3.010	.000	-3.000
(V4LT02)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	3.010	.000	-3.000
(Y4LT02)	◇	IH85 (W.L. TEST) OTS/ET = V4LT02/C9NT05= HI/HU	3.010	.000	-3.000
(Y4LT02)	△	IH85 (W.L. THEORY) OTS/ET = V4LT02/A9NT05= HI/HU	3.010	.000	-3.000

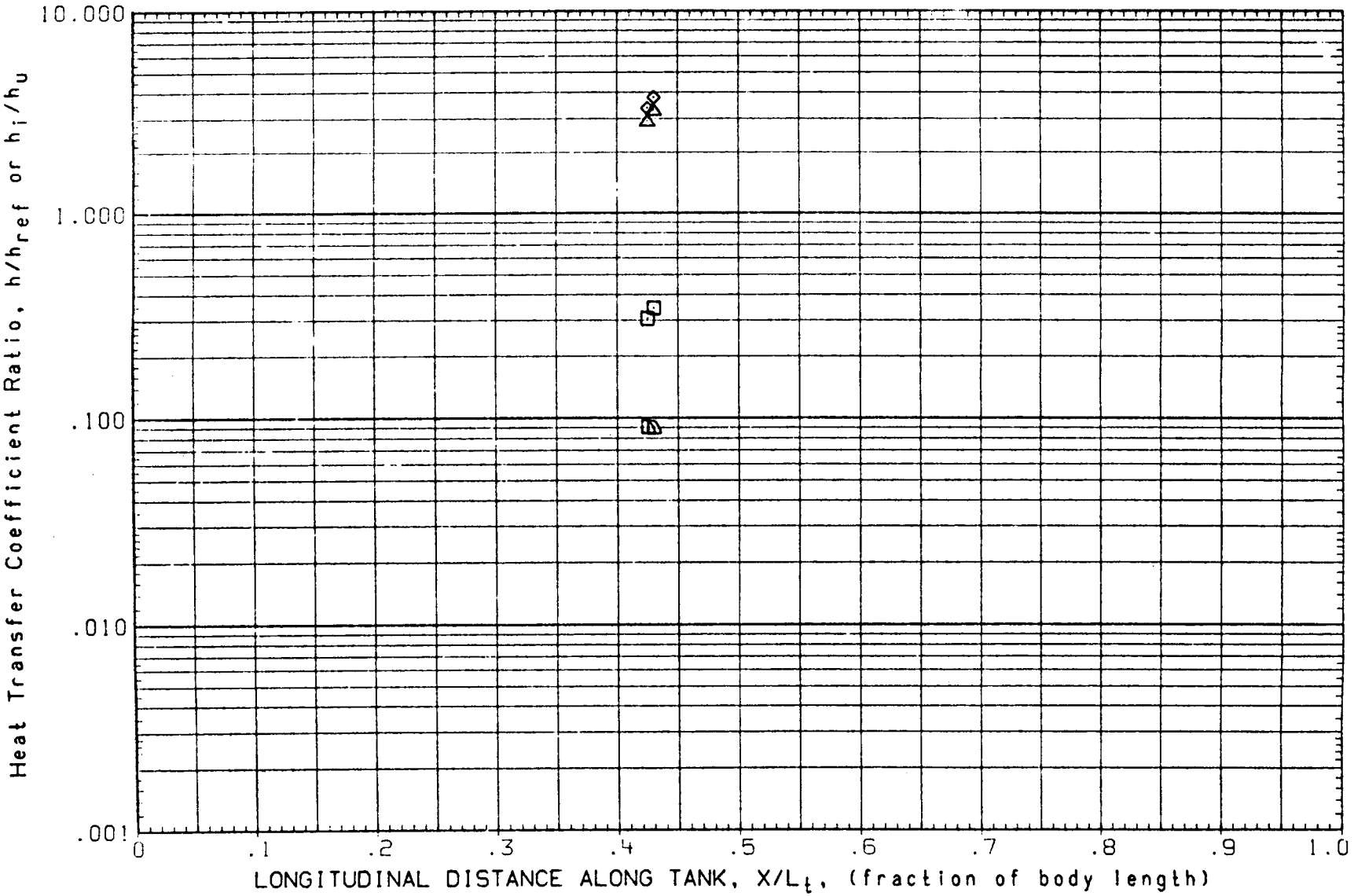

FIG. 4-1 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 5.625

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⬠	DATA NOT AVAILABLE		3.010	.000	-3.000
(Y4LT02)	□	DATA NOT AVAILABLE		3.010	.000	-3.000
(X4LT02)	◇	DATA NOT AVAILABLE		3.010	.000	-3.000
(Y4LT02)	△	DATA NOT AVAILABLE		3.010	.000	-3.000

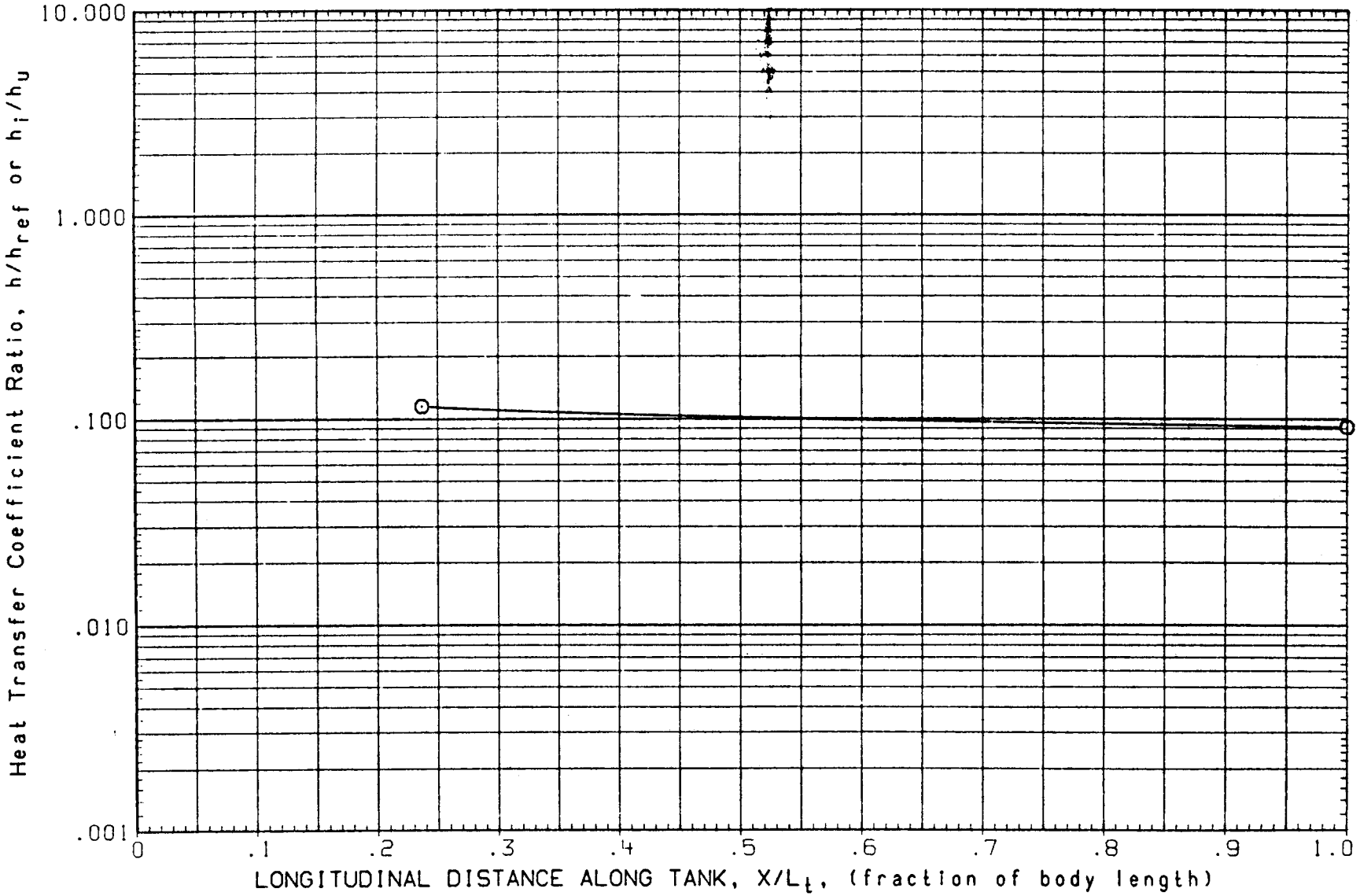

FIG. 4-1 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 5.630

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(C9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT02)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	-3.000
(X4LT02)	◇	IH85 (W.L. TEST) OTS/ET = V4LT02/C9NT05=	HI/HU	3.010	.000	-3.000
(Y4LT02)	△	IH85 (W.L. THEORY) OTS/ET = V4LT02/A9NT05=	HI/HU	3.010	.000	-3.000

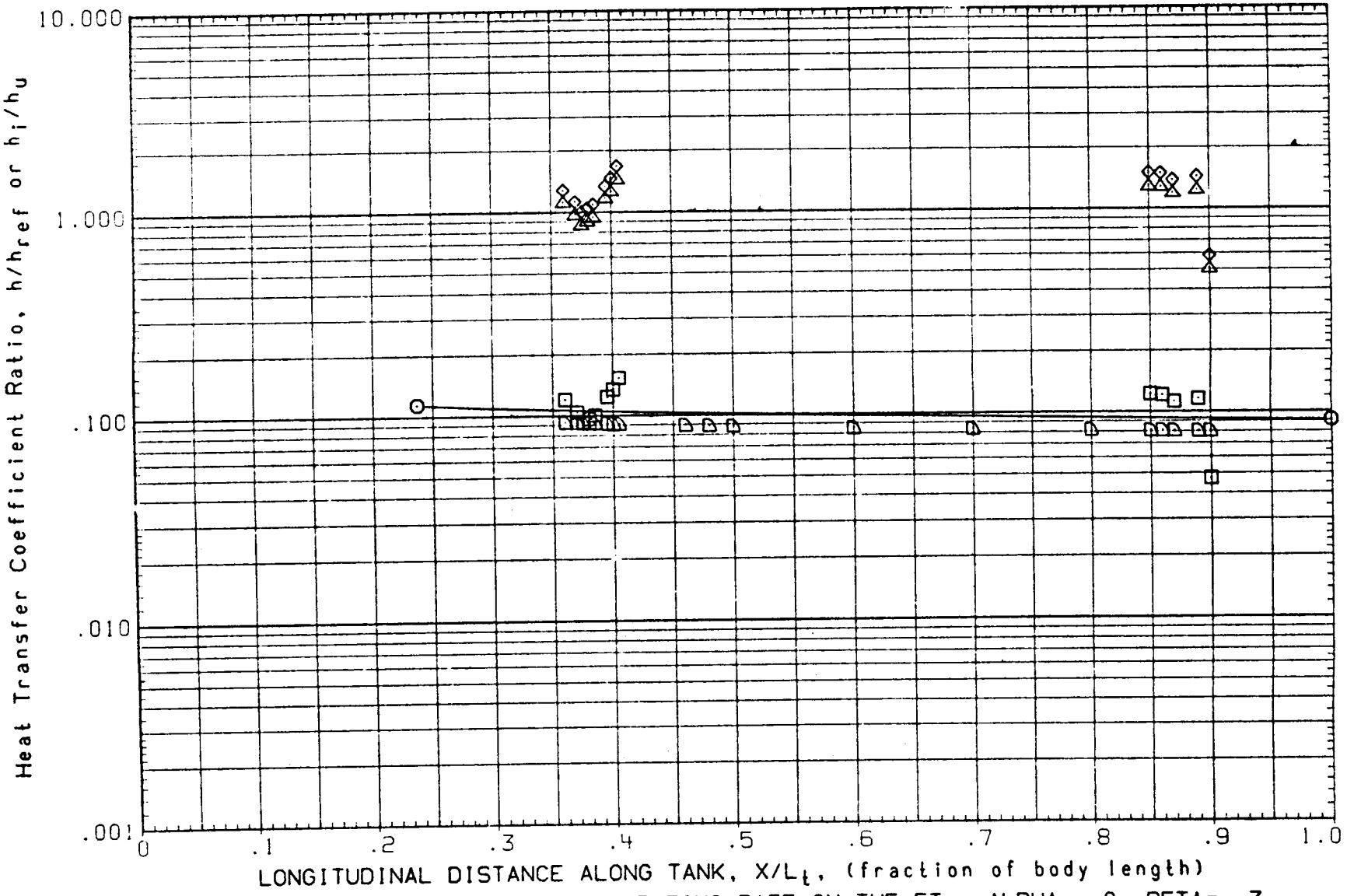

FIG. 4-1 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 11.250

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⊏	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT02)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	-3.000
(X4LT02)	◇	IH85 (W.L. TEST) OTS/ET = V4LT02/C9NT05=	HI/HU	3.010	.000	-3.000
(Y4LT02)	△	IH85 (W.L. THEORY) OTS/ET = V4LT02/A9NT05=	HI/HU	3.010	.000	-3.000

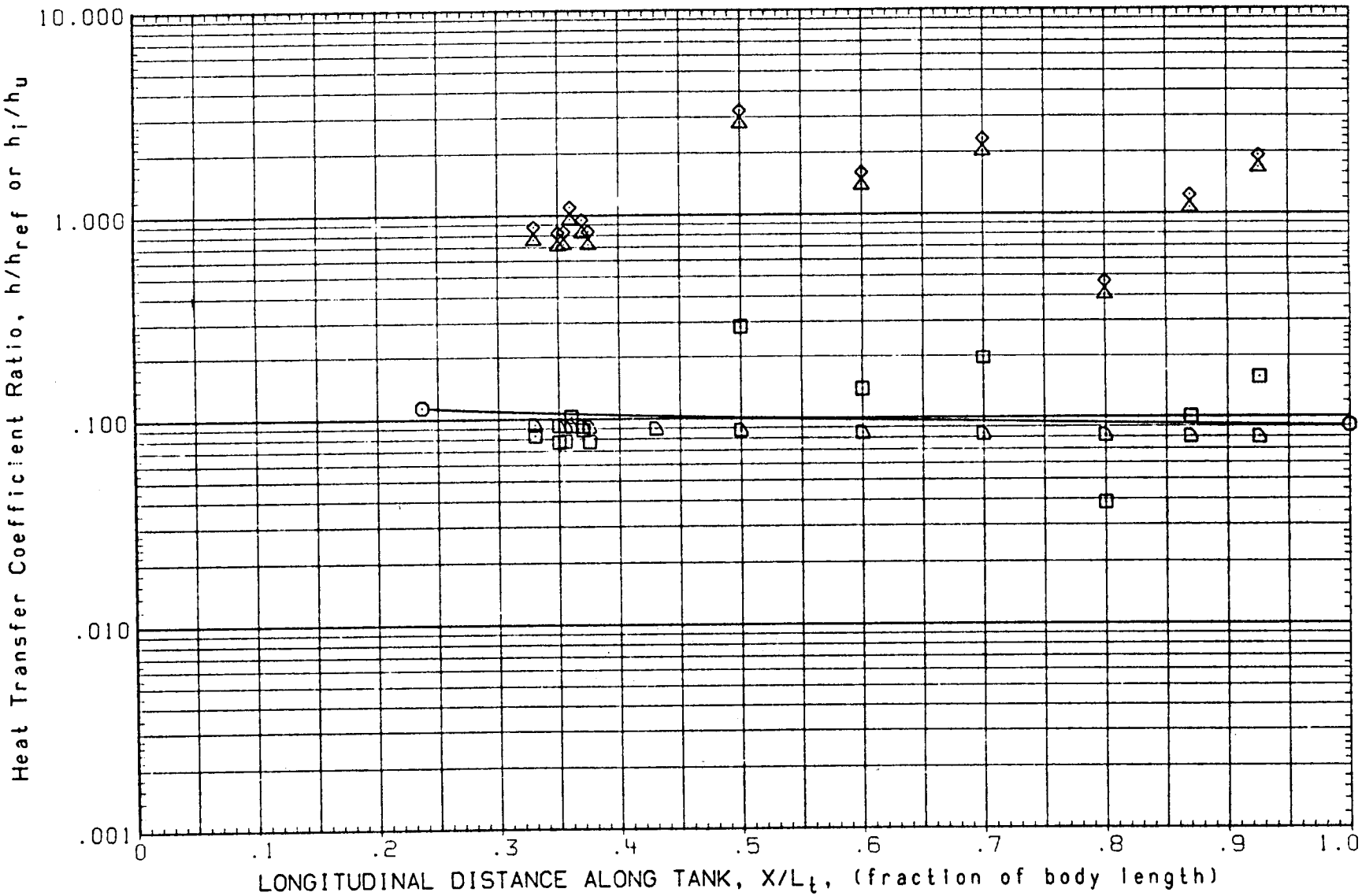

FIG. 4-1 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 17.000

C-2

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⊃	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT02)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	-3.000
(X4LT02)	◇	IH85 (W.L. TEST) OTS/ET = V4LT02/C9NT05=	HI/HU	3.010	.000	-3.000
(Y4LT02)	△	IH85 (W.L. THEORY) OTS/ET = V4LT02/A9NT05=	HI/HU	3.010	.000	-3.000

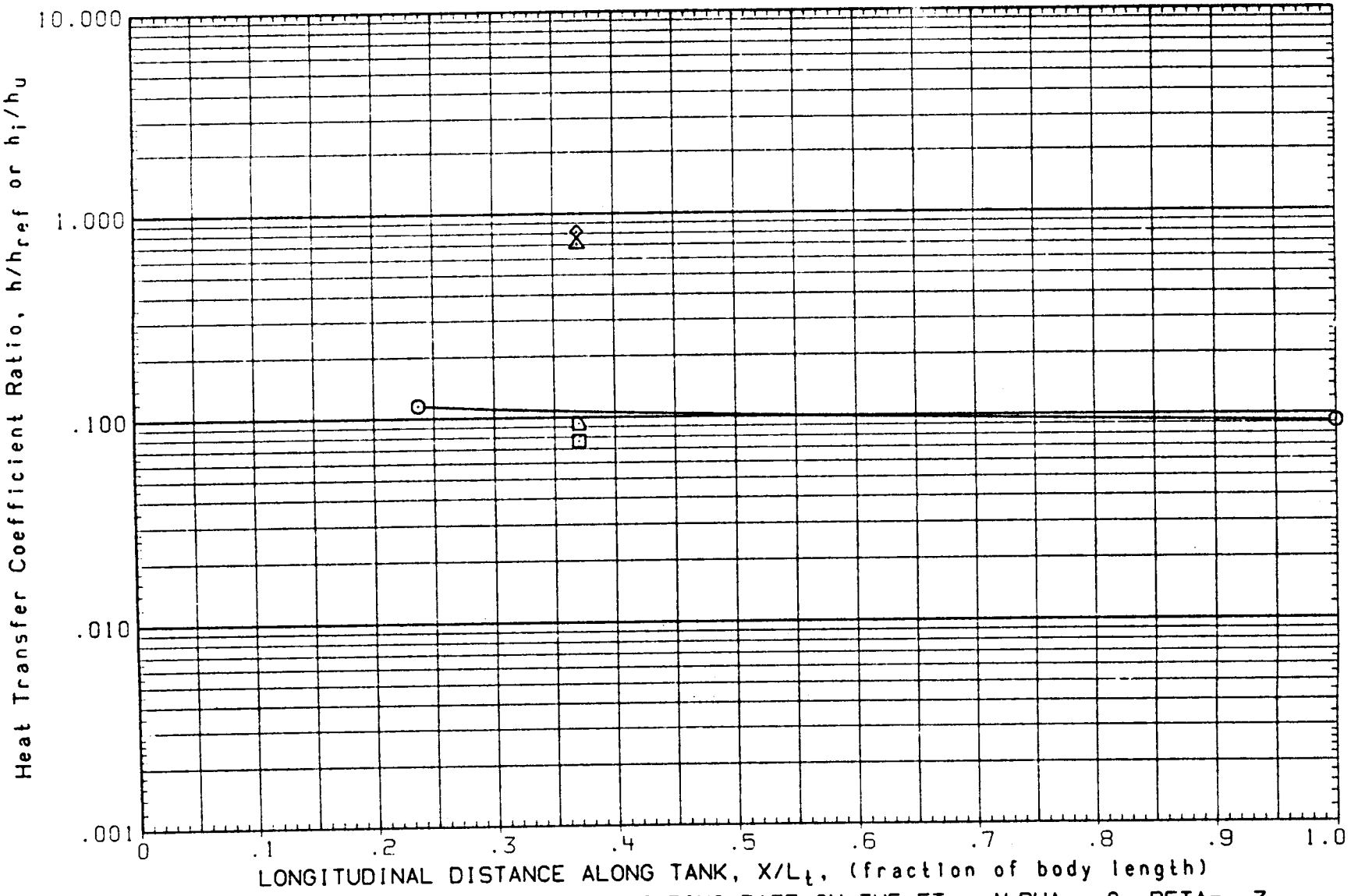

FIG. 4-1 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 20.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT02)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	-3.000
(X4LT02)	◇	IH85 (W.L. TEST) OTS/ET = V4LT02/C9NT05=	HI/HU	3.010	.000	-3.000
(Y4LT02)	△	IH85 (W.L. THEORY) OTS/ET = V4LT02/A9NT05=	HI/HU	3.010	.000	-3.000

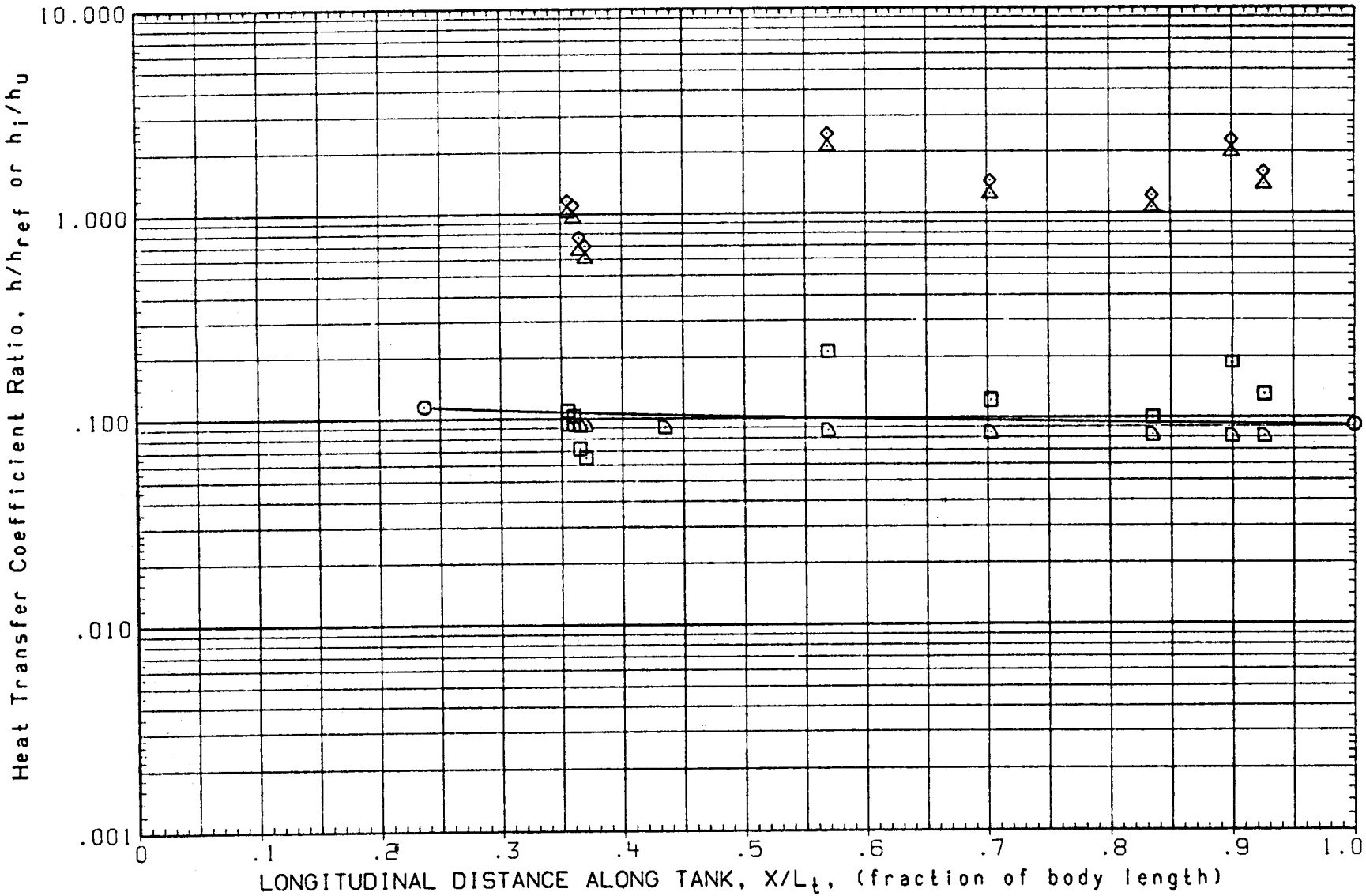

FIG. 4-1 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 23.070

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	3.010	.000	-3.000
(C9NT05)	◗	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	3.010	.000	-3.000
(V4LT02)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	3.010	.000	-3.000
(X4LT02)	◇	IH85 (W.L. TEST) OTS/ET = V4LT02/C9NT05= HI/HU	3.010	.000	-3.000
(Y4LT02)	△	IH85 (W.L. THEORY) OTS/ET = V4LT02/A9NT05= HI/HU	3.010	.000	-3.000

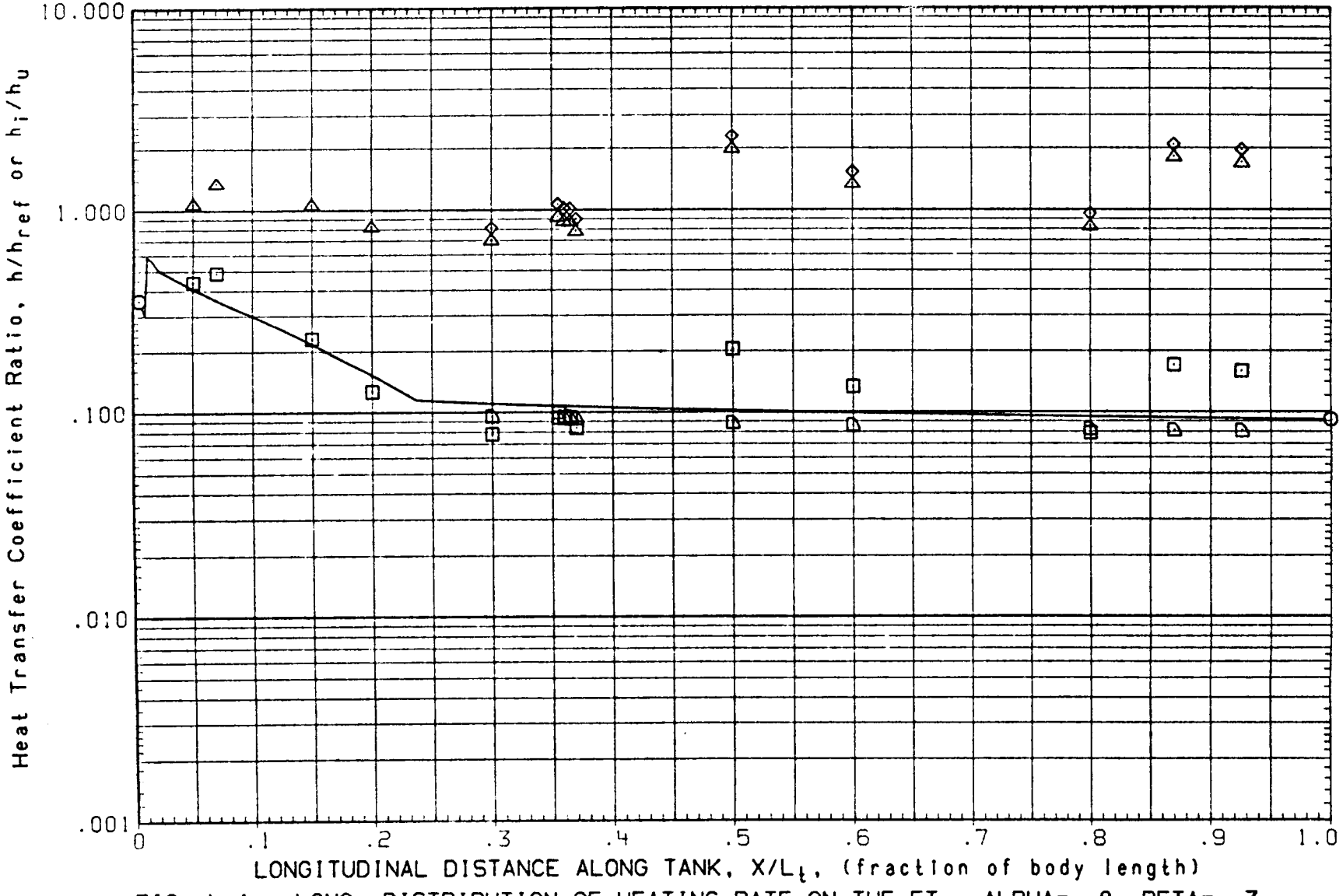

FIG. 4-1 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 29.800

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT02)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	-3.000
(X4LT02)	◇	IH85 (W.L. TEST) OTS/ET = V4LT02/C9NT05=	HI/HU	3.010	.000	-3.000
(Y4LT02)	△	IH85 (W.L. THEORY) OTS/ET = V4LT02/A9NT05=	HI/HU	3.010	.000	-3.000

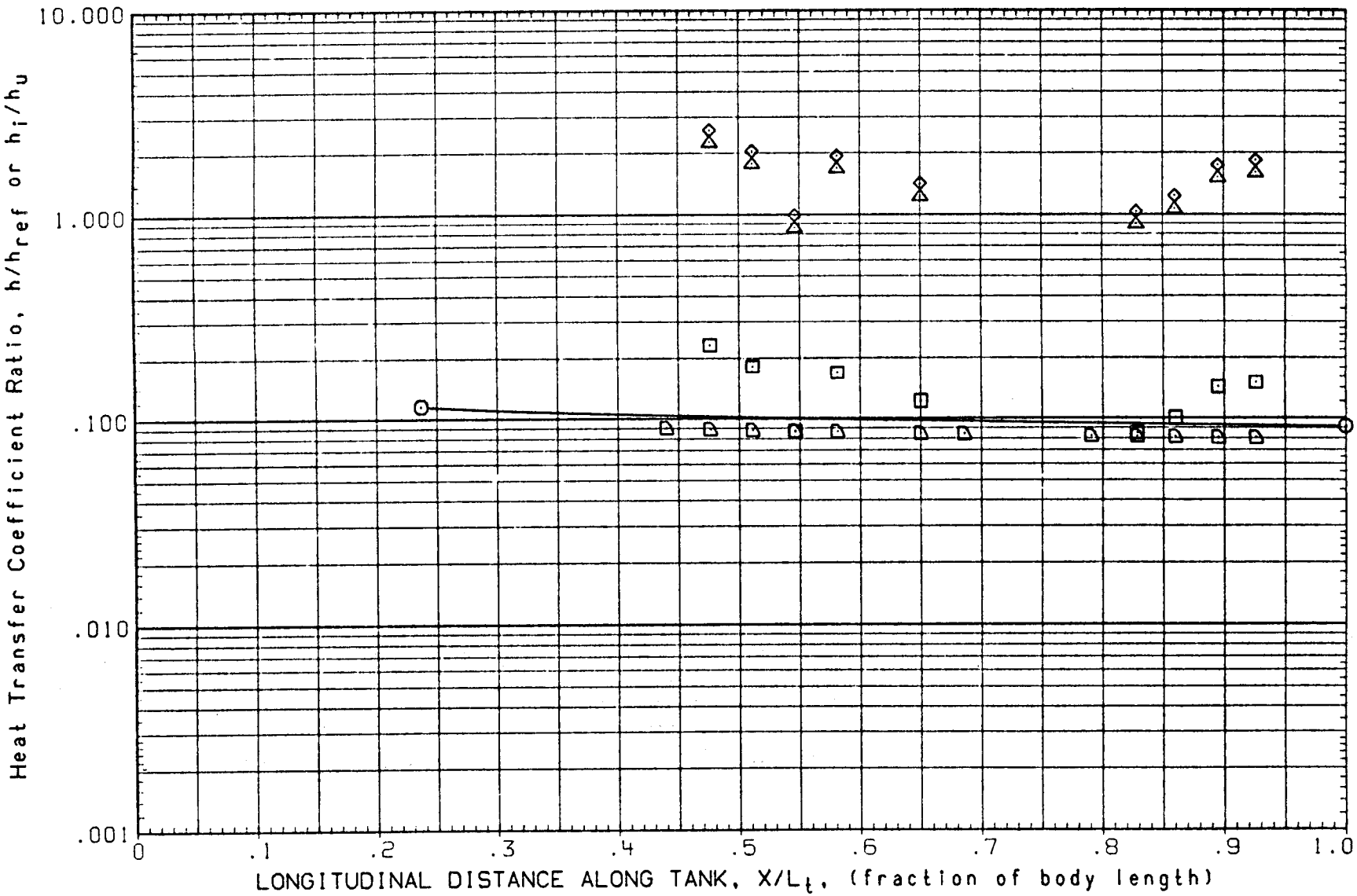

FIG. 4-1 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 31.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT02)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	-3.000
(X4LT02)	◇	IH85 (W.L. TEST) OTS/ET = V4LT02/C9NT05=	HI/HU	3.010	.000	-3.000
(Y4LT02)	△	IH85 (W.L. THEORY) OTS/ET = V4LT02/A9NT05=	HI/HU	3.010	.000	-3.000

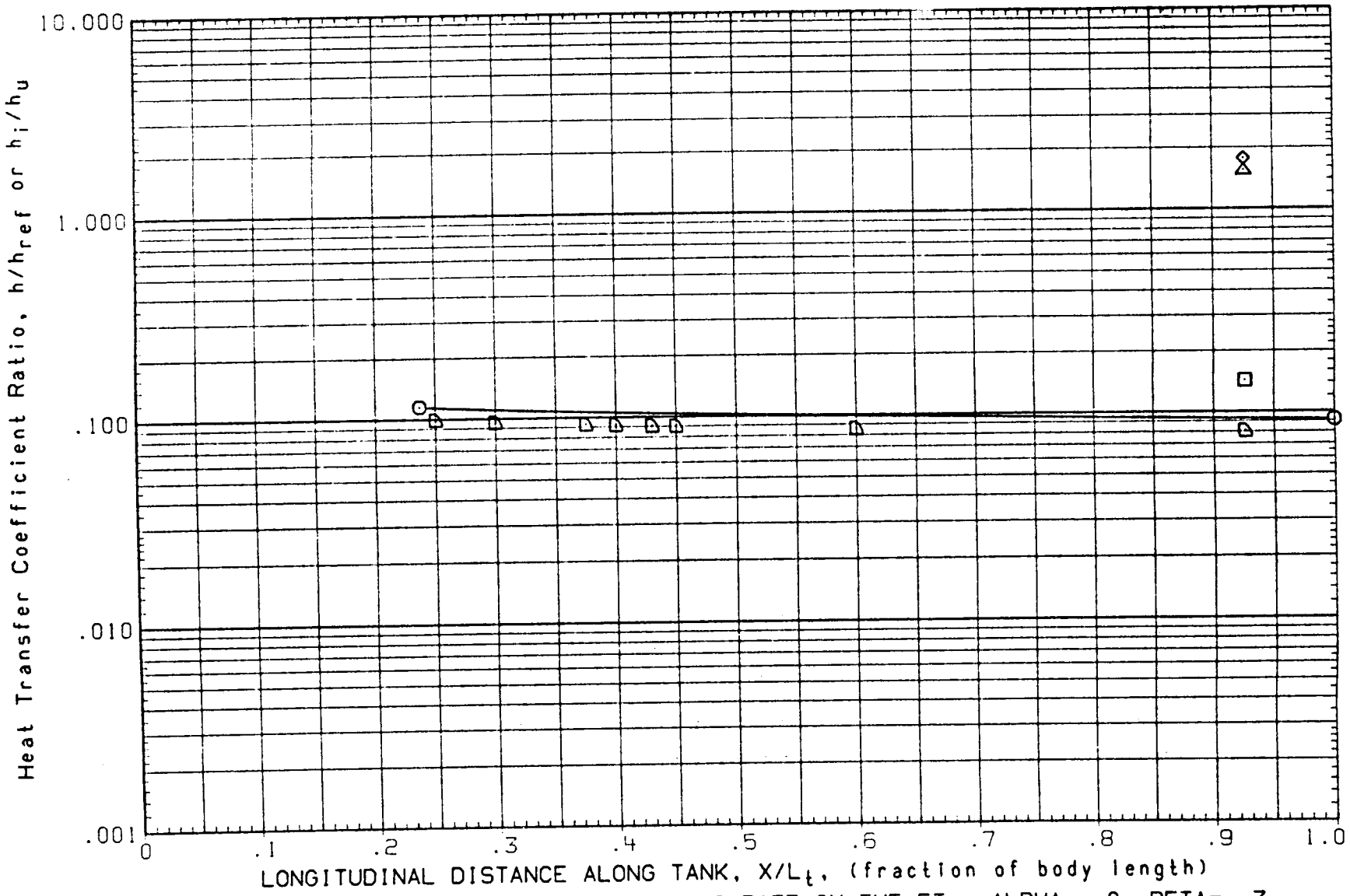

FIG. 4-1 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 33.750

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⊿	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT02)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	-3.000
(X4LT02)	◇	IH85 (W.L. TEST) OTS/ET = V4LT02/C9NT05=	HI/HU	3.010	.000	-3.000
(Y4LT02)	△	IH85 (W.L. THEORY) OTS/ET = V4LT02/A9NT05=	HI/HU	3.010	.000	-3.000

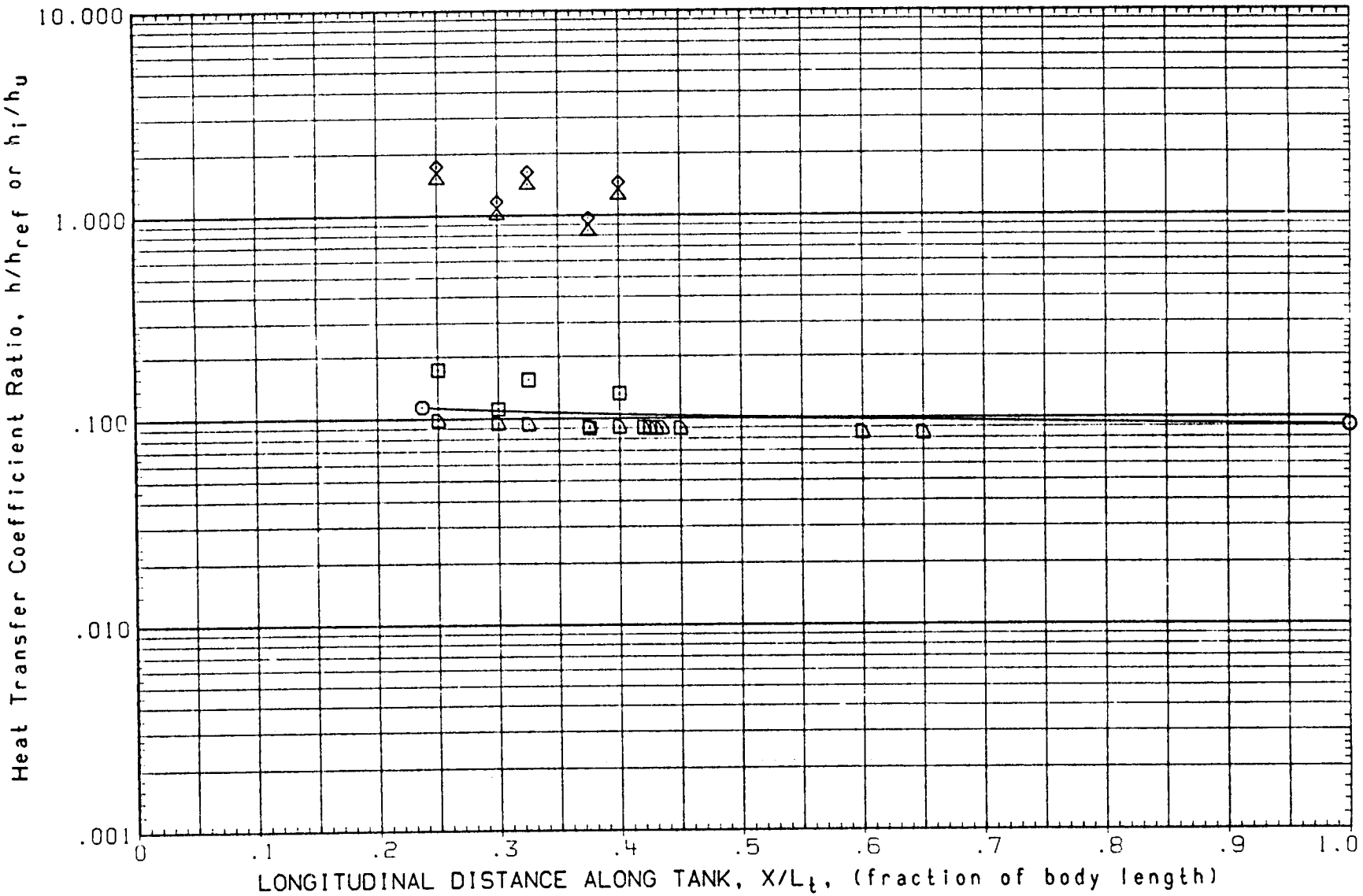

FIG. 4-1 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 36.320

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT02)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	-3.000
(X4LT02)	◇	IH85 (W.L. TEST) OTS/ET = V4LT02/C9NT05= HI/HU		3.010	.000	-3.000
(Y4LT02)	△	IH85 (W.L. THEORY) OTS/ET = V4LT02/A9NT05= HI/HU		3.010	.000	-3.000

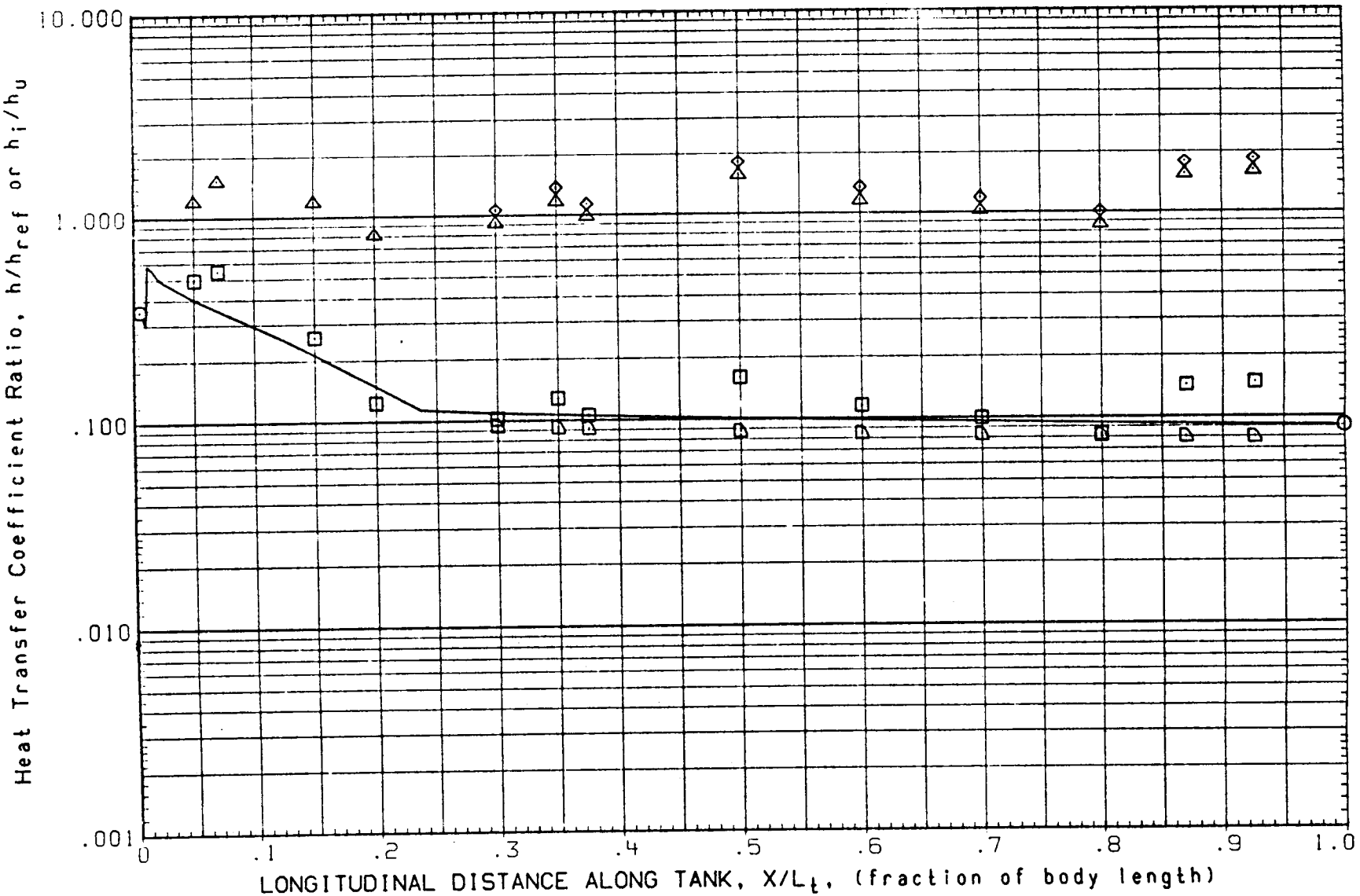

FIG. 4-1 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 37.700

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	HU/HREF	MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT		3.010	.000	-3.000
(C9NT05)	⬠	DATA NOT AVAILABLE		3.010	.000	-3.000
(V4LT02)	□	DATA NOT AVAILABLE		3.010	.000	-3.000
(X4LT02)	◇	DATA NOT AVAILABLE		3.010	.000	-3.000
(Y4LT02)	△	DATA NOT AVAILABLE		3.010	.000	-3.000

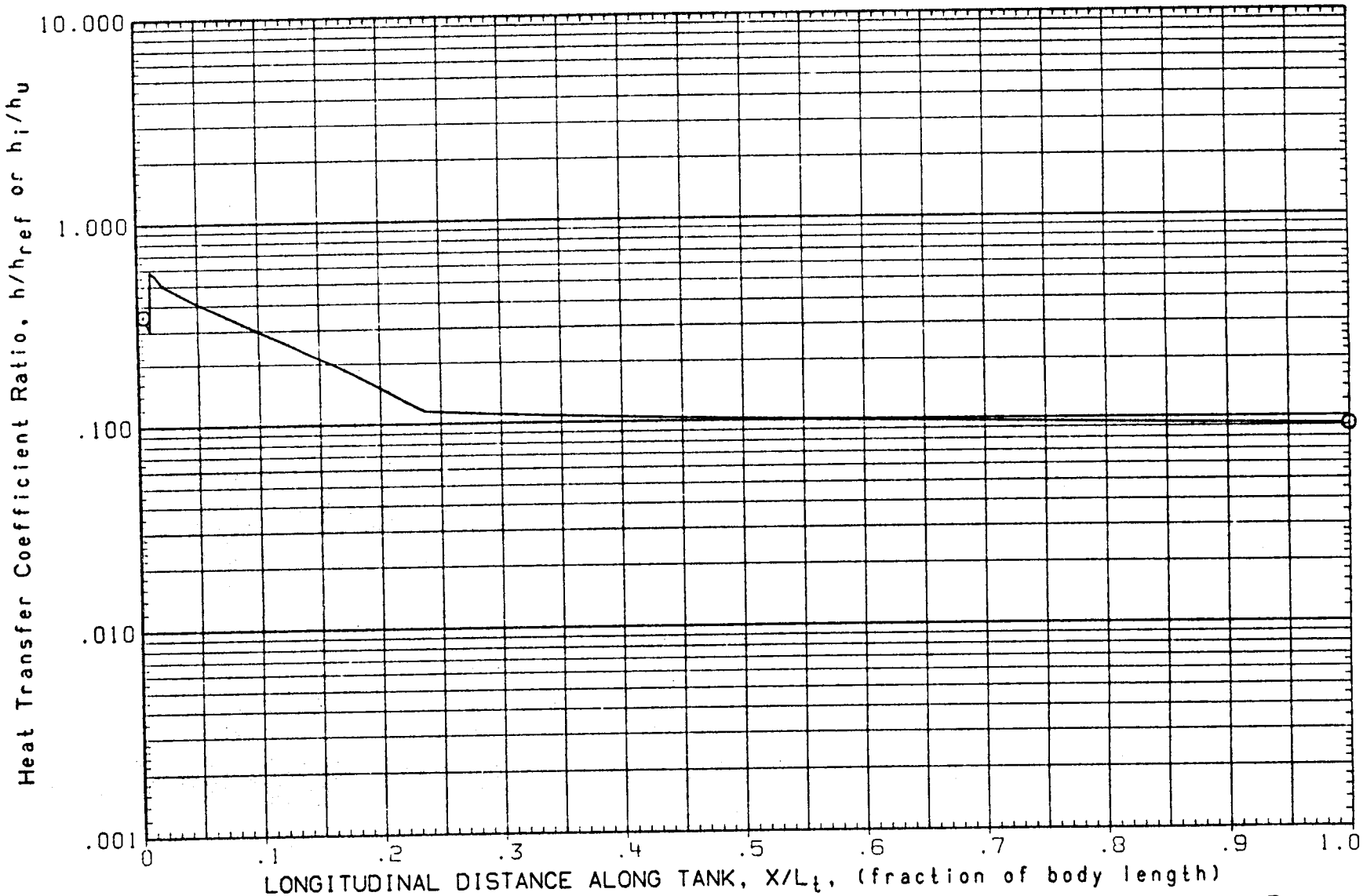

FIG. 4-1 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 39.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT02)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	-3.000
(X4LT02)	◇	IH85 (W.L. TEST) OTS/ET = V4LT02/C9NT05=	HI/HU	3.010	.000	-3.000
(Y4LT02)	△	IH85 (W.L. THEORY) OTS/ET = V4LT02/A9NT05=	HI/HU	3.010	.000	-3.000

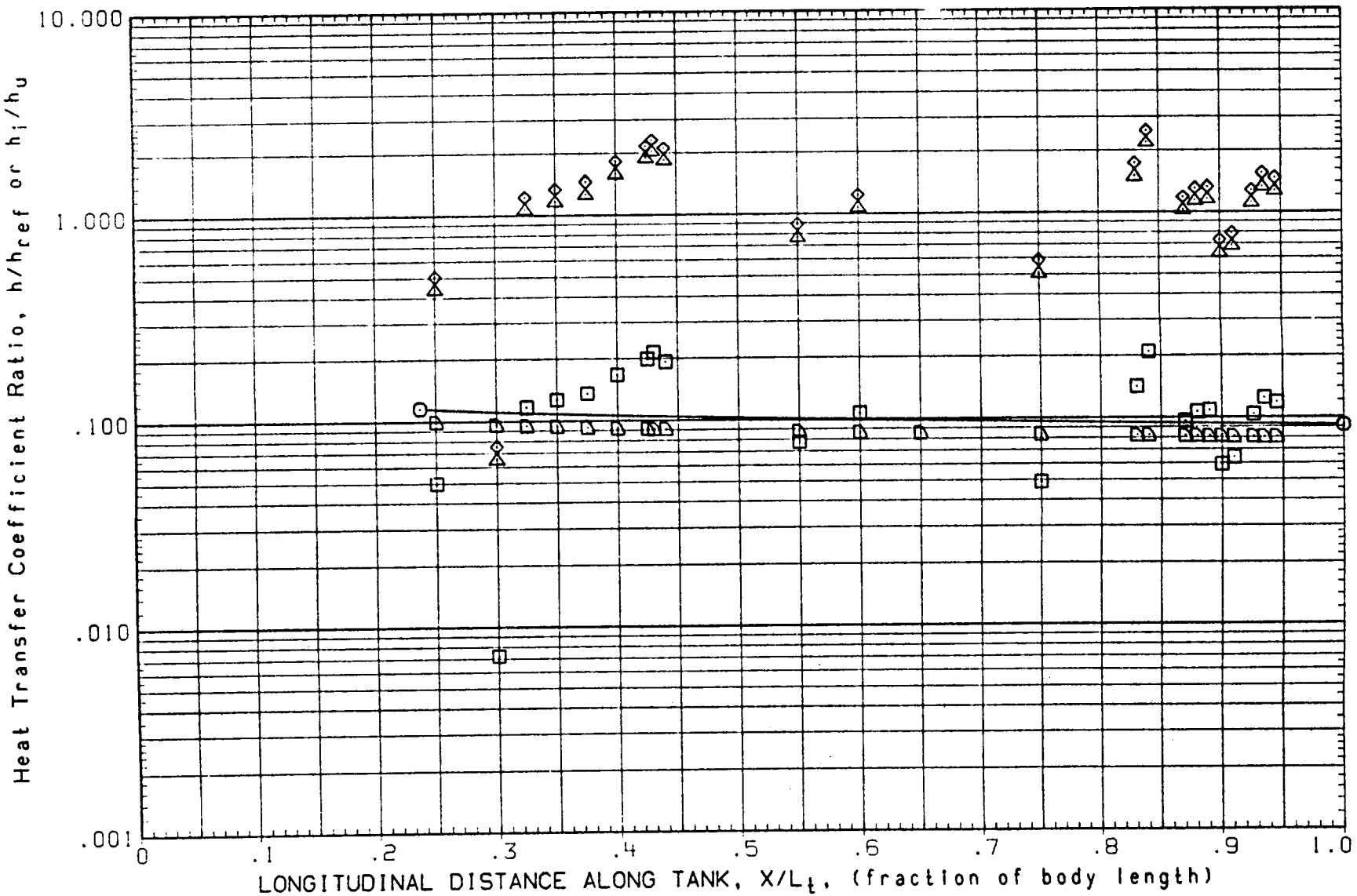

FIG. 4-1 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 45.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	3.010	.000	-3.000
(C9NT05)	⌂	DATA NOT AVAILABLE	3.010	.000	-3.000
(V4LT02)	□	IH85, AEDC V41A-W5, CONFIGURATION O (T) S	3.010	.000	-3.000
(X4LT02)	◇	DATA NOT AVAILABLE	3.010	.000	-3.000
(Y4LT02)	△	IH85 (W.L. THEORY) OTS/ET = V4LT02/A9NT05= HI/HU	3.010	.000	-3.000

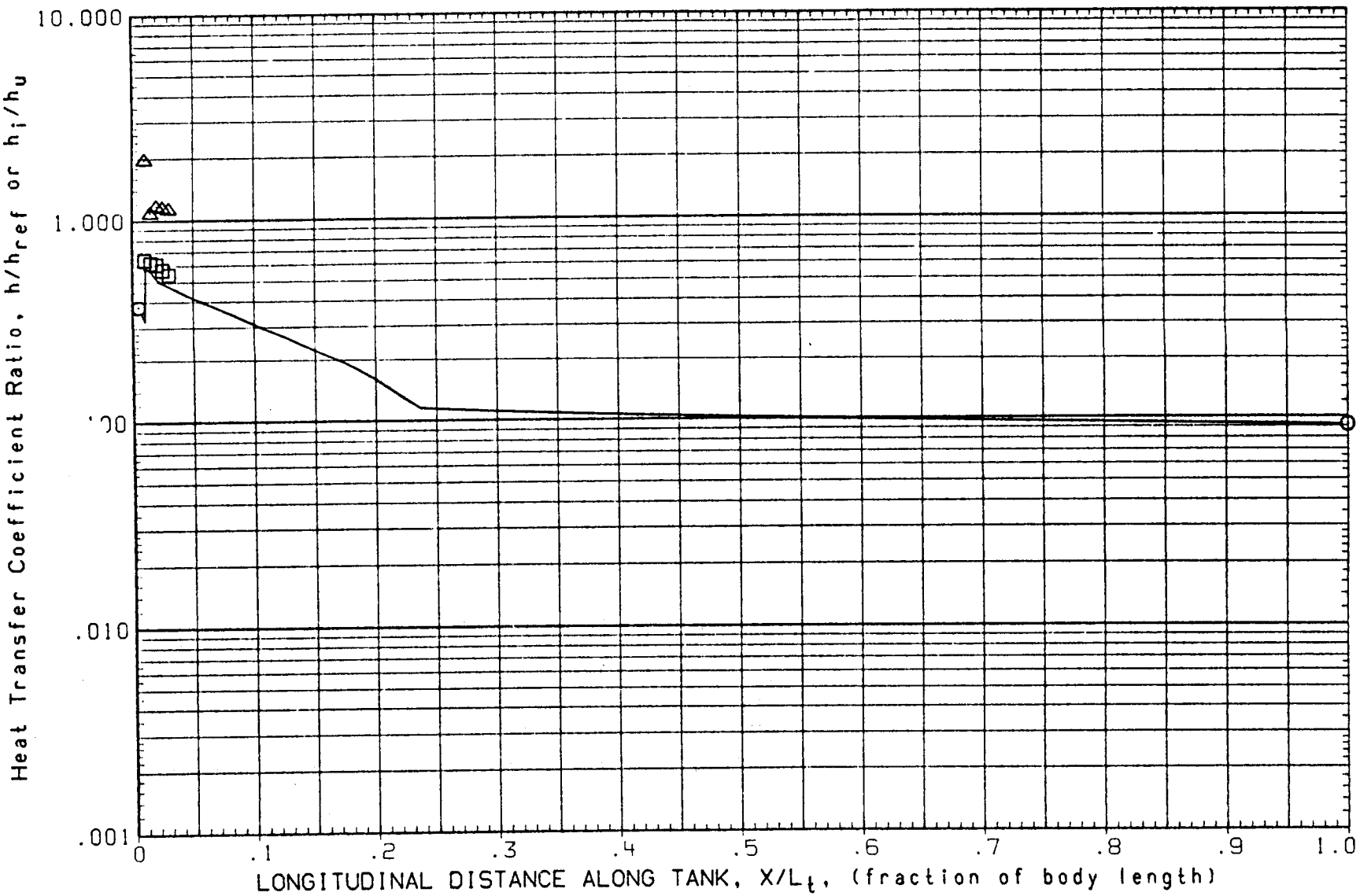

FIG. 4-1 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 180.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⌂	DATA NOT AVAILABLE		3.010	.000	-3.000
(V4LT02)	□	DATA NOT AVAILABLE		3.010	.000	-3.000
(X4LT02)	◇	DATA NOT AVAILABLE		3.010	.000	-3.000
(Y4LT02)	△	DATA NOT AVAILABLE		3.010	.000	-3.000

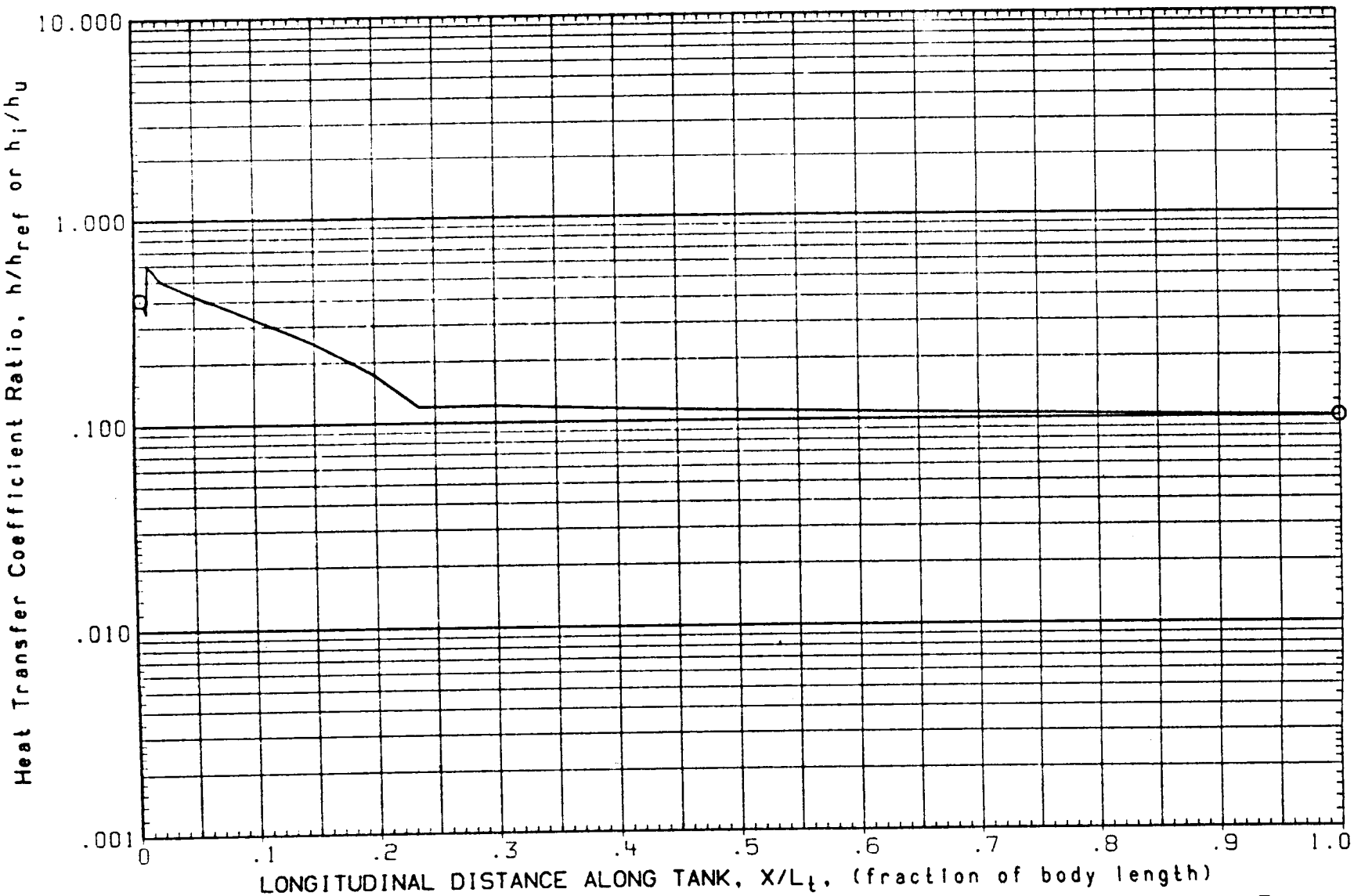

FIG. 4-1 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 235.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT02)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	-3.000
(X4LT02)	◇	IH85 (W.L. TEST) OTS/ET = V4LT02/C9NT05=	HI/HU	3.010	.000	-3.000
(Y4LT02)	△	IH85 (W.L. THEORY) OTS/ET = V4LT02/A9NT05=	HI/HU	3.010	.000	-3.000

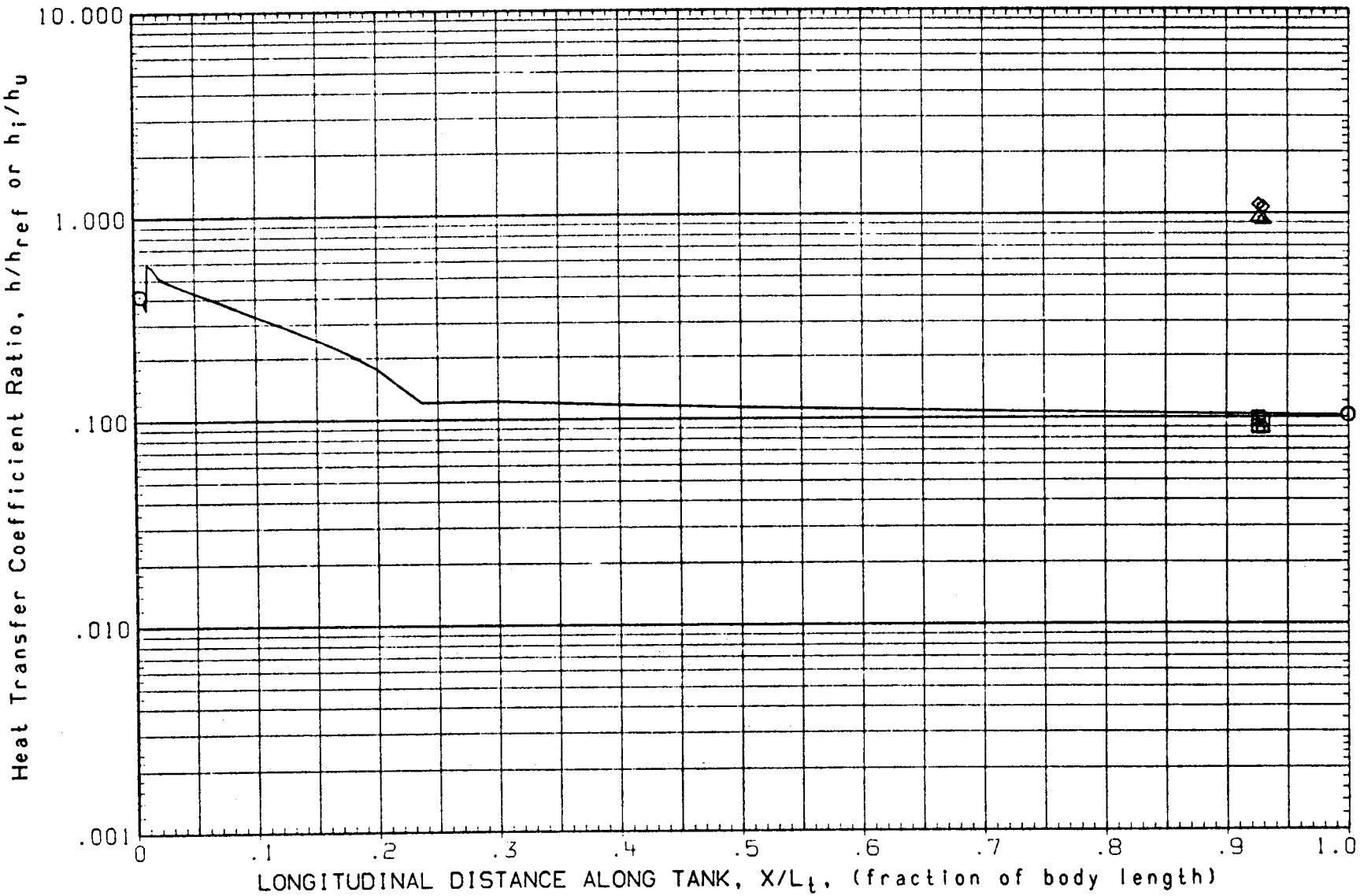

FIG. 4-1 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 247.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⌂	DATA NOT AVAILABLE		3.010	.000	-3.000
(Y4LT02)	□	DATA NOT AVAILABLE		3.010	.000	-3.000
(X4LT02)	◇	DATA NOT AVAILABLE		3.010	.000	-3.000
(Y4LT02)	△	DATA NOT AVAILABLE		3.010	.000	-3.000

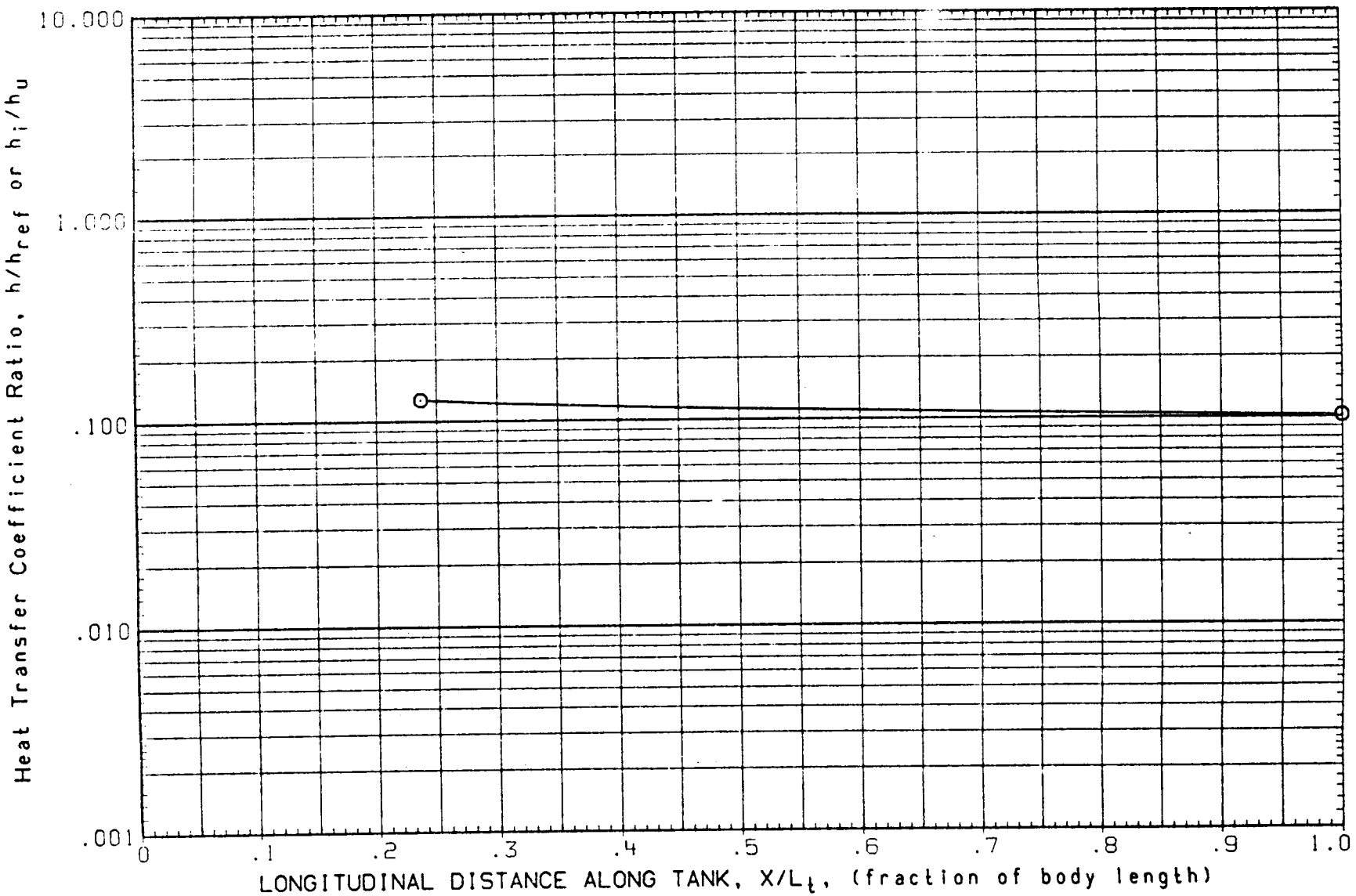

FIG. 4-1 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 247.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT02)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	-3.000
(X4LT02)	◇	IH85 (W.L. TEST) OTS/ET = V4LT02/C9NT05=	HI/HU	3.010	.000	-3.000
(Y4LT02)	△	IH85 (W.L. THEORY) OTS/ET = V4LT02/A9NT05=	HI/HU	3.010	.000	-3.000

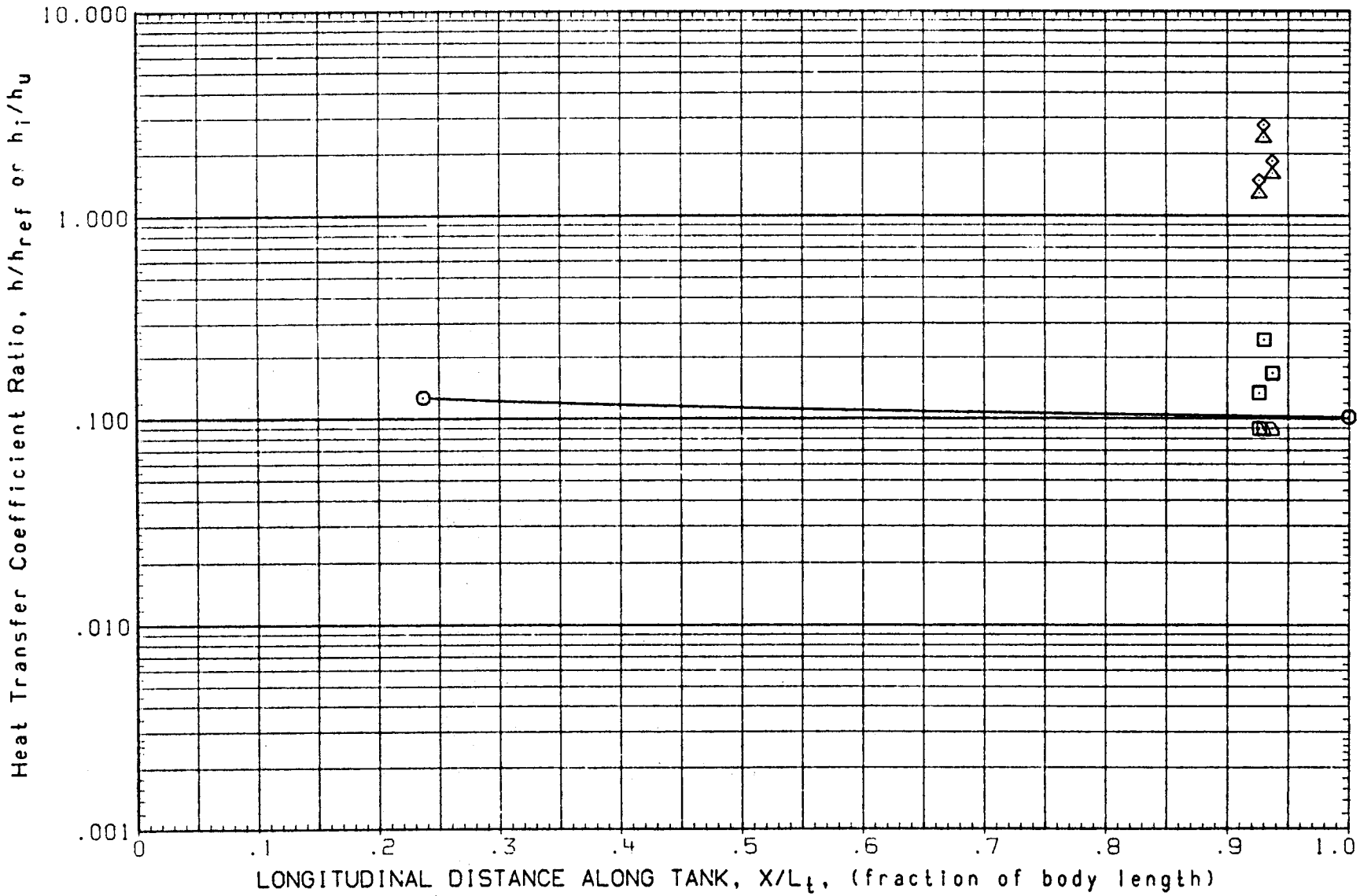

FIG. 4-1 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 250.570

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(C9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT02)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	-3.000
(X4LT02)	◇	IH85 (W.L. TEST) OTS/ET = V4LT02/C9NT05=	HI/HU	3.010	.000	-3.000
(Y4LT02)	△	IH85 (W.L. THEORY) OTS/ET = V4LT02/A9NT05=	HI/HU	3.010	.000	-3.000

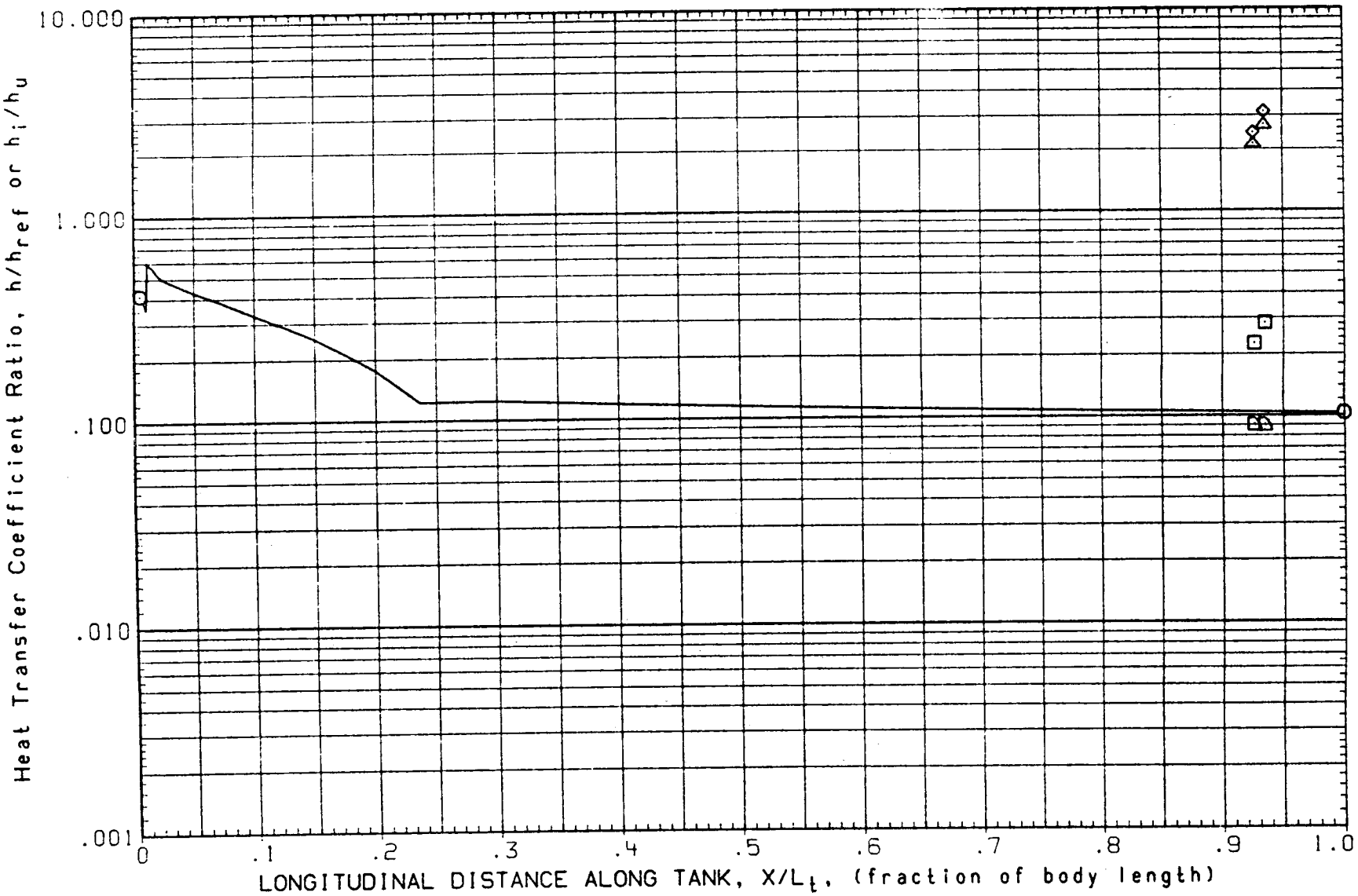

FIG. 4-1 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 258.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT02)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	-3.000
(X4LT02)	◇	IH85 (W.L. TEST) OTS/ET = V4LT02/C9NT05=	HI/HU	3.010	.000	-3.000
(Y4LT02)	△	IH85 (W.L. THEORY) OTS/ET = V4LT02/A9NT05=	HI/HU	3.010	.000	-3.000

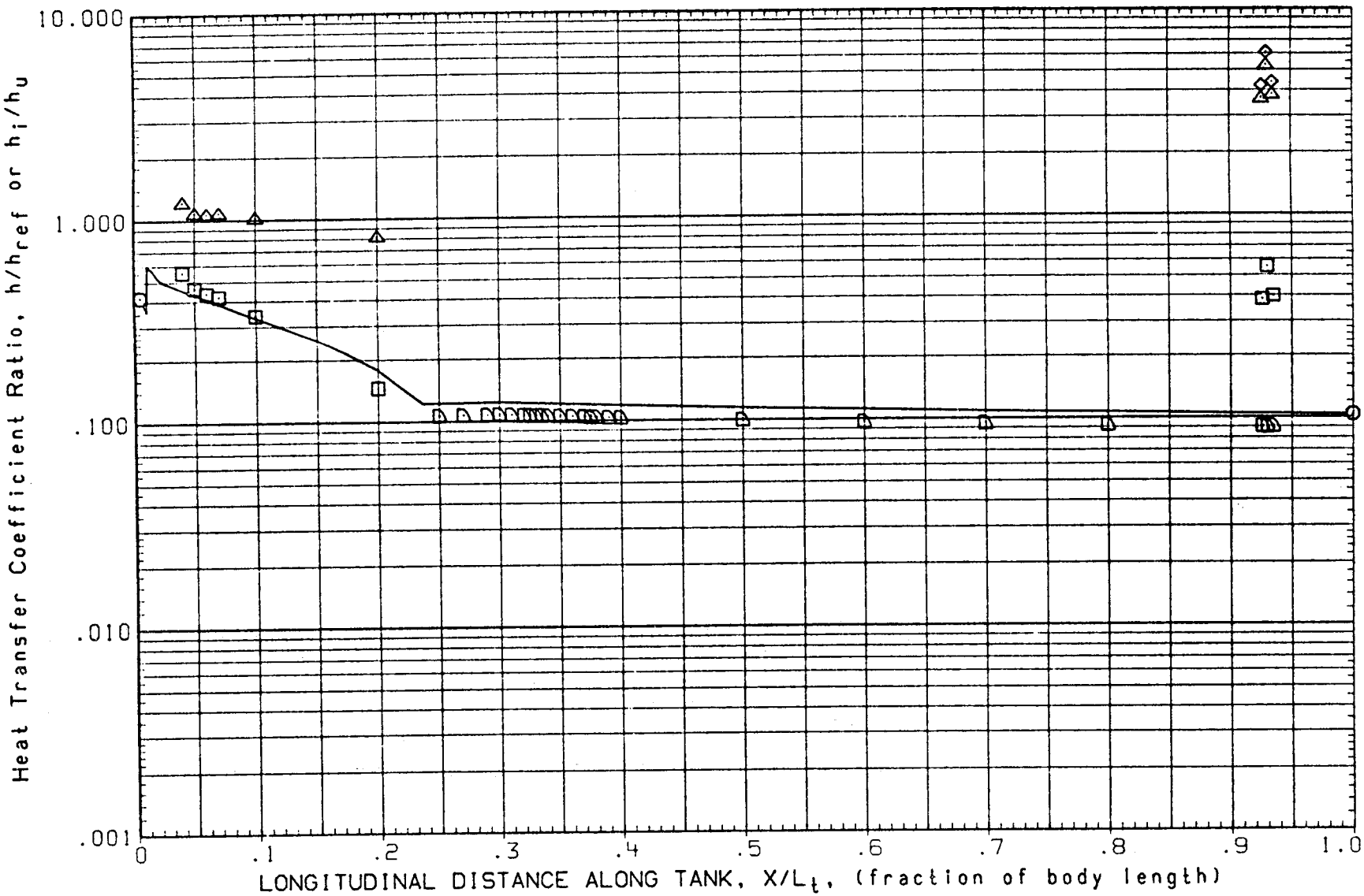

FIG. 4-1 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0≤ X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 270.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT02)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	-3.000
(X4LT02)	◇	IH85 (W.L. TEST) OTS/ET = V4LT02/C9NT05=	HI/HU	3.010	.000	-3.000
(Y4LT02)	△	IH85 (W.L. THEORY) OTS/ET = V4LT02/A9NT05=	HI/HU	3.010	.000	-3.000

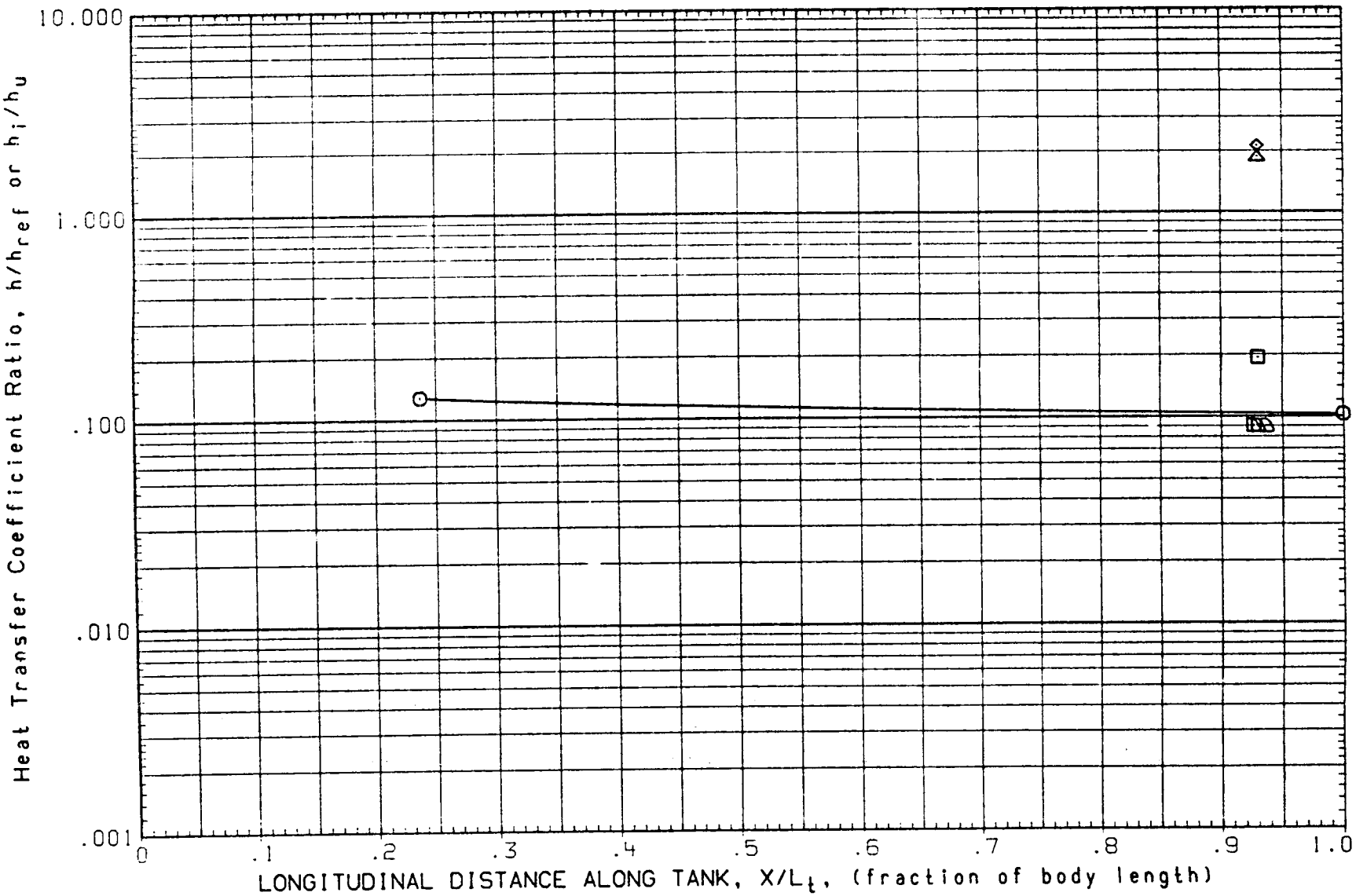

FIG. 4-1 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 289.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	3.010	.000	-3.000
(C9NT05)	⊐	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	3.010	.000	-3.000
(V4LT02)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	3.010	.000	-3.000
(X4LT02)	◇	IH85 (W.L. TEST) OTS/ET = V4LT02/C9NT05= HI/HU	3.010	.000	-3.000
(Y4LT02)	△	IH85 (W.L. THEORY) OTS/ET = V4LT02/A9NT05= HI/HU	3.010	.000	-3.000

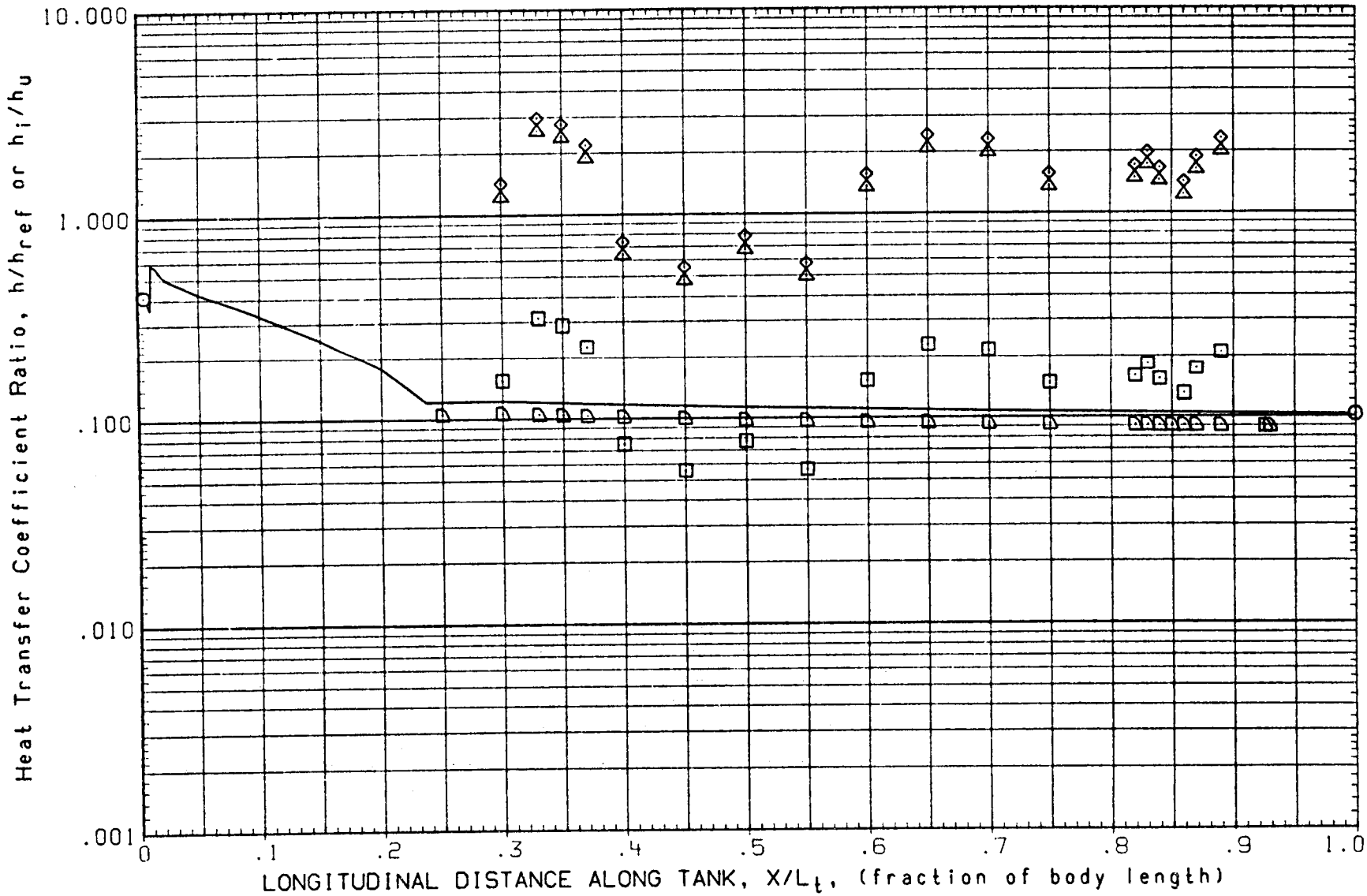

FIG. 4-1 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 292.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	△	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT02)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	-3.000
(X4LT02)	◇	IH85 (W.L. TEST) OTS/ET = V4LT02/C9NT05=	HI/HU	3.010	.000	-3.000
(Y4LT02)	△	IH85 (W.L. THEORY) OTS/ET = V4LT02/A9NT05=	HI/HU	3.010	.000	-3.000

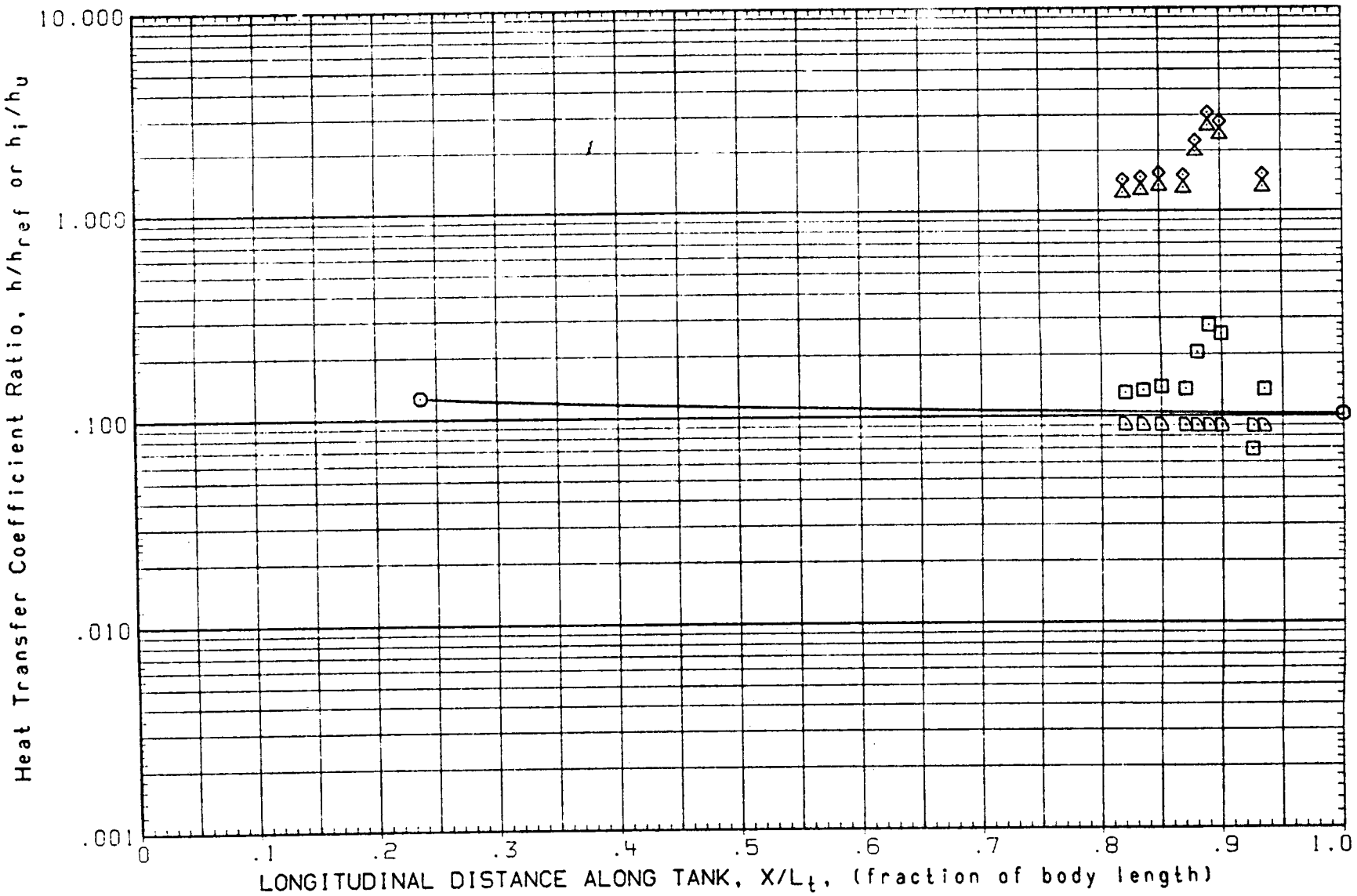

FIG. 4-1 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 301.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT02)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	-3.000
(X4LT02)	◇	IH85 (W.L. TEST) OTS/ET = V4LT02/C9NT05= HI/HU		3.010	.000	-3.000
(Y4LT02)	△	IH85 (W.L. THEORY) OTS/ET = V4LT02/A9NT05= HI/HU		3.010	.000	-3.000

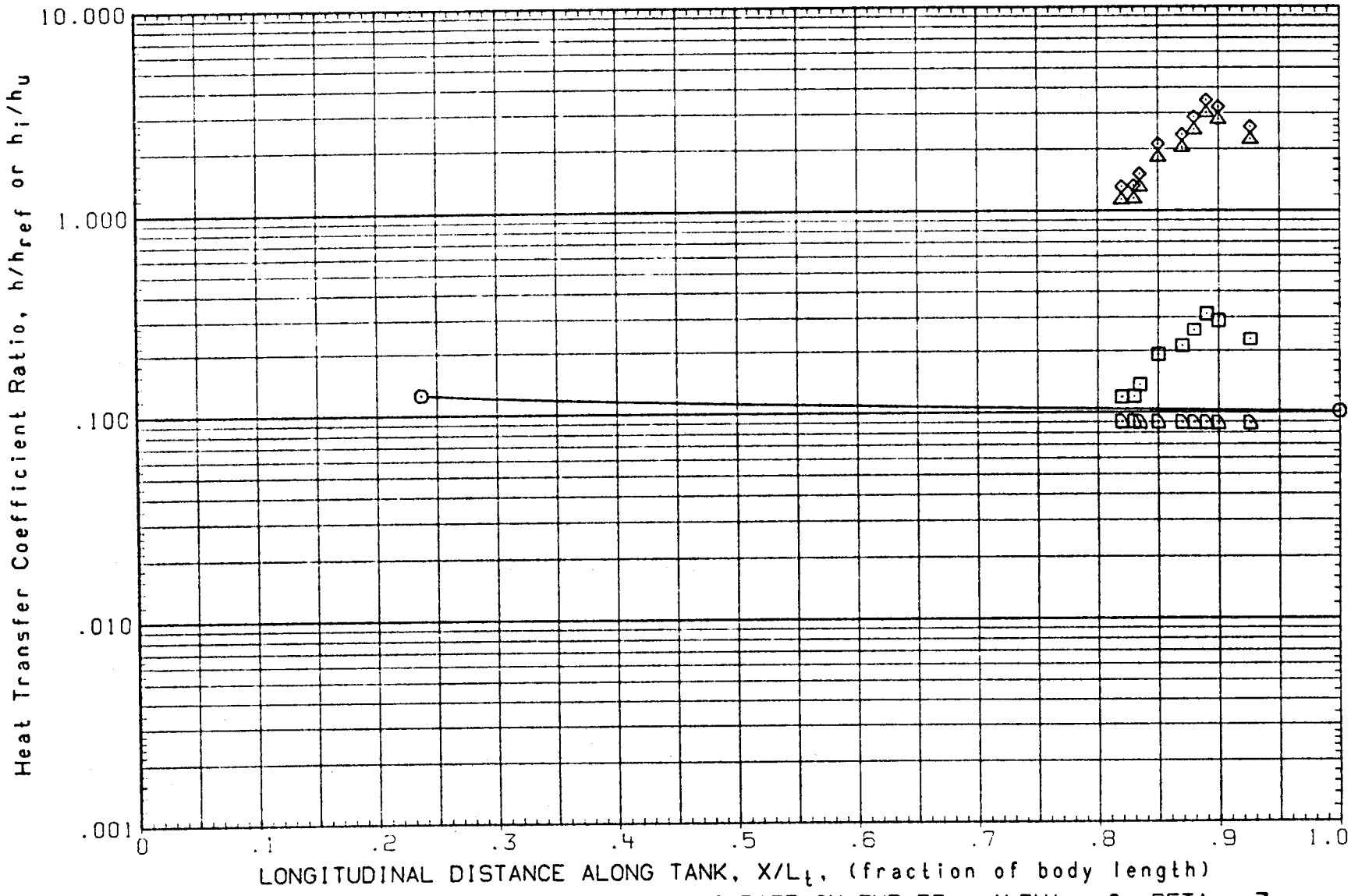

FIG. 4-1 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 305.400

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	◫	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT02)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	-3.000
(X4LT02)	◇	IH85 (W.L. TEST) OTS/ET = V4LT02/C9NT05=	HI/HU	3.010	.000	-3.000
(Y4LT02)	△	IH85 (W.L. THEORY) OTS/ET = V4LT02/A9NT05=	HI/HU	3.010	.000	-3.000

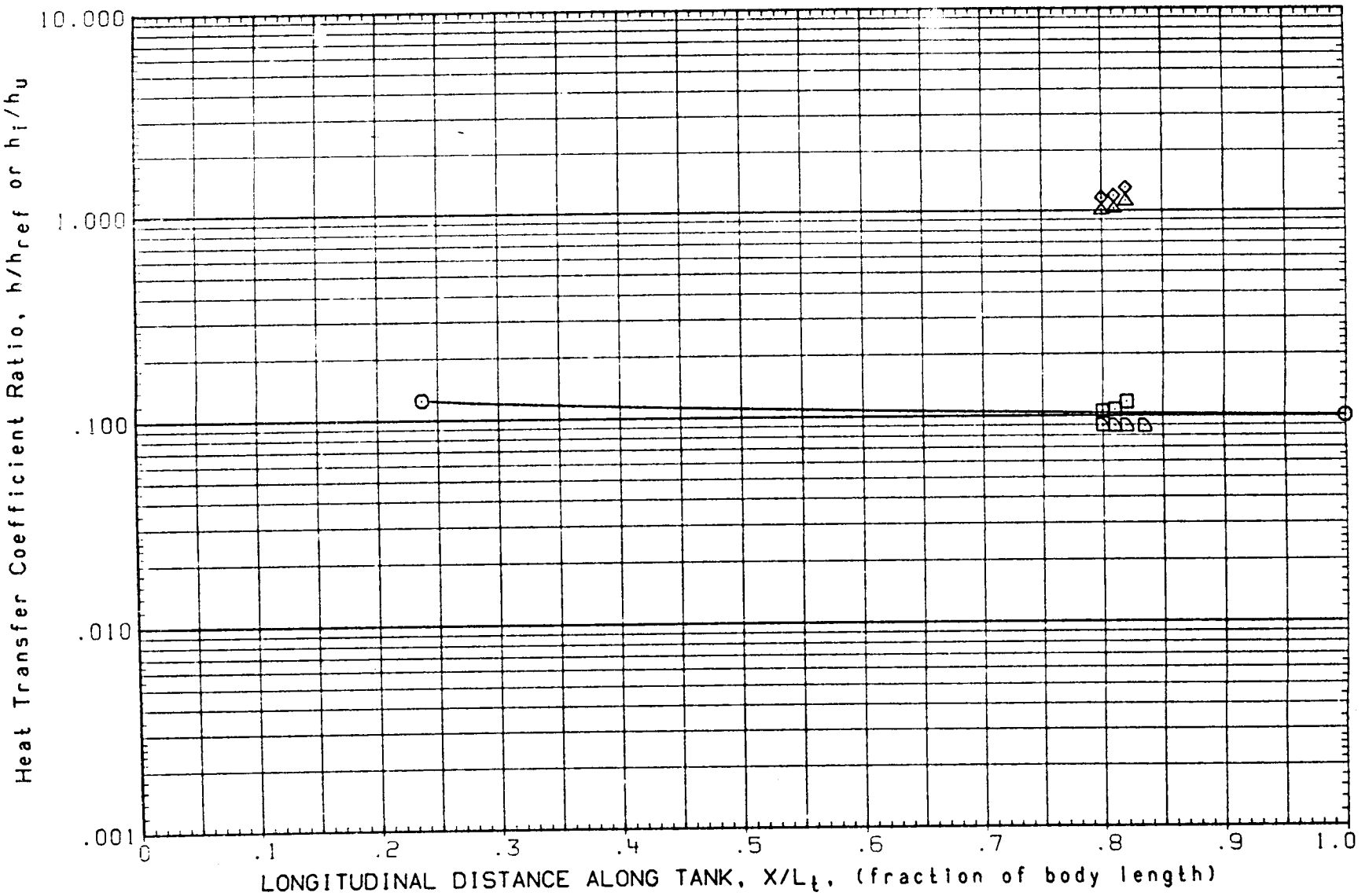

FIG. 4-1 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 309.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT02)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	-3.000
(X4LT02)	◇	IH85 (W.L. TEST) OTS/ET = V4LT02/C9NT05=	HI/HU	3.010	.000	-3.000
(Y4LT02)	△	IH85 (W.L. THEORY) OTS/ET = V4LT02/A9NT05=	HI/HU	3.010	.000	-3.000

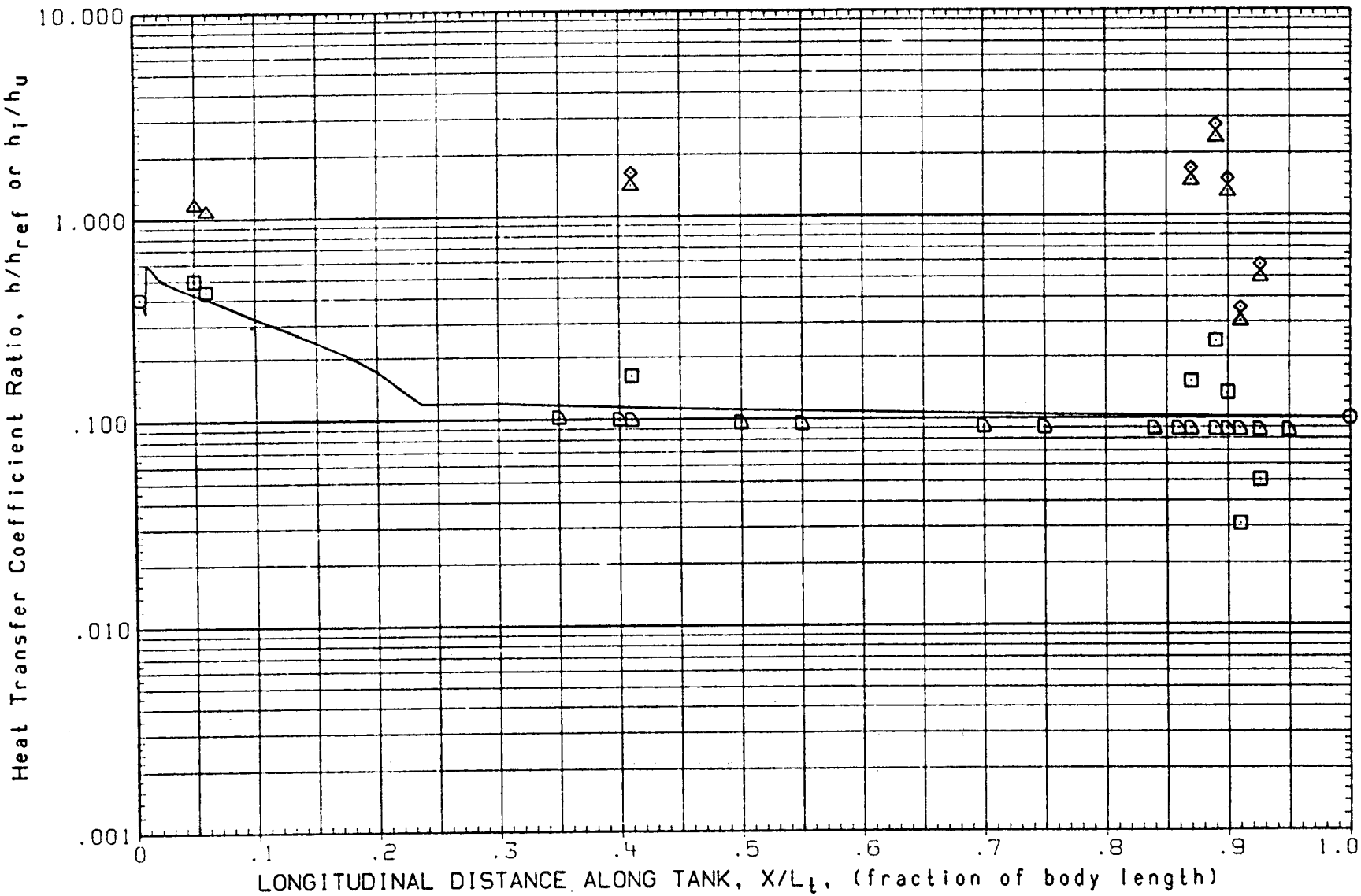

FIG. 4-1 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 315.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT02)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	-3.000
(X4LT02)	◇	IH85 (W.L. TEST) OTS/ET = V4LT02/C9NT05=	HI/HU	3.010	.000	-3.000
(Y4LT02)	△	IH85 (W.L. THEORY) OTS/ET = V4LT02/A9NT05=	HI/HU	3.010	.000	-3.000

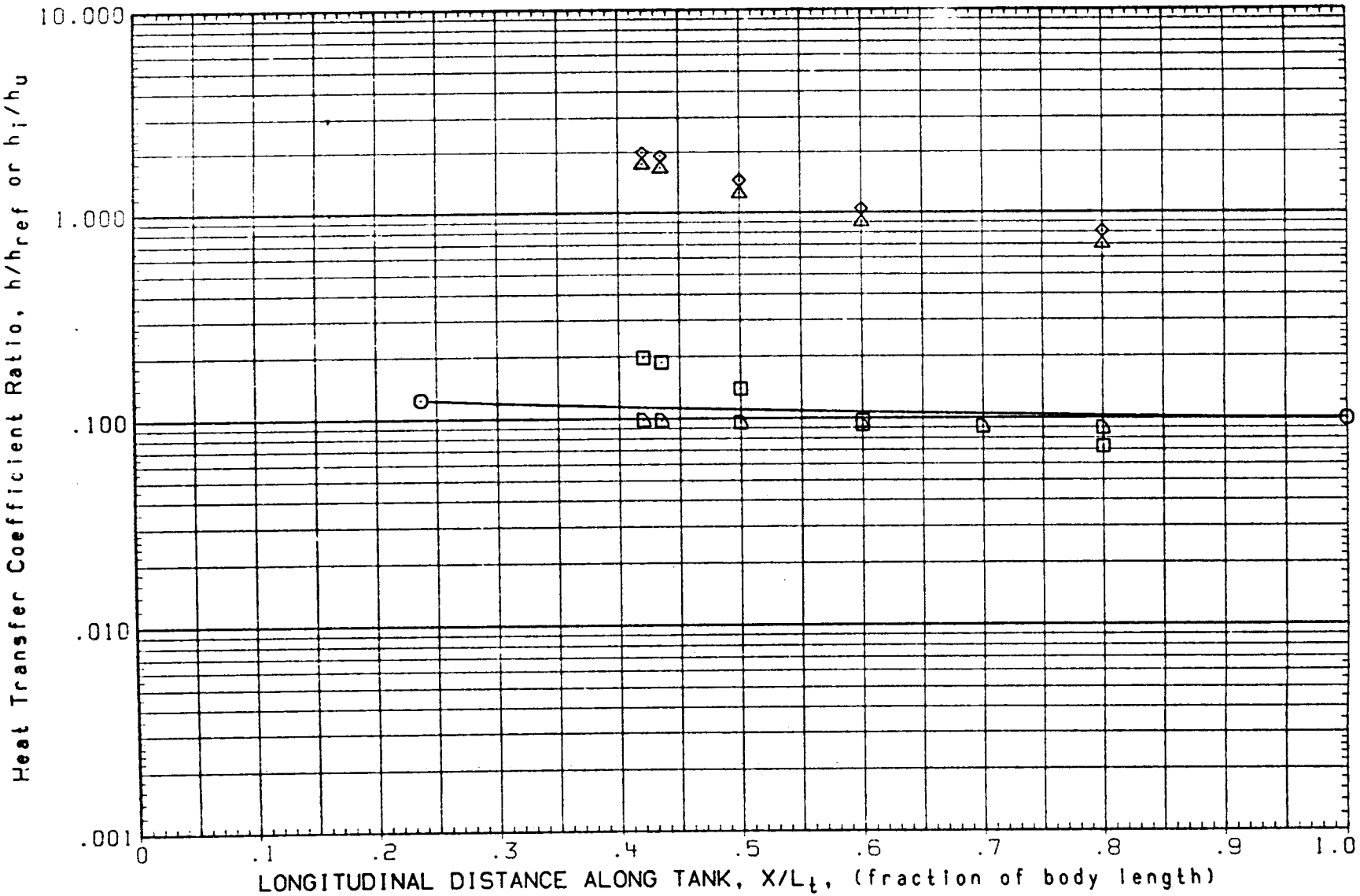

FIG. 4-1 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 322.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	▷	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT02)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	-3.000
(X4LT02)	◇	IH85 (W.L. TEST) OTS/ET = V4LT02/C9NT05=	HI/HU	3.010	.000	-3.000
(Y4LT02)	△	IH85 (W.L. THEORY) OTS/ET = V4LT02/A9NT05=	HI/HU	3.010	.000	-3.000

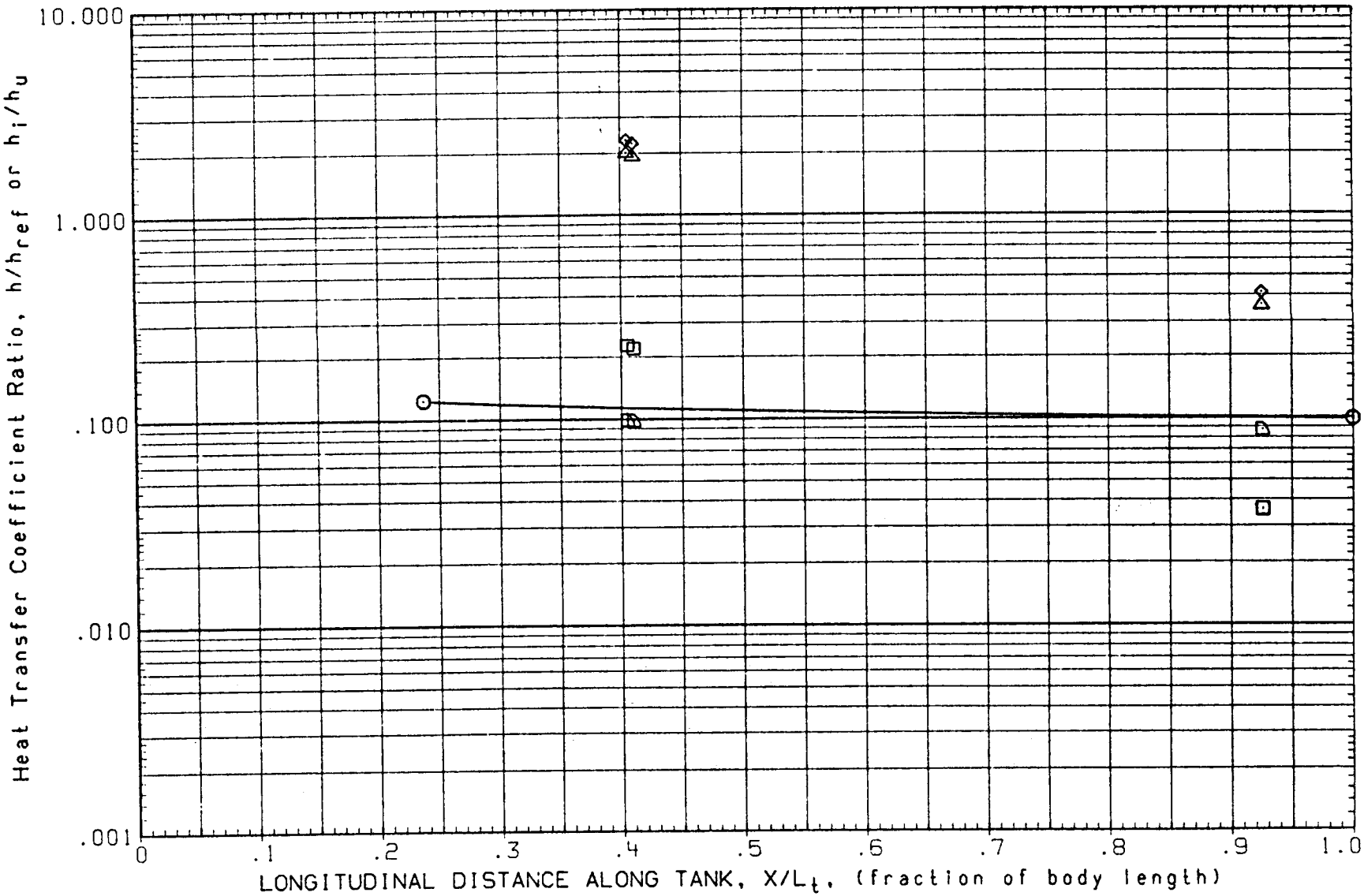

FIG. 4-1 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 324.450

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT02)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	-3.000
(X4LT02)	◇	IH85 (W.L. TEST) OTS/ET = V4LT02/C9NT05=	HI/HU	3.010	.000	-3.000
(Y4LT02)	△	IH85 (W.L. THEORY) OTS/ET = V4LT02/A9NT05=	HI/HU	3.010	.000	-3.000

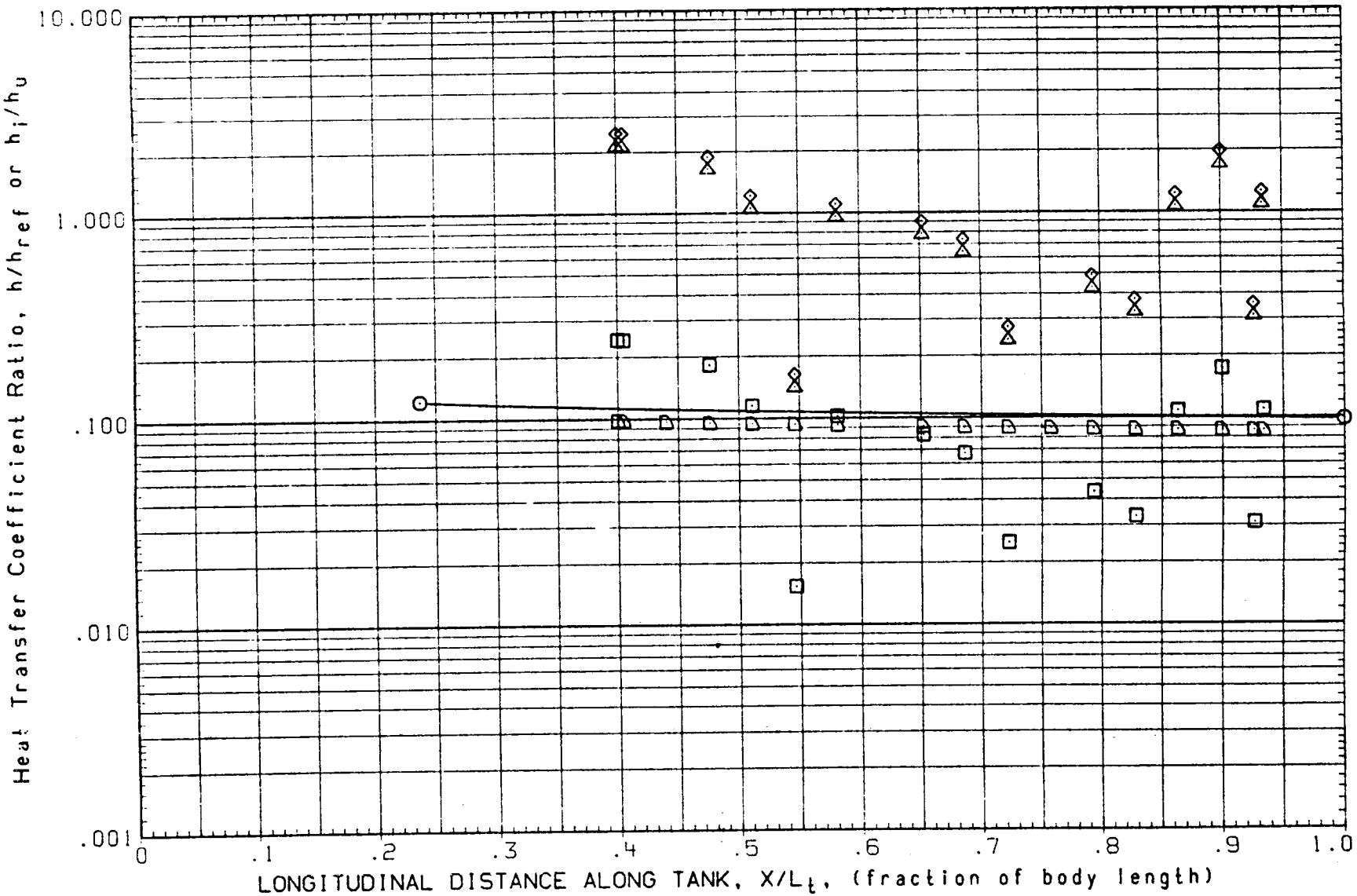

FIG. 4-1 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 336.850

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT02)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	-3.000
(X4LT02)	◇	IH85 (W.L. TEST) OTS/ET = V4LT02/C9NT05=	HI/HU	3.010	.000	-3.000
(Y4LT02)	△	IH85 (W.L. THEORY) OTS/ET = V4LT02/A9NT05=	HI/HU	3.010	.000	-3.000

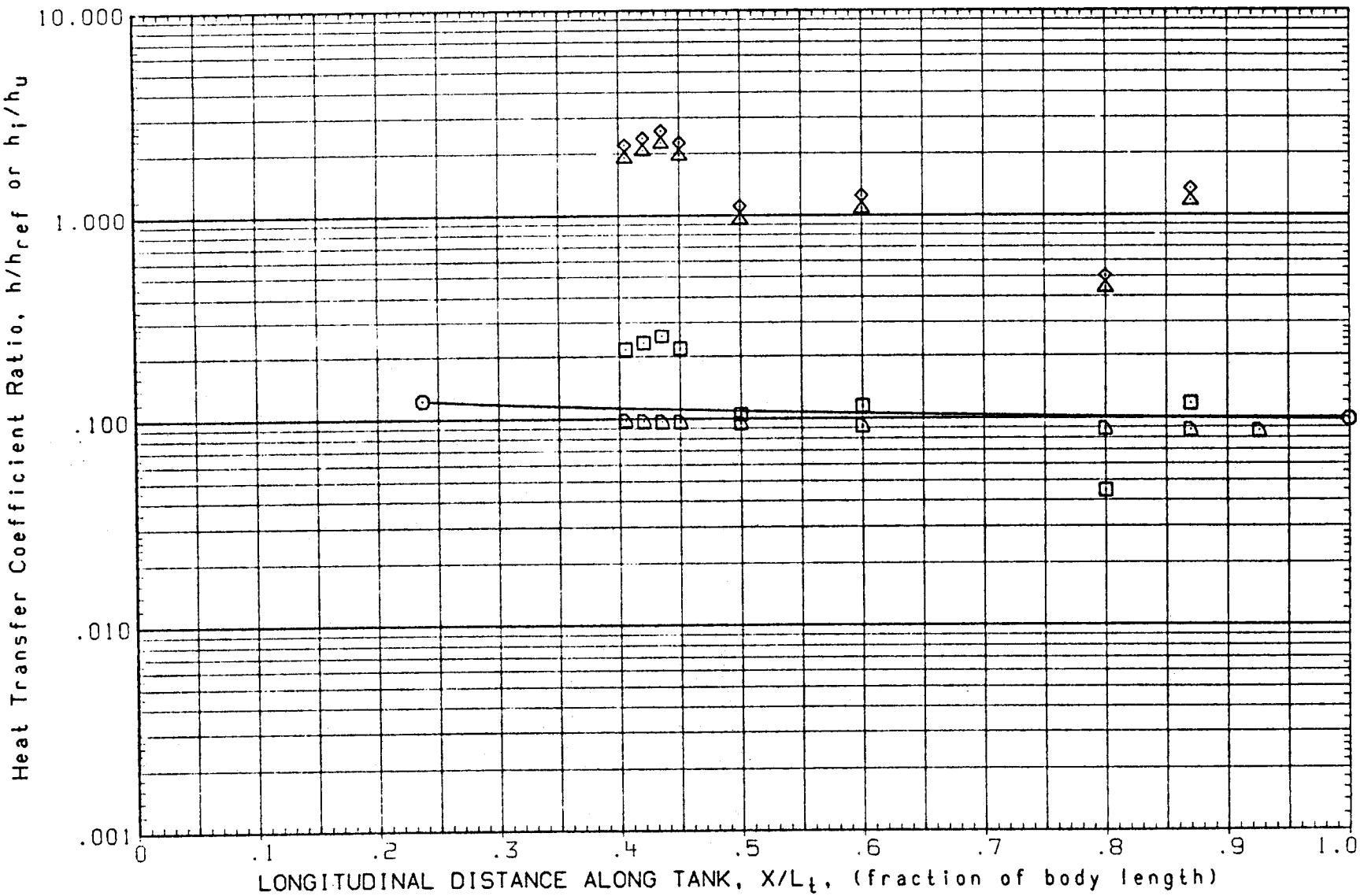

FIG. 4-1 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 330.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT02)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	-3.000
(X4LT02)	◇	IH85 (W.L. TEST) OTS/ET = V4LT02/C9NT05=	HI/HU	3.010	.000	-3.000
(Y4LT02)	△	IH85 (W.L. THEORY) OTS/ET = V4LT02/A9NT05=	HI/HU	3.010	.000	-3.000

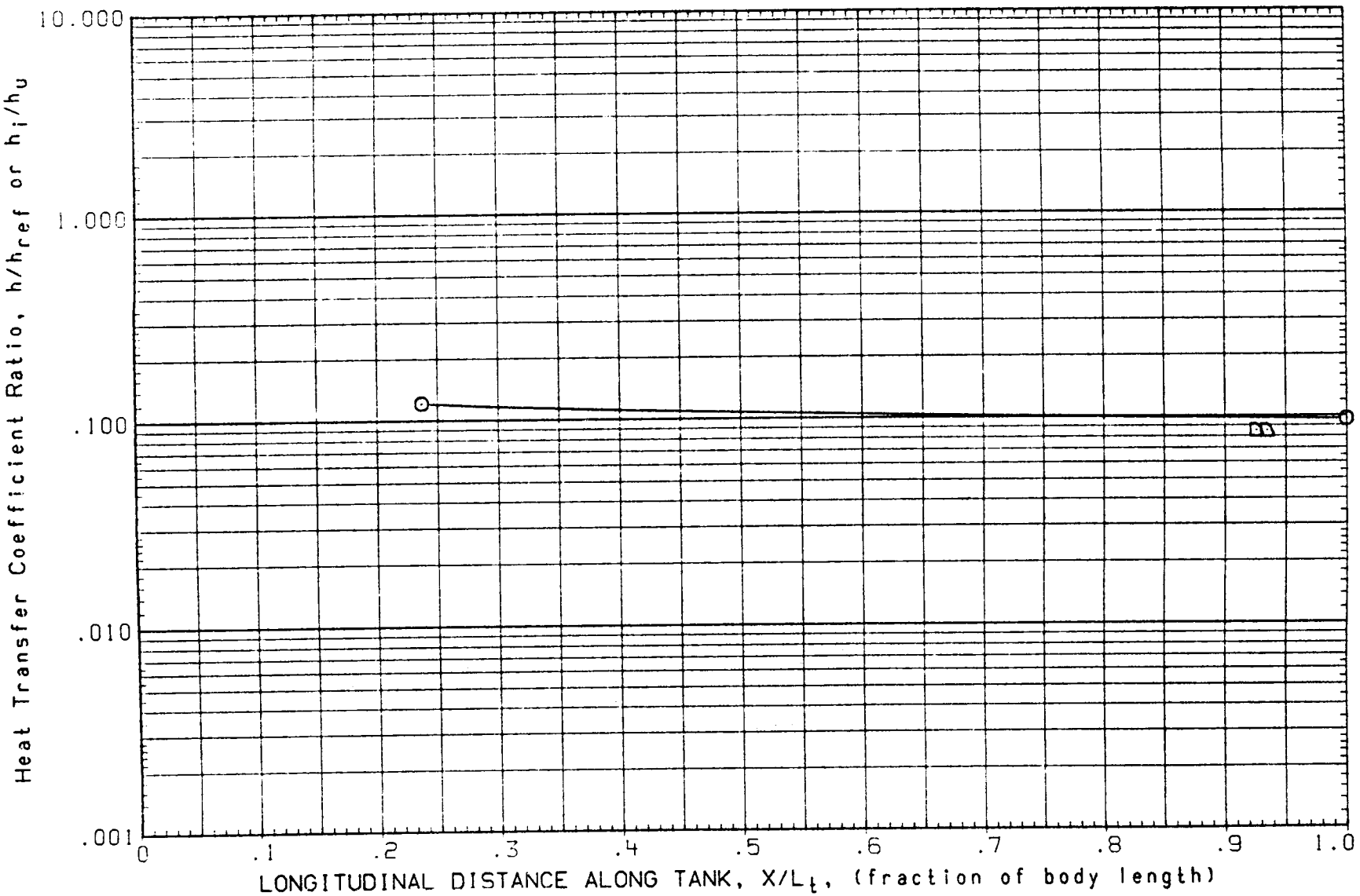

FIG. 4-1 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 334.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT02)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	-3.000
(X4LT02)	◇	IH85 (W,L, TEST) OTS/ET = V4LT02/C9NT05=	HI/HU	3.010	.000	-3.000
(Y4LT02)	△	IH85 (W,L, THEORY) OTS/ET = V4LT02/A9NT05=	HI/HU	3.010	.000	-3.000

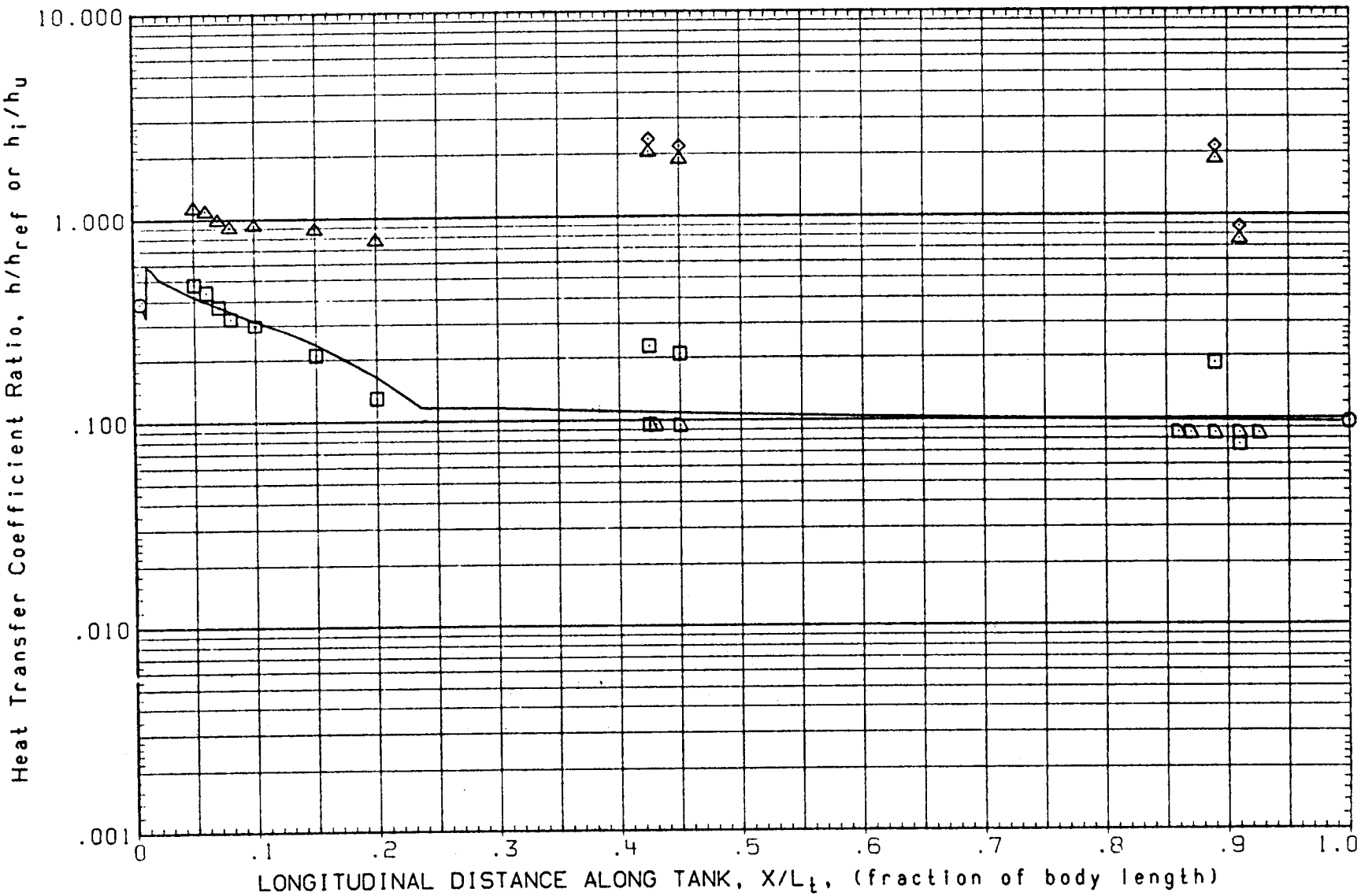

FIG. 4-1 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 337.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(Y4LT02)	□	DATA NOT AVAILABLE		3.010	.000	-3.000
(X4LT02)	◇	DATA NOT AVAILABLE		3.010	.000	-3.000
(Y4LT02)	△	DATA NOT AVAILABLE		3.010	.000	-3.000

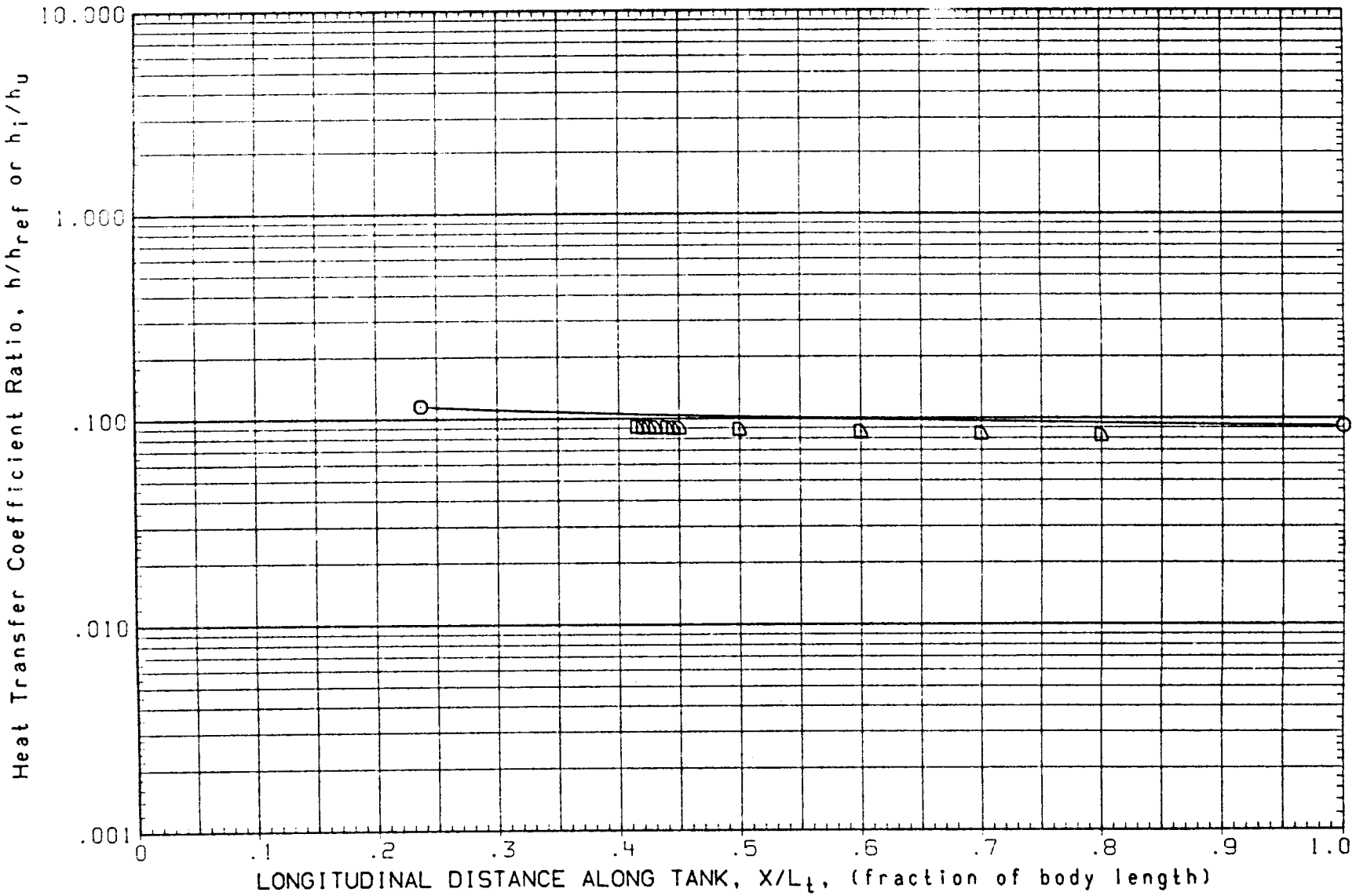

FIG. 4-1 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 343.120

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S..TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT02)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	-3.000
(X4LT02)	◇	IH85 (W.L. TEST) OTS/ET = V4LT02/C9NT05=	HI/HU	3.010	.000	-3.000
(Y4LT02)	△	IH85 (W.L. THEORY) OTS/ET = V4LT02/A9NT05=	HI/HU	3.010	.000	-3.000

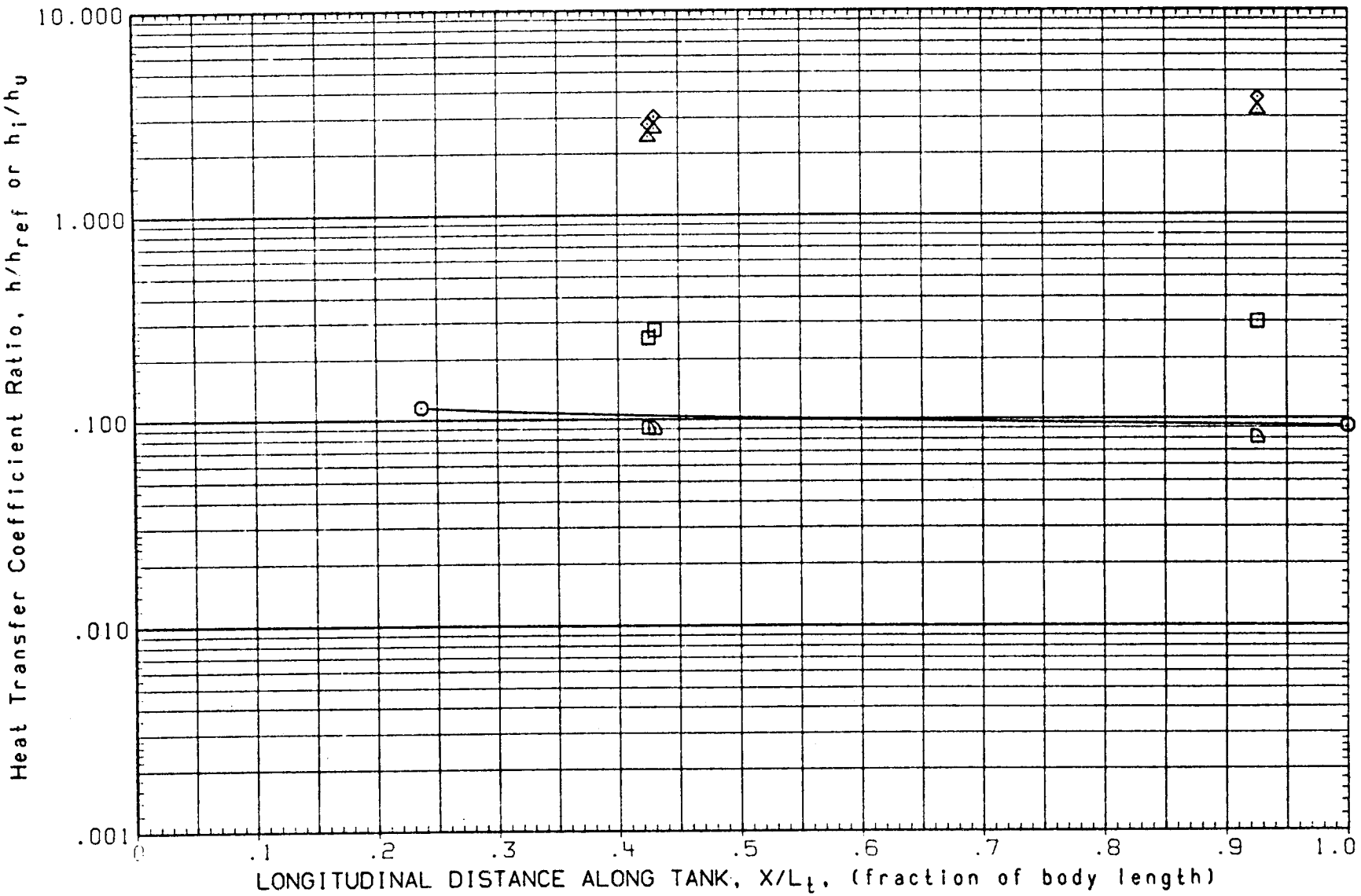

FIG. 4-1 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 345.560

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT02)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	-3.000
(X4LT02)	◇	IH85 (W.L. TEST) OTS/ET = V4LT02/C9NT05=	HI/HU	3.010	.000	-3.000
(Y4LT02)	△	IH85 (W.L. THEORY) OTS/ET = V4LT02/A9NT05=	HI/HU	3.010	.000	-3.000

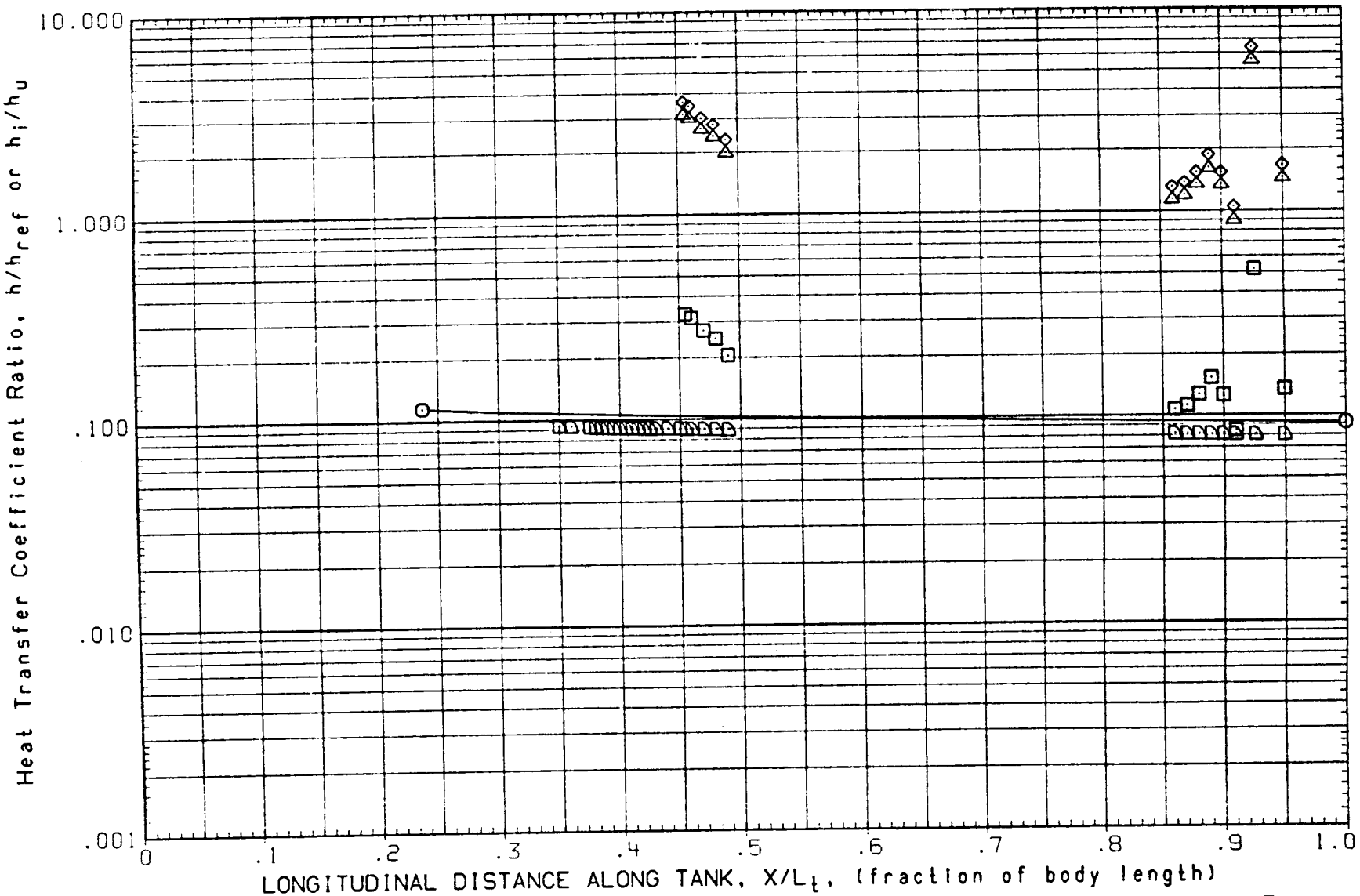

FIG. 4-1 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 348.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT02)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	-3.000
(X4LT02)	◇	IH85 (W.L. TEST) OTS/ET = V4LT02/C9NT05=	HI/HU	3.010	.000	-3.000
(Y4LT02)	△	IH85 (W.L. THEORY) OTS/ET = V4LT02/A9NT05=	HI/HU	3.010	.000	-3.000

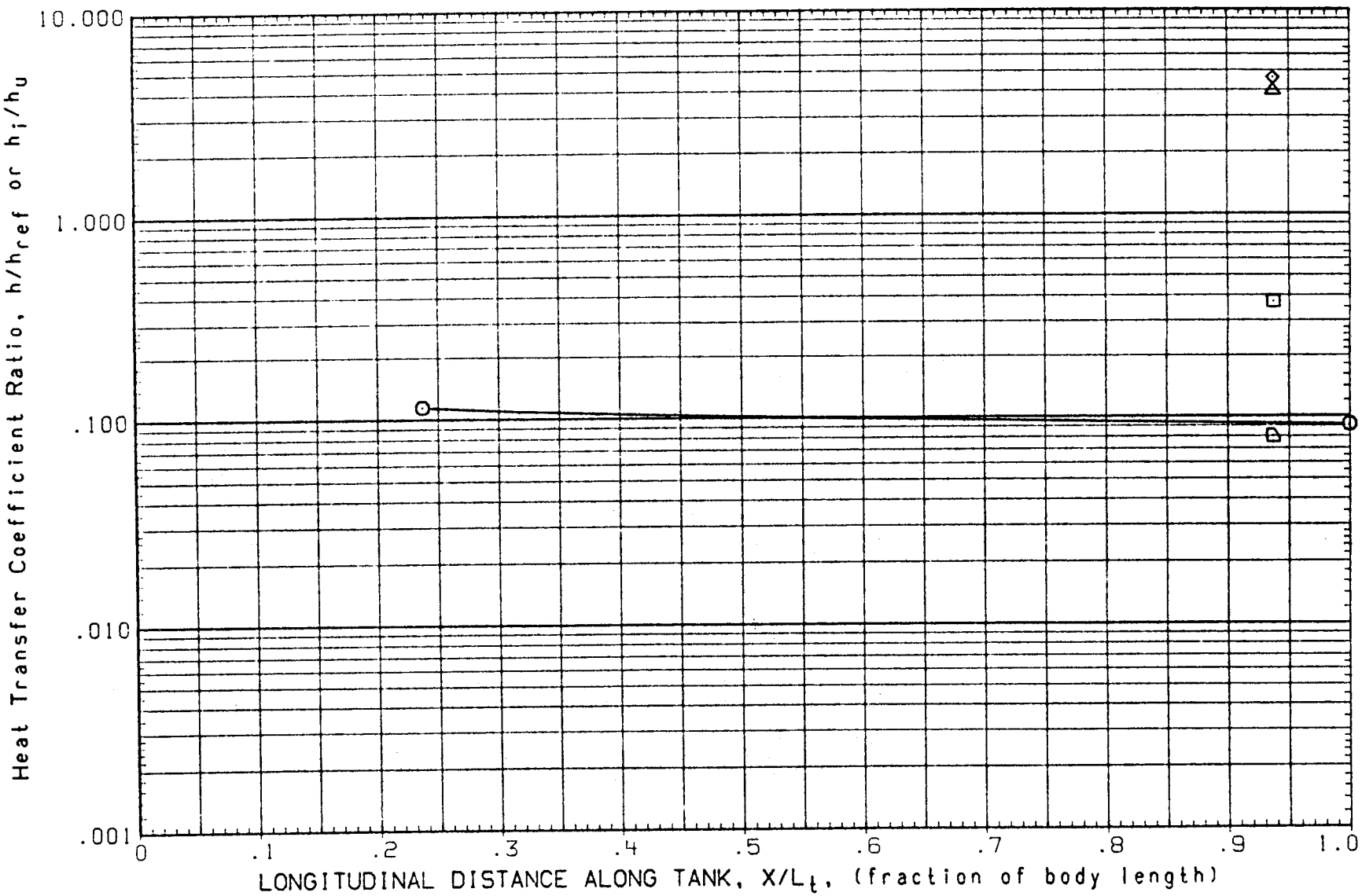

FIG. 4-1 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 352.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT02)	□	IH85, AEDC V41A-W5, CONFIGURATION C (T) S		3.010	.000	-3.000
(X4LT02)	◇	IH85 (W.L. TEST) OTS/ET = V4LT02/C9NT05=	HI/HU	3.010	.000	-3.000
(Y4LT02)	△	IH85 (W.L. THEORY) OTS/ET = V4LT02/A9NT05=	HI/HU	3.010	.000	-3.000

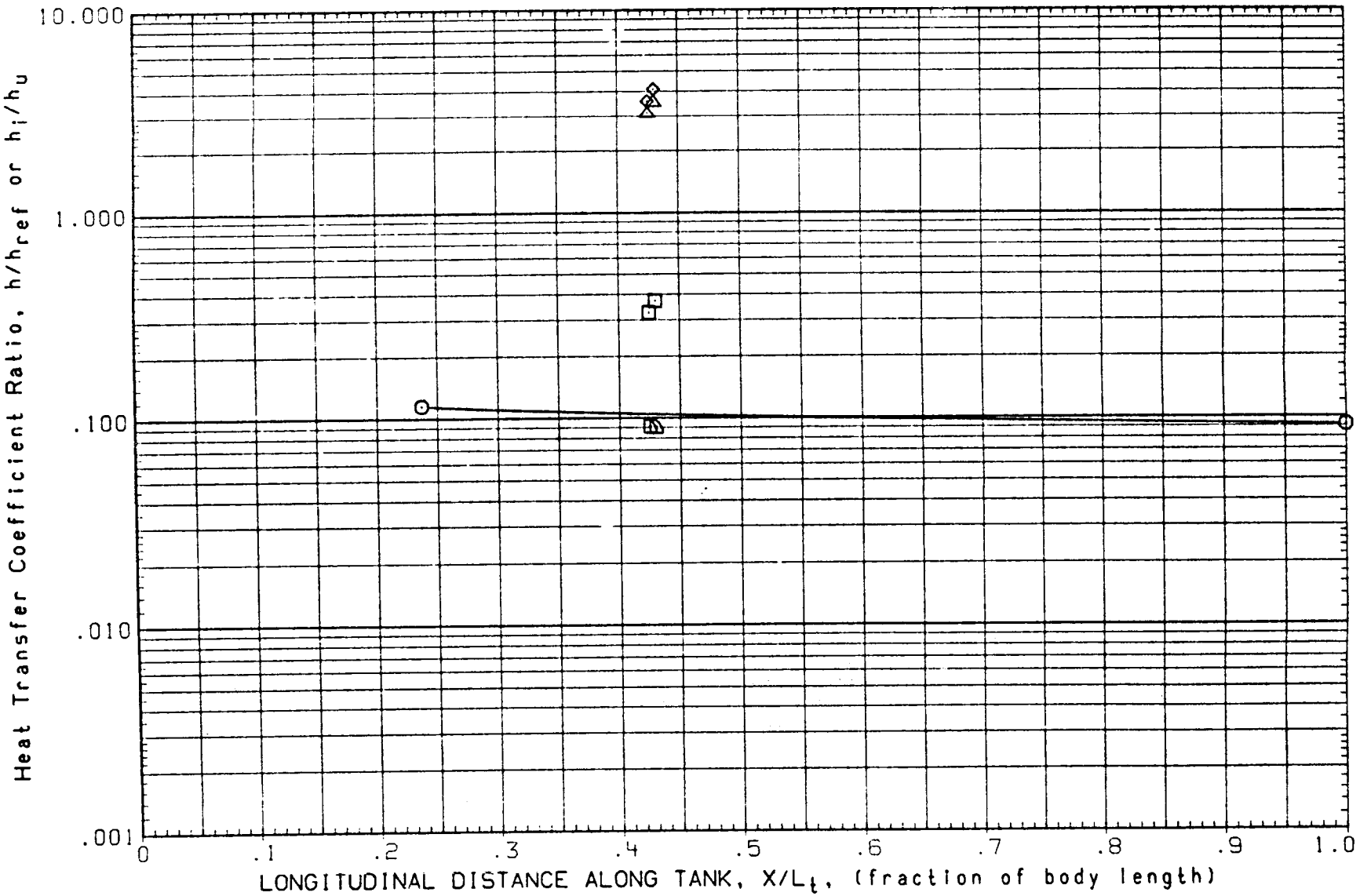

FIG. 4-1 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 354.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⬠	DATA NOT AVAILABLE		3.010	.000	-3.000
(Y4LT02)	□	DATA NOT AVAILABLE		3.010	.000	-3.000
(X4LT02)	◇	DATA NOT AVAILABLE		3.010	.000	-3.000
(Y4LT02)	△	DATA NOT AVAILABLE		3.010	.000	-3.000

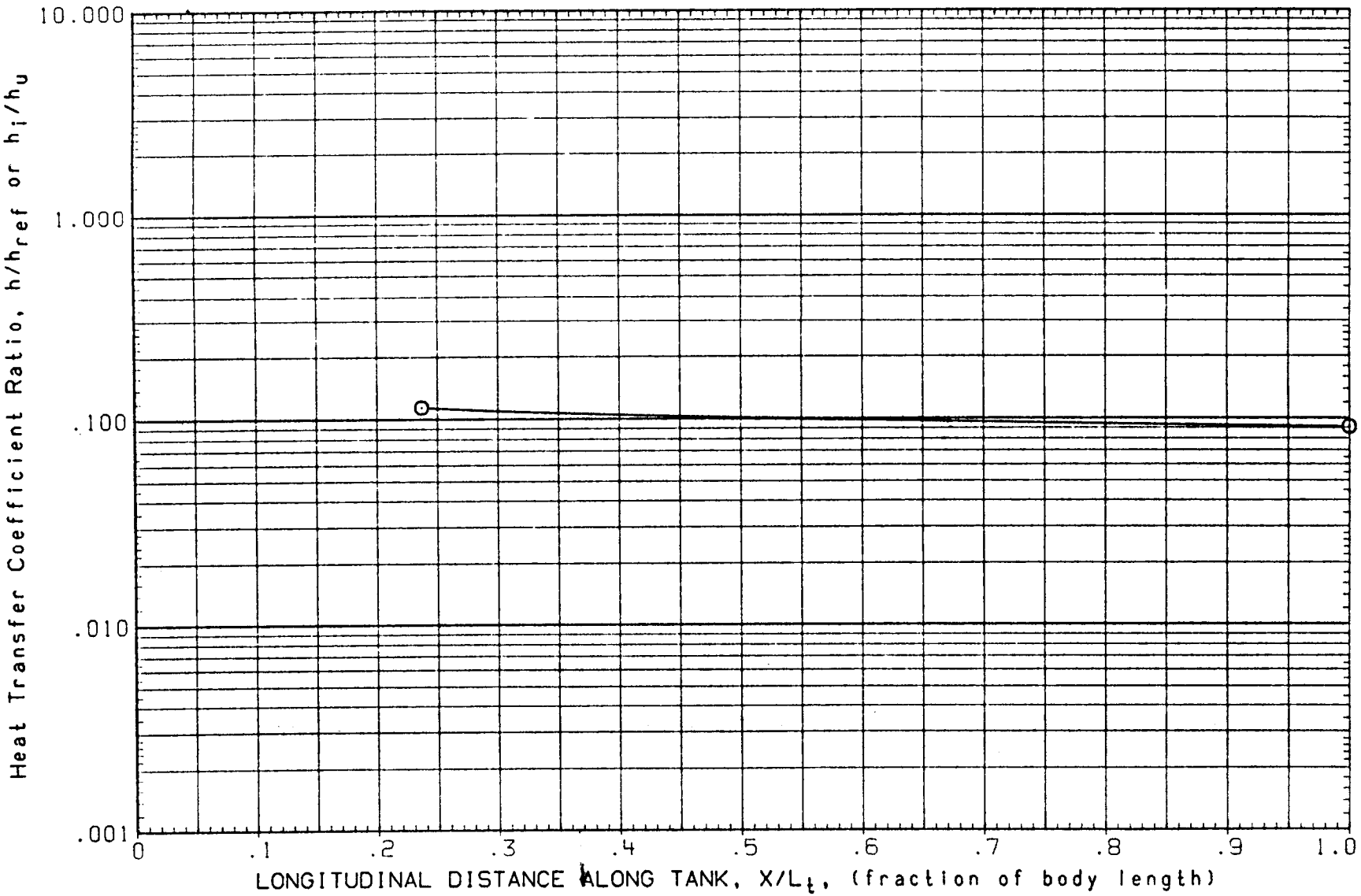

FIG. 4-1 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 355.160

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⬠	DATA NOT AVAILABLE		3.010	.000	-3.000
(Y4LT02)	□	DATA NOT AVAILABLE		3.010	.000	-3.000
(X4LT02)	◇	DATA NOT AVAILABLE		3.010	.000	-3.000
(Y4LT02)	△	DATA NOT AVAILABLE		3.010	.000	-3.000

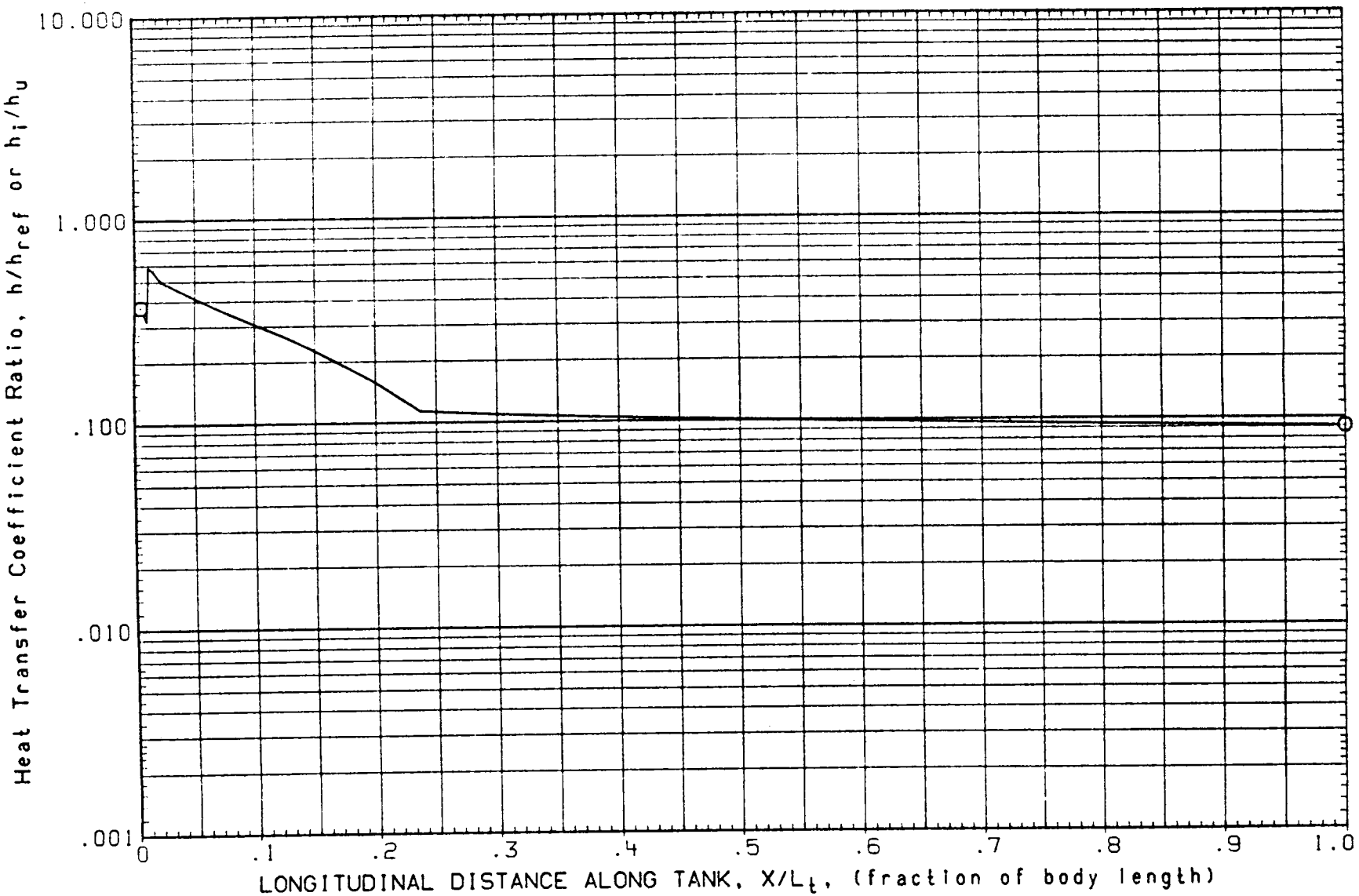

FIG. 4-1 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 360.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT03)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	.000
(X4LT03)	◇	IH85 (W.L. TEST) OTS/ET = V4LT03/C9NT06=	HI/HU	3.010	.000	.000
(Y4LT03)	△	IH85 (W.L. THEORY) OTS/ET = V4LT03/A9NT06=	HI/HU	3.010	.000	.000

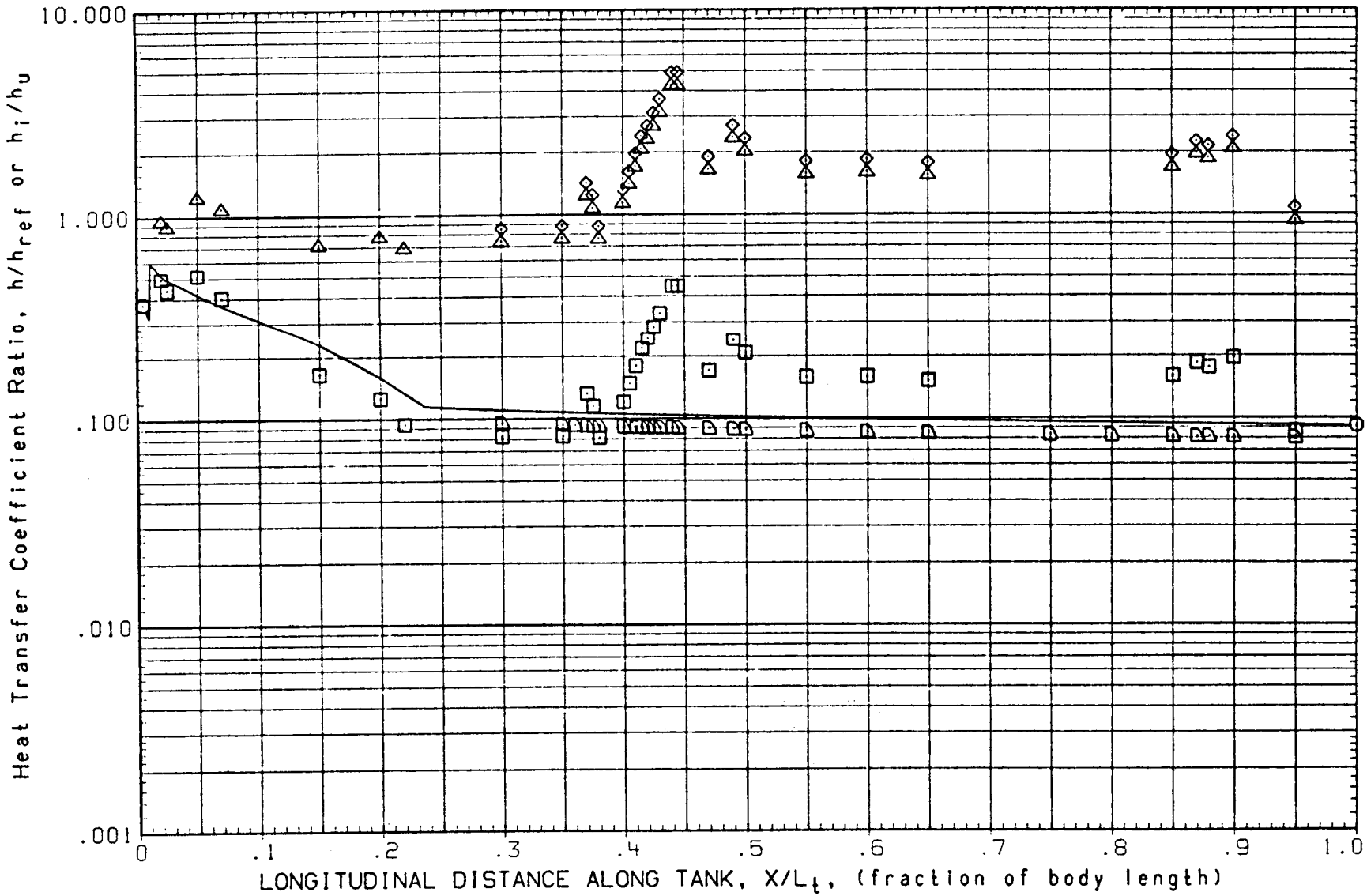

FIG. 4-2 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = .000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT06)	○	DATA NOT AVAILABLE	3.010	.000	.000
(C9NT06)	□	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	3.010	.000	.000
(V4LT03)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	3.010	.000	.000
(X4LT03)	◇	IH85 (W.L. TEST) OTS/ET = V4LT03/C9NT06= HI/HU	3.010	.000	.000
(Y4LT03)	△	IH85 (W.L. THEORY) OTS/ET = V4LT03/A9NT06= HI/HU	3.010	.000	.000

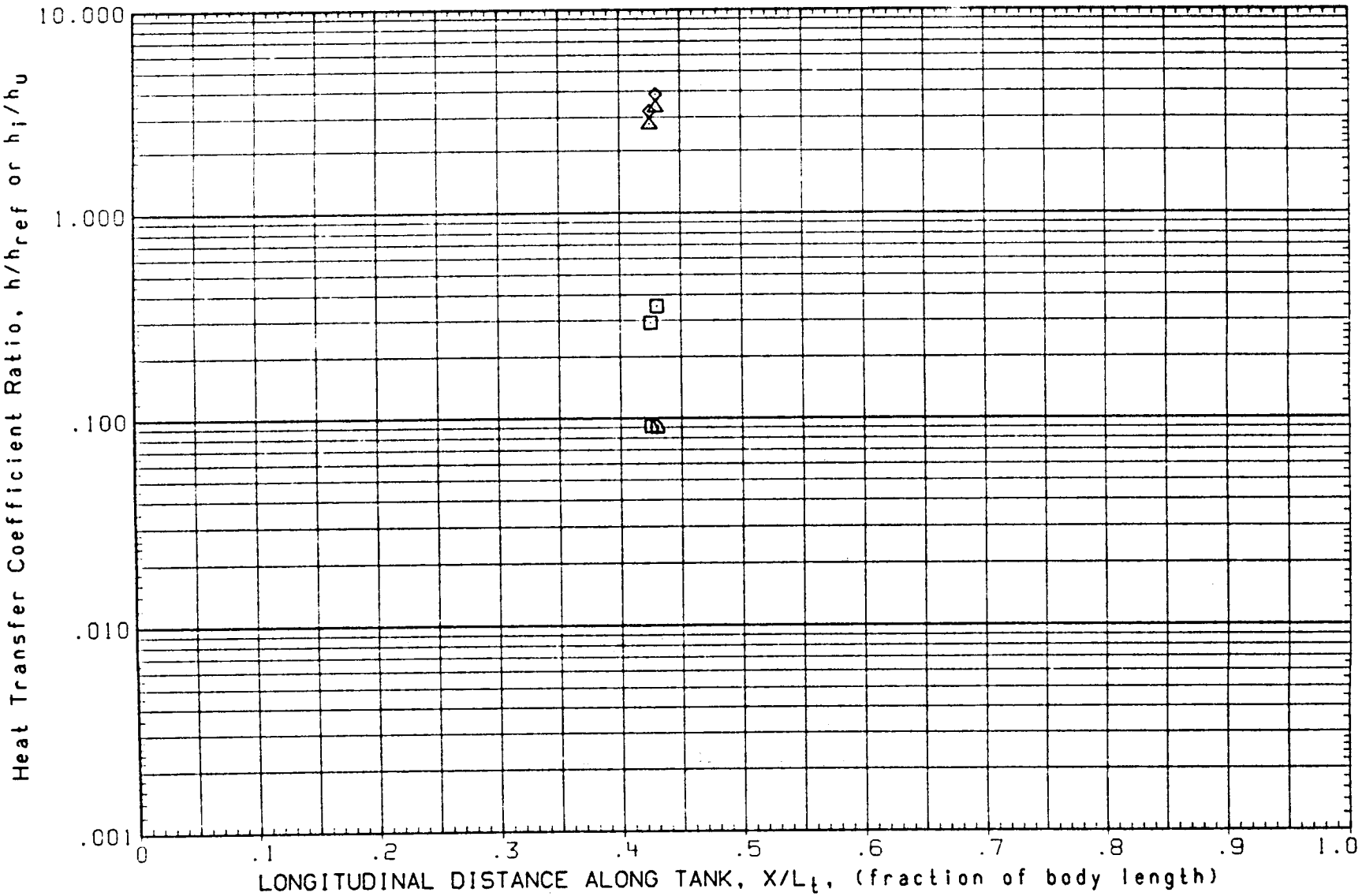

FIG. 4-2 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 5.625

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⬠	DATA NOT AVAILABLE		3.010	.000	.000
(V4LT03)	□	DATA NOT AVAILABLE		3.010	.000	.000
(X4LT03)	◇	DATA NOT AVAILABLE		3.010	.000	.000
(Y4LT03)	△	DATA NOT AVAILABLE		3.010	.000	.000

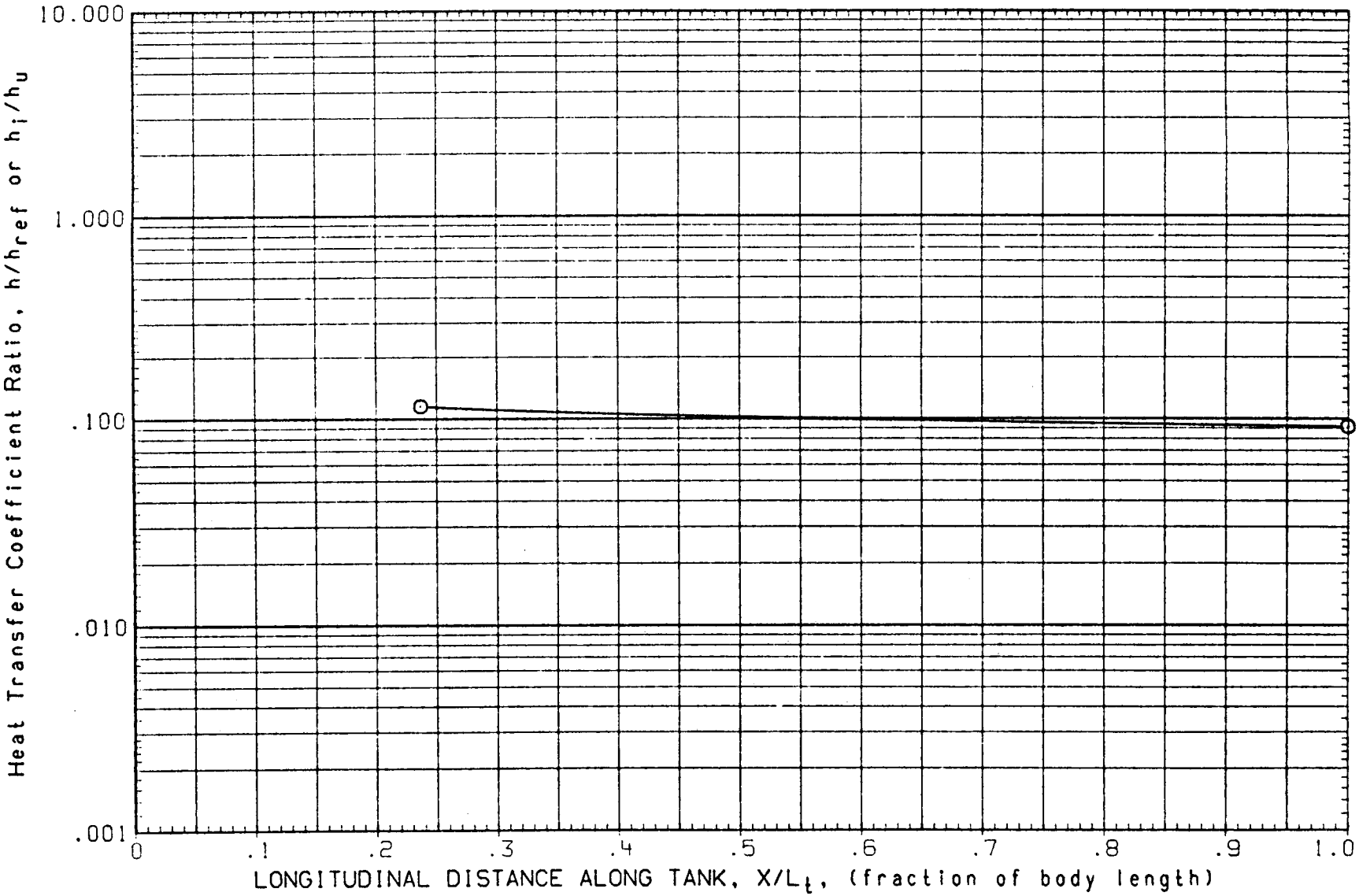

FIG. 4-2 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 5.630

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT03)	□	IH85, AEDC V4IA-W5, CONFIGURATION 0 (T) S		3.010	.000	.000
(X4LT03)	◇	IH85 (W.L. TEST) OTS/ET = V4LT03/C9NT06=	HI/HU	3.010	.000	.000
(Y4LT03)	△	IH85 (W.L. THEORY) OTS/ET = V4LT03/A9NT06=	HI/HU	3.010	.000	.000

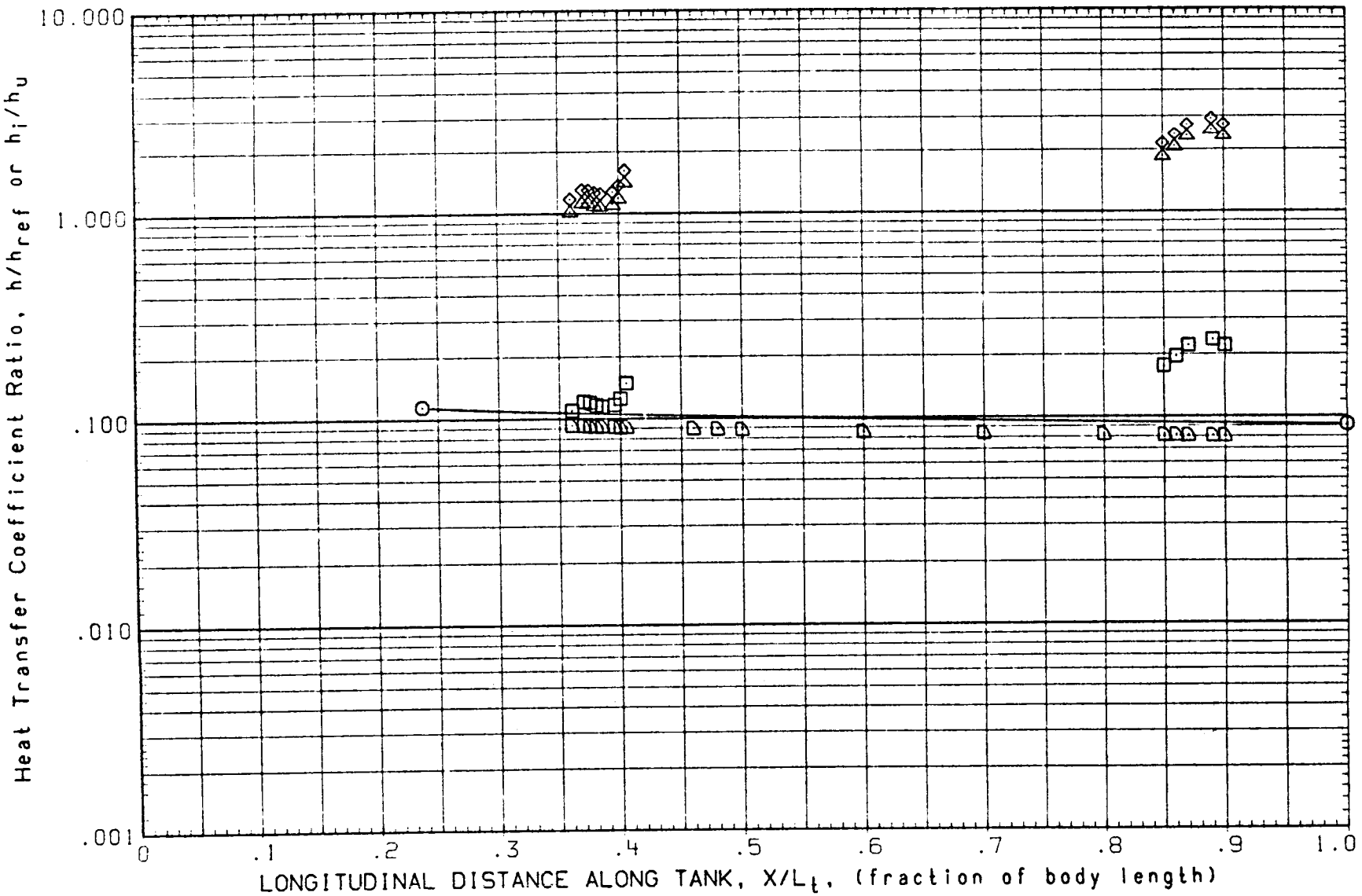

FIG. 4-2 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 11.250

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT03)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	.000
(X4LT03)	◇	IH85 (W.L. TEST) OTS/ET = V4LT03/C9NT06=	HI/HU	3.010	.000	.000
(Y4LT03)	△	IH85 (W.L. THEORY) OTS/ET = V4LT03/A9NT06=	HI/HU	3.010	.000	.000

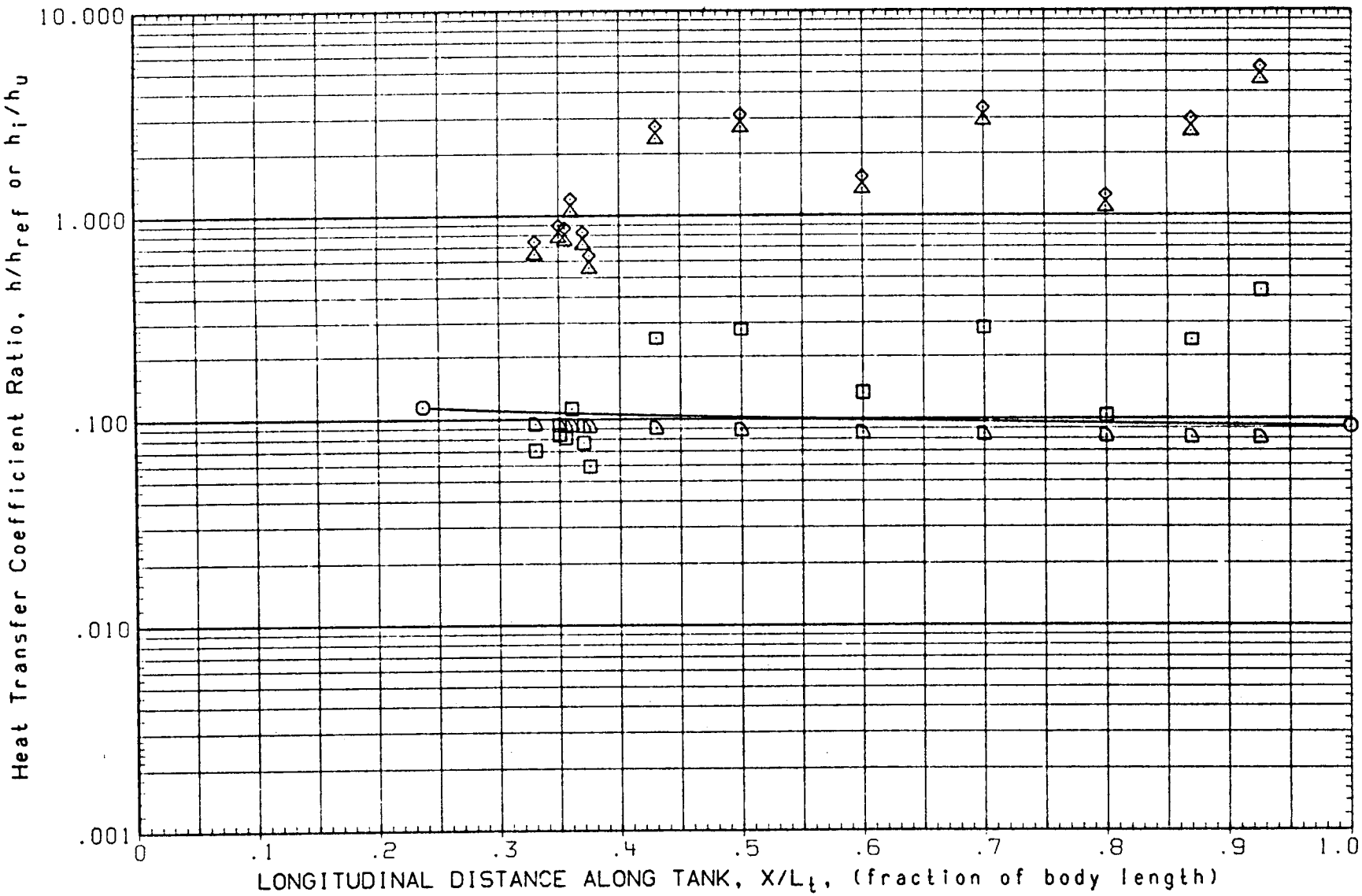

FIG. 4-2 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 17.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⊏⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT03)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	.000
(X4LT03)	◇	IH85 (W.L. TEST) OTS/ET = V4LT03/C9NT06=	HI/HU	3.010	.000	.000
(Y4LT03)	△	IH85 (W.L. THEORY) OTS/ET = V4LT03/A9NT06=	HI/HU	3.010	.000	.000

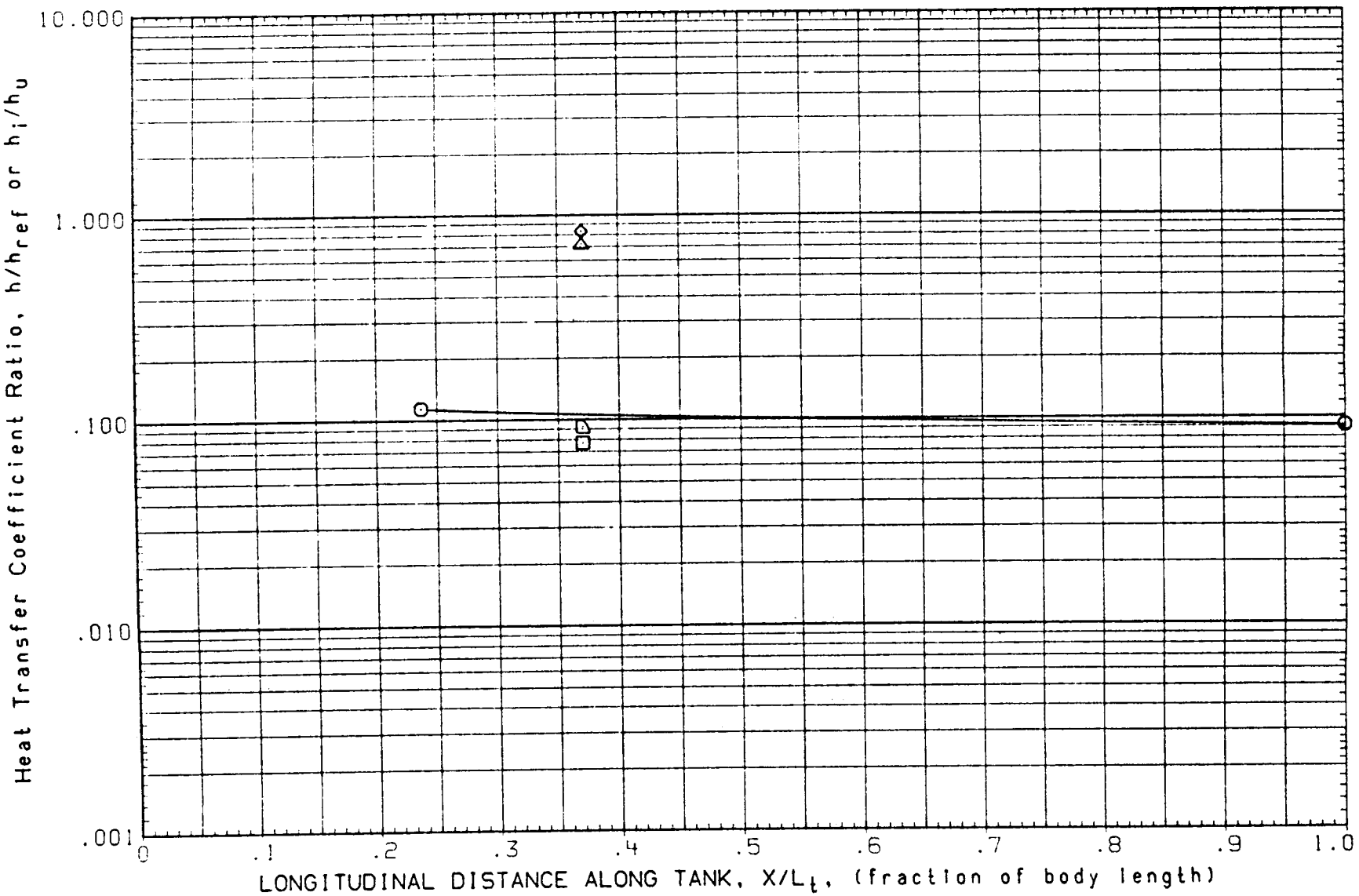

FIG. 4-2 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 20.990

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT03)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	.000
(X4LT03)	◇	IH85 (W.L. TEST) OTS/ET = V4LT03/C9NT06=	HI/HU	3.010	.000	.000
(Y4LT03)	△	IH85 (W.L. THEORY) OTS/ET = V4LT03/A9NT06=	HI/HU	3.010	.000	.000

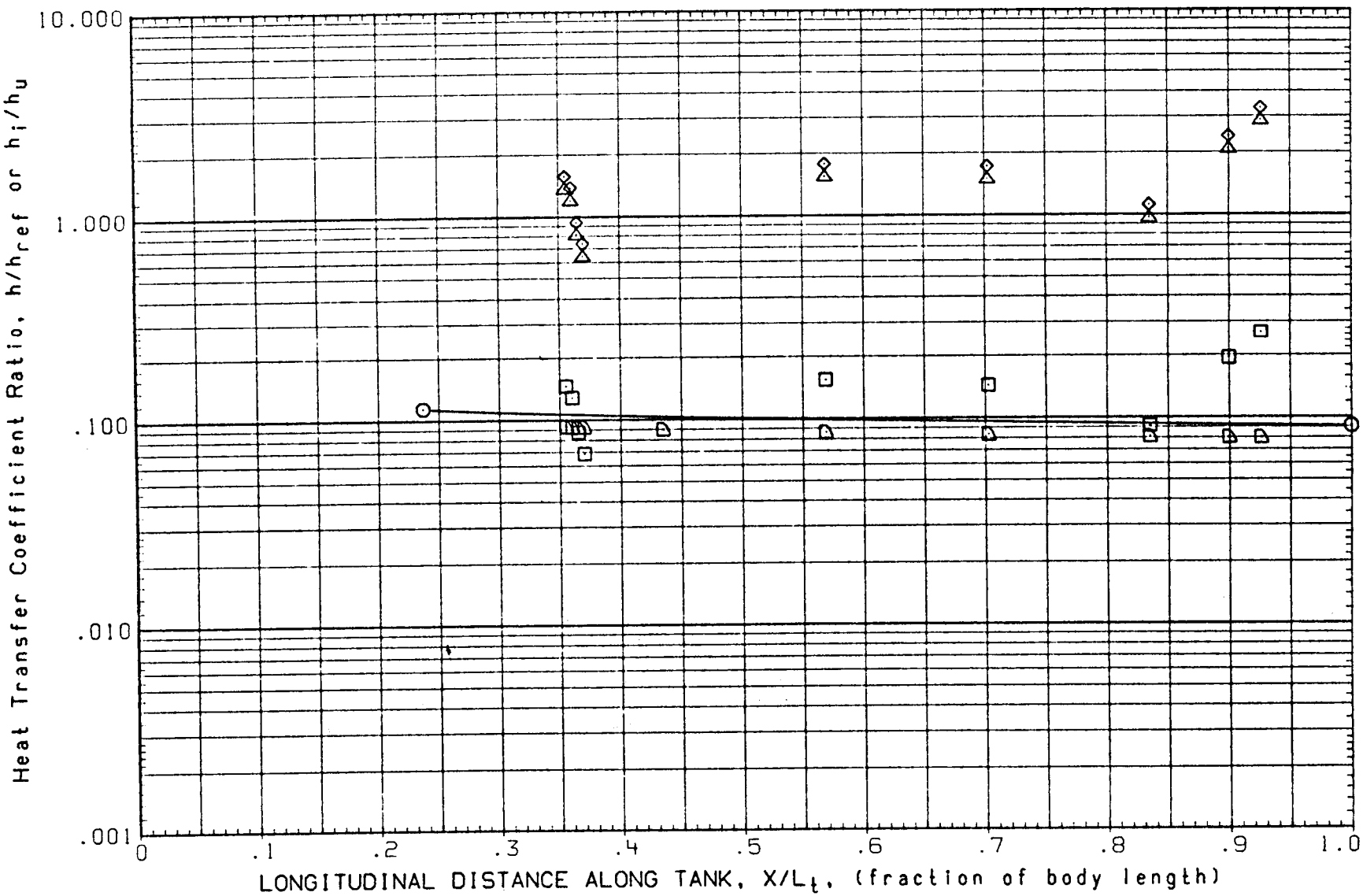

FIG. 4-2 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 23.070

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT03)	□	IH85, AEDC V4IA-W5, CONFIGURATION 0 (T) S		3.010	.000	.000
(X4LT03)	◇	IH85 (W.L. TEST) OTS/ET = V4LT03/C9NT06=	HI/HU	3.010	.000	.000
(Y4LT03)	△	IH85 (W.L. THEORY) OTS/ET = V4LT03/A9NT06=	HI/HU	3.010	.000	.000

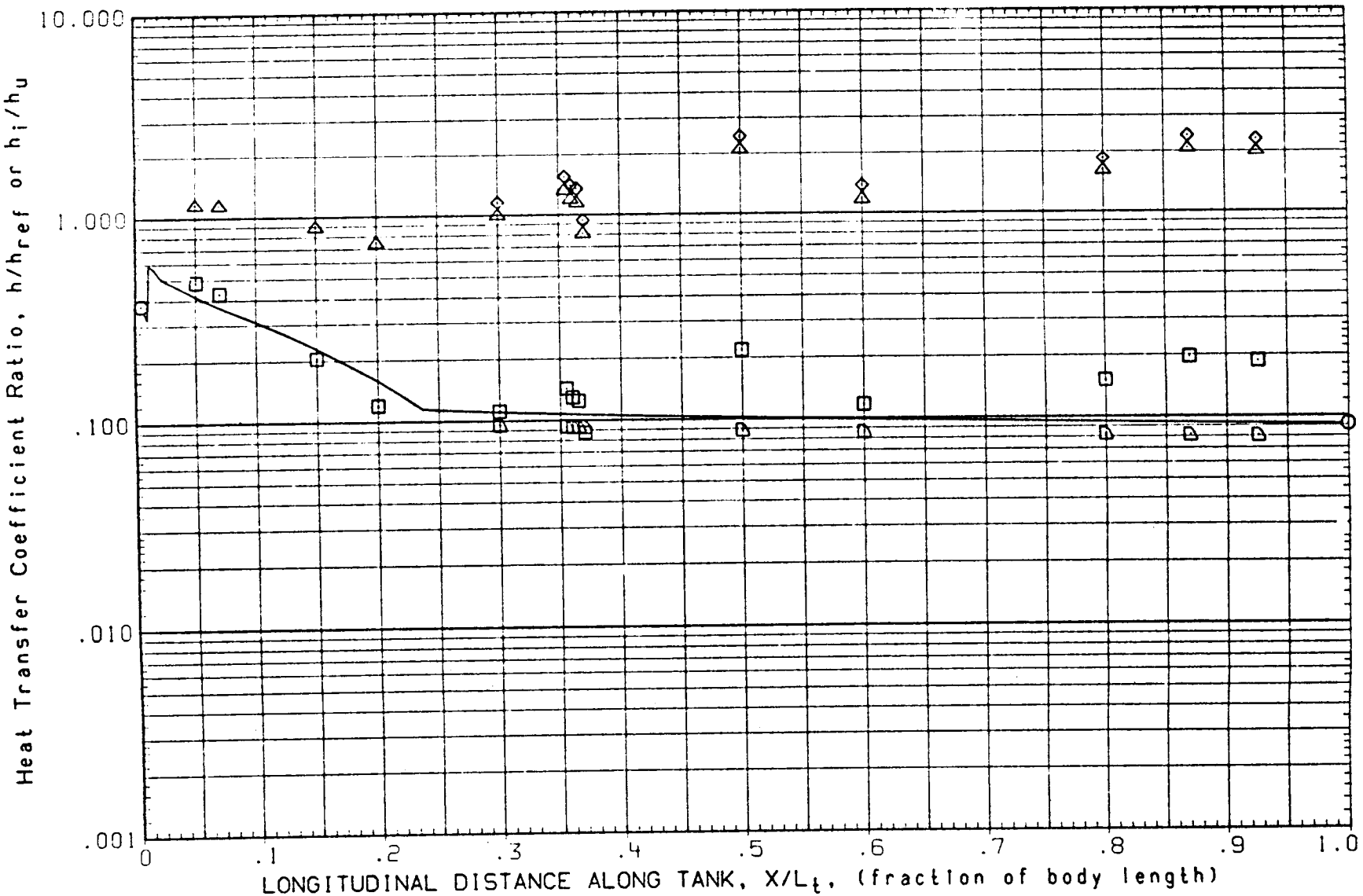

FIG. 4-2 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 29.800

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT03)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	.000
(X4LT03)	◇	IH85 (W.L. TEST) OTS/ET = V4LT03/C9NT06=	HI/HU	3.010	.000	.000
(Y4LT03)	△	IH85 (W.L. THEORY) OTS/ET = V4LT03/A9NT06=	HI/HU	3.010	.000	.000

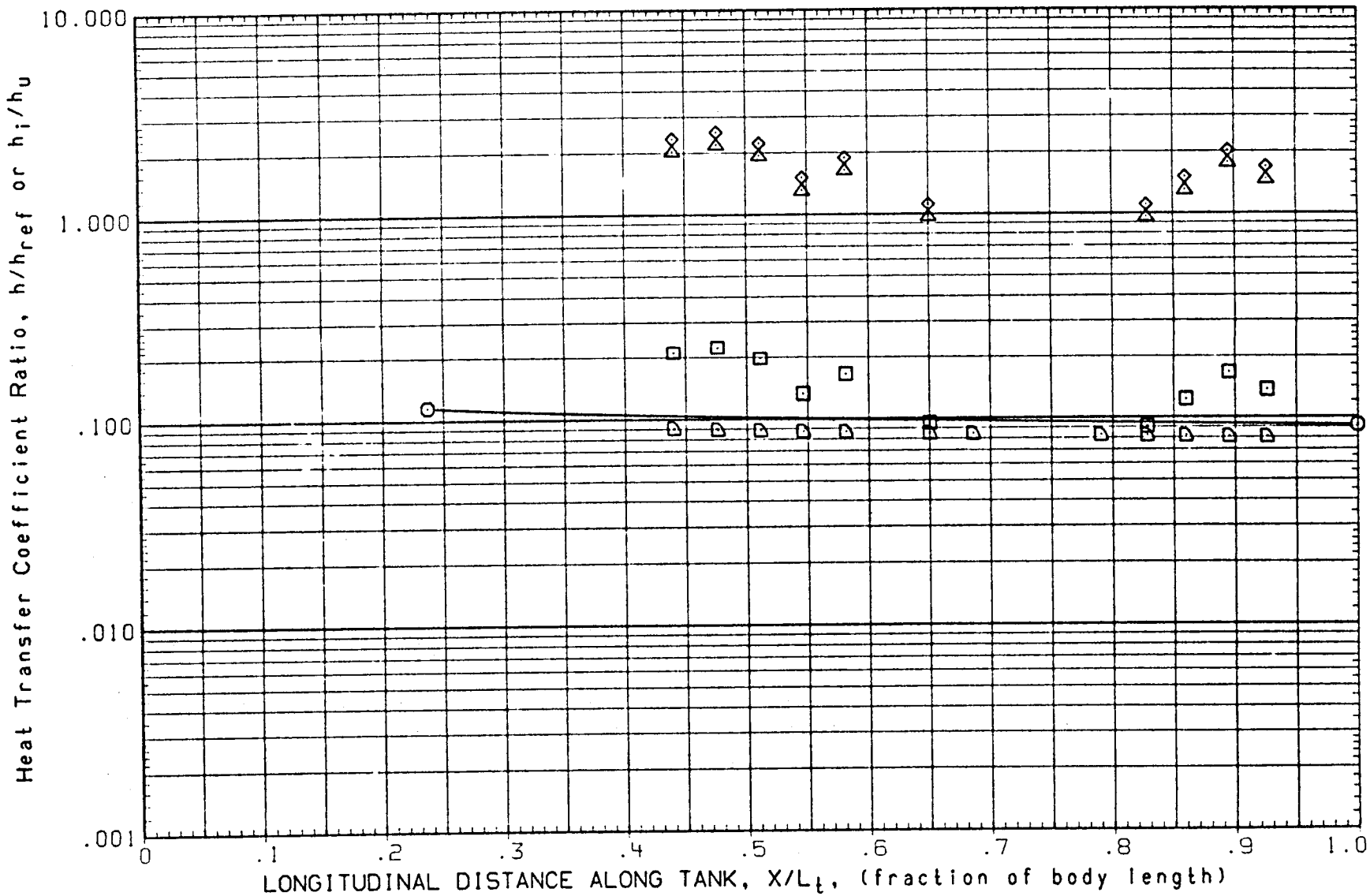

FIG. 4-2 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 31.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	D	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT03)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	.000
(X4LT03)	◇	IH85 (W.L. TEST) OTS/ET = V4LT03/C9NT06=	HI/HU	3.010	.000	.000
(Y4LT03)	△	IH85 (W.L. THEORY) OTS/ET = V4LT03/A9NT06=	HI/HU	3.010	.000	.000

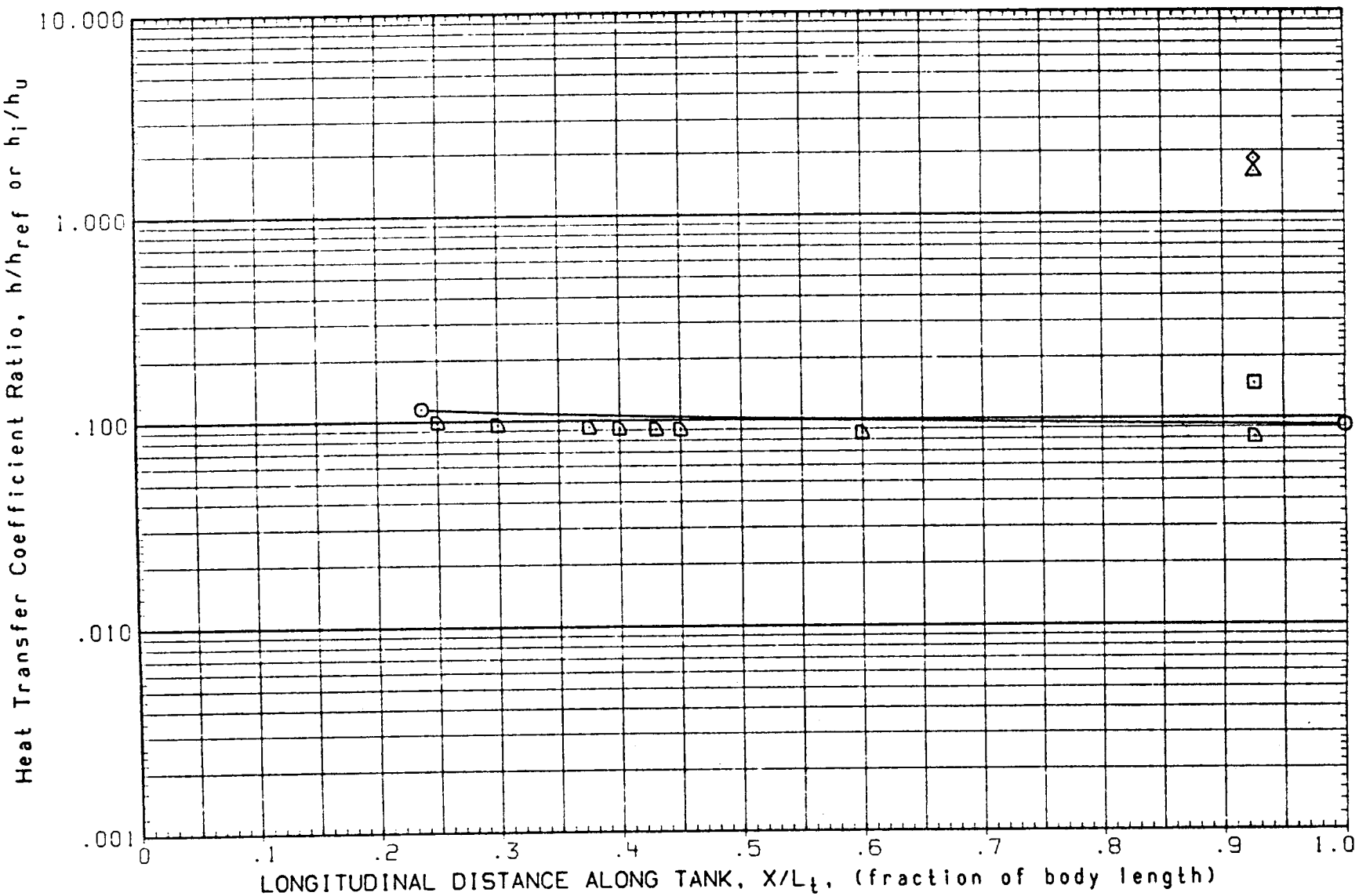

FIG. 4-2 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 33.750

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT03)	□	IH85, AEDC V41A-U5, CONFIGURATION 0 (T) S		3.010	.000	.000
(X4LT03)	◇	IH85 (W.L. TEST) OTS/ET = V4LT03/C9NT06= HI/HU		3.010	.000	.000
(Y4LT03)	△	IH85 (W.L. THEORY) OTS/ET = V4LT03/A9NT06= HI/HU		3.010	.000	.000

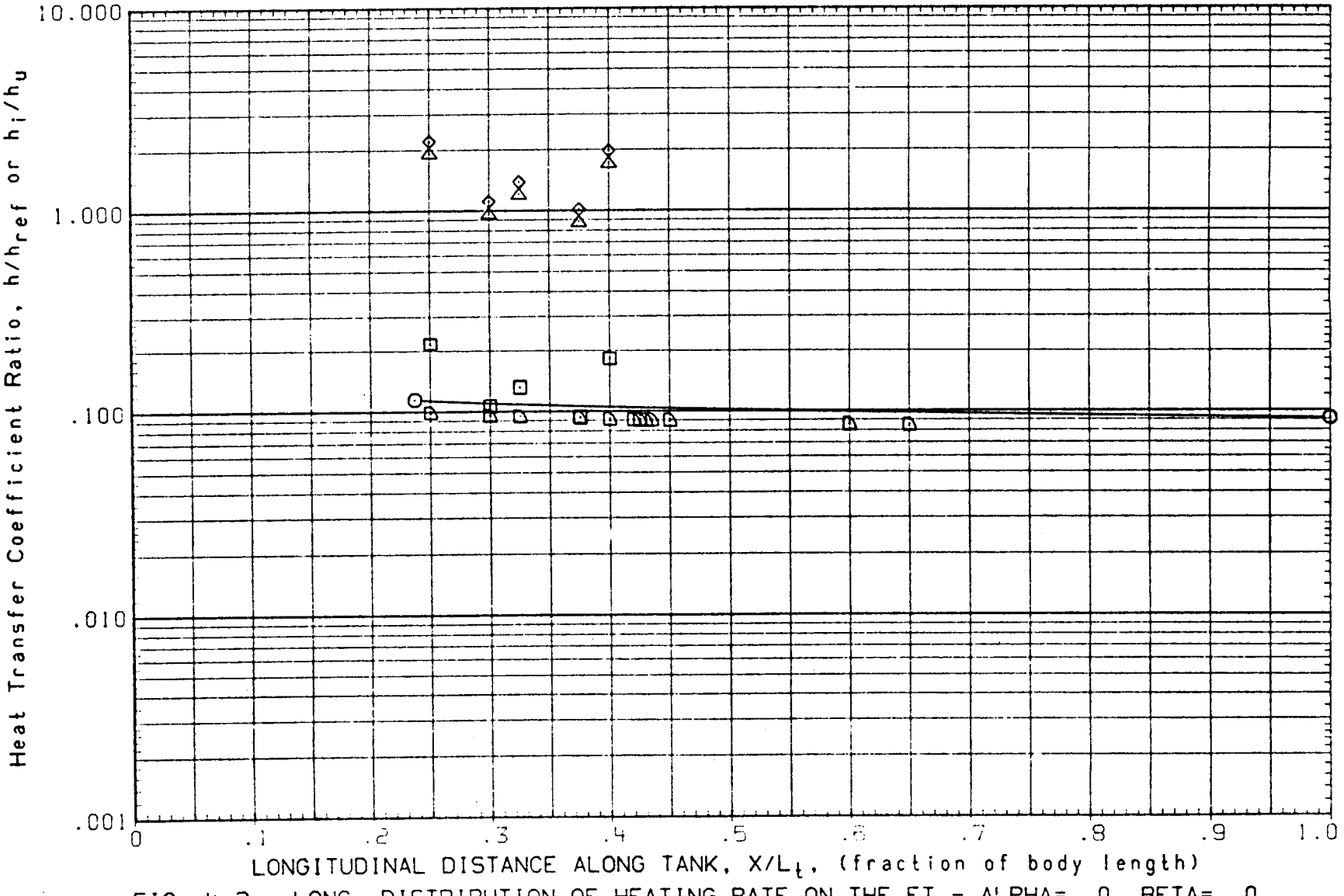

FIG. 4-2 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA .000 [illegible] = [illegible].320

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(09NT06)	○	EXTERNAL TANK THEORY, N.S., TURBULENT	HU/HREF	3.010	.000	.000
(CCNT06)	□	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(Y4LT03)	□	1-85, AEDC 741A-W5, CONFIGURATION 0 (T) S		3.010	.000	.000
(X4LT03)	◇	1H85 (W.L. TEST) OTS/ET = Y4LT03/CCNT06= HI/HU		3.010	.000	.000
(Y4LT03)	△	1H85 (W.L. THEORY) OTS/ET = Y4LT03/CCNT06= HI/HU		3.010	.000	.000

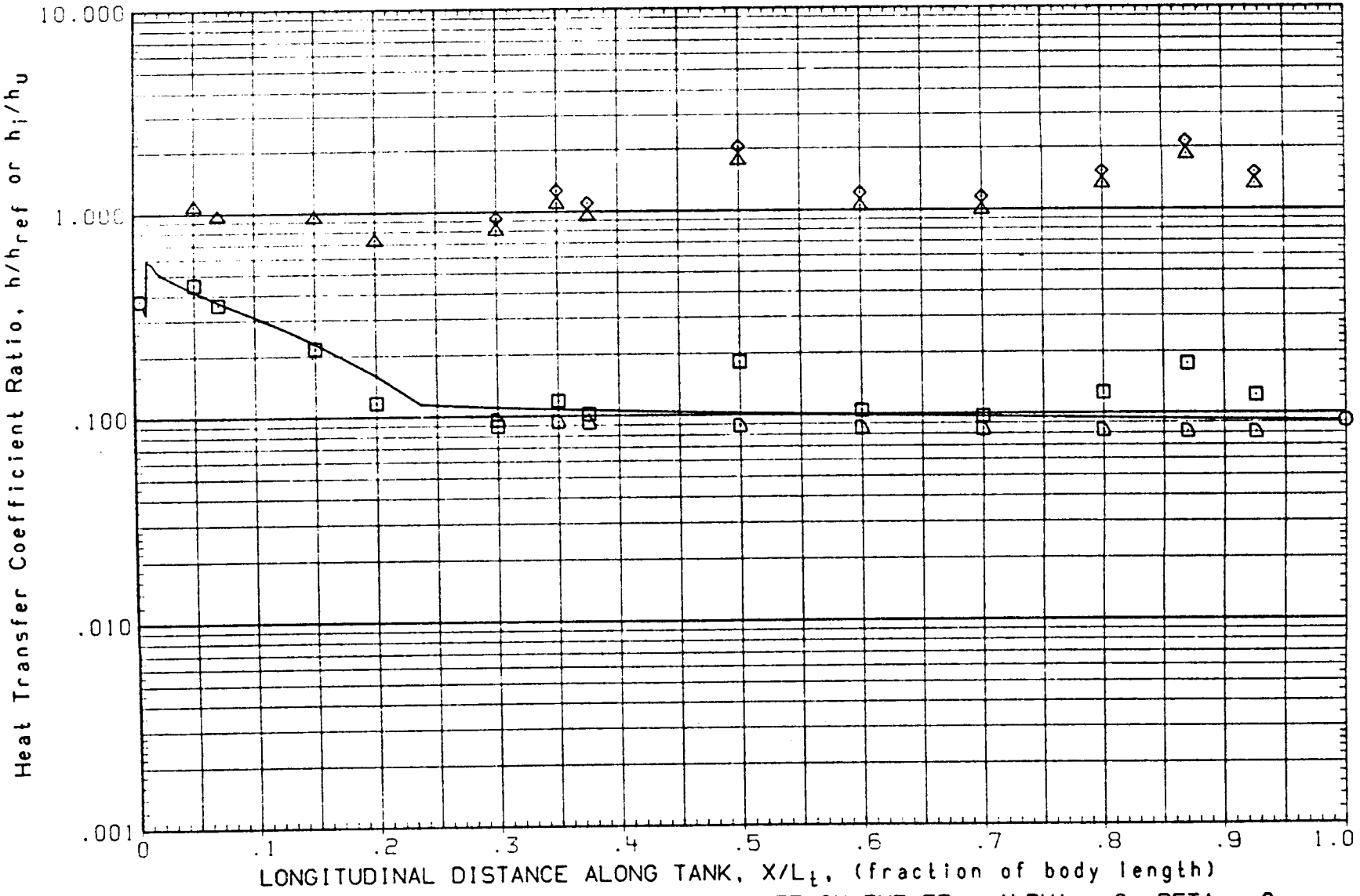

FIG. 4-2 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 37.700

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	◐	DATA NOT AVAILABLE		3.010	.000	.000
(V4LT03)	□	DATA NOT AVAILABLE		3.010	.000	.000
(X4LT03)	◇	DATA NOT AVAILABLE		3.010	.000	.000
(Y4LT03)	△	DATA NOT AVAILABLE		3.010	.000	.000

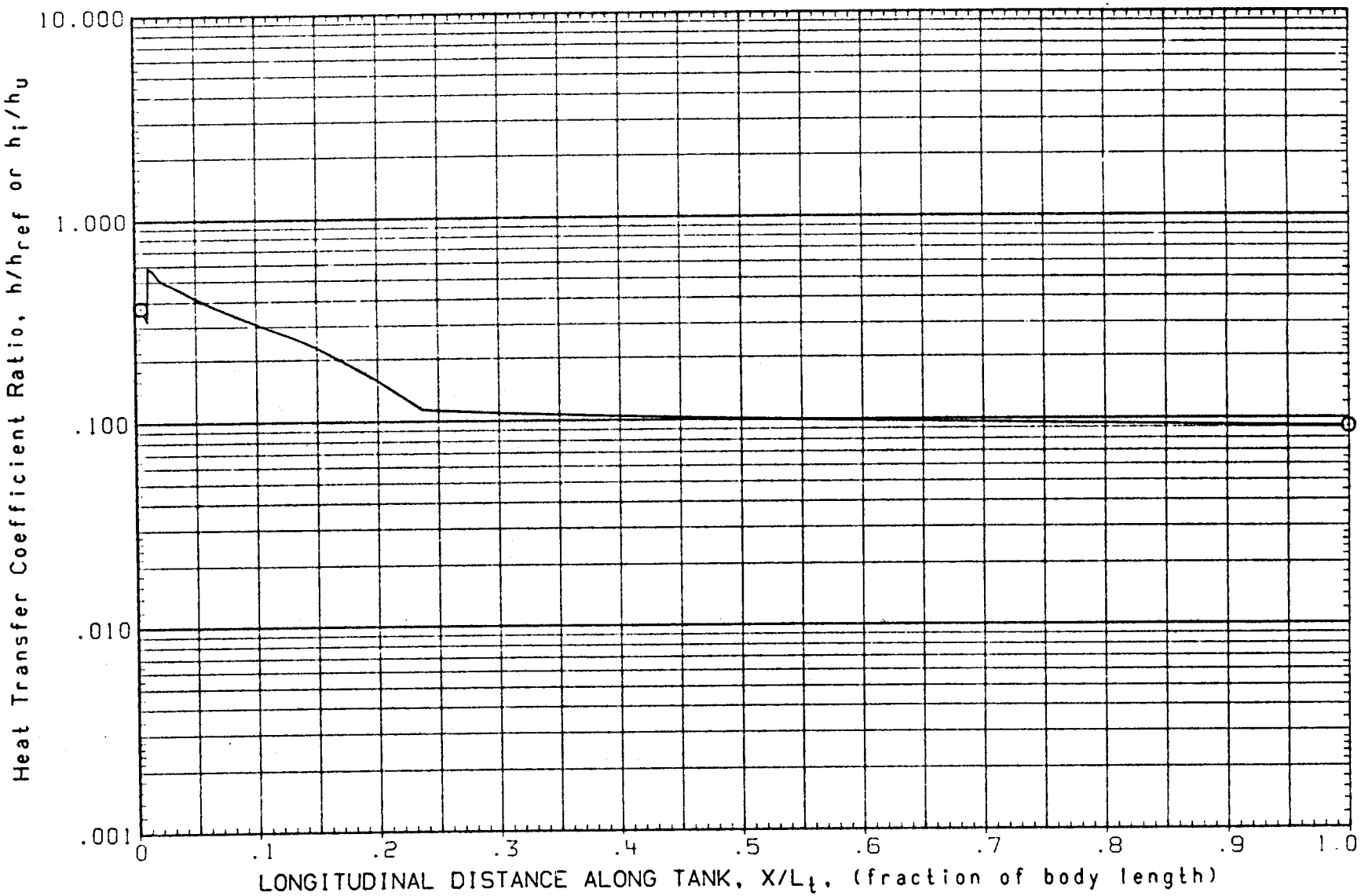

FIG. 4-2 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 39.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT03)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	.000
(X4LT03)	◇	IH85 (W.L. TEST) OTS/ET = V4LT03/C9NT06=	HI/HU	3.010	.000	.000
(Y4LT03)	△	IH85 (W.L. THEORY) OTS/ET = V4LT03/A9NT06=	HI/HU	3.010	.000	.000

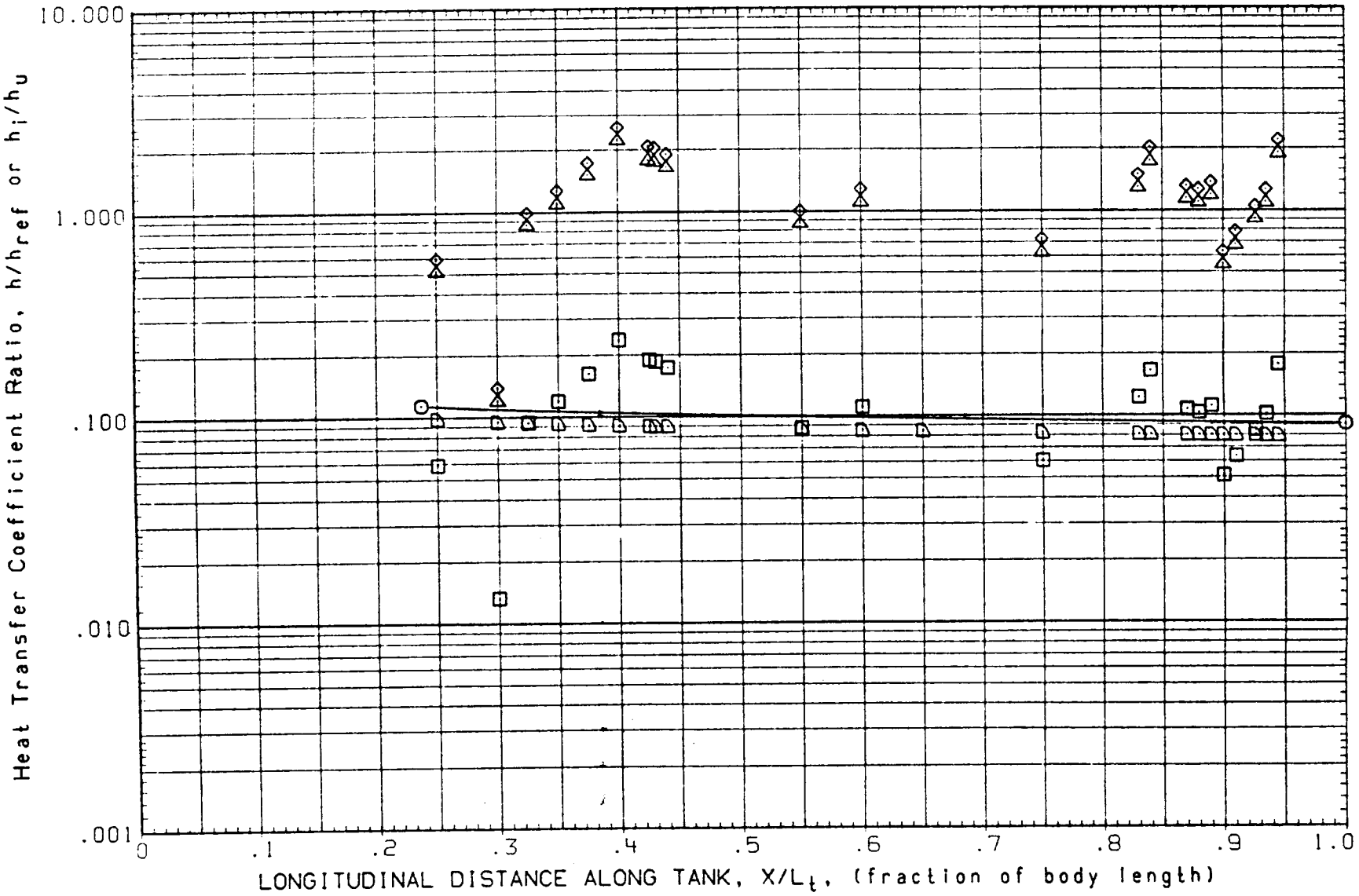

FIG. 4-2 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 45.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	3.010	.000	.000
(C9NT06)	⬡	DATA NOT AVAILABLE	3.010	.000	.000
(V4LT03)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	3.010	.000	.000
(X4LT03)	◇	DATA NOT AVAILABLE	3.010	.000	.000
(Y4LT03)	△	IH85 (W.L. THEORY) OTS/ET = V4LT03/A9NT06= HI/HU	3.010	.000	.000

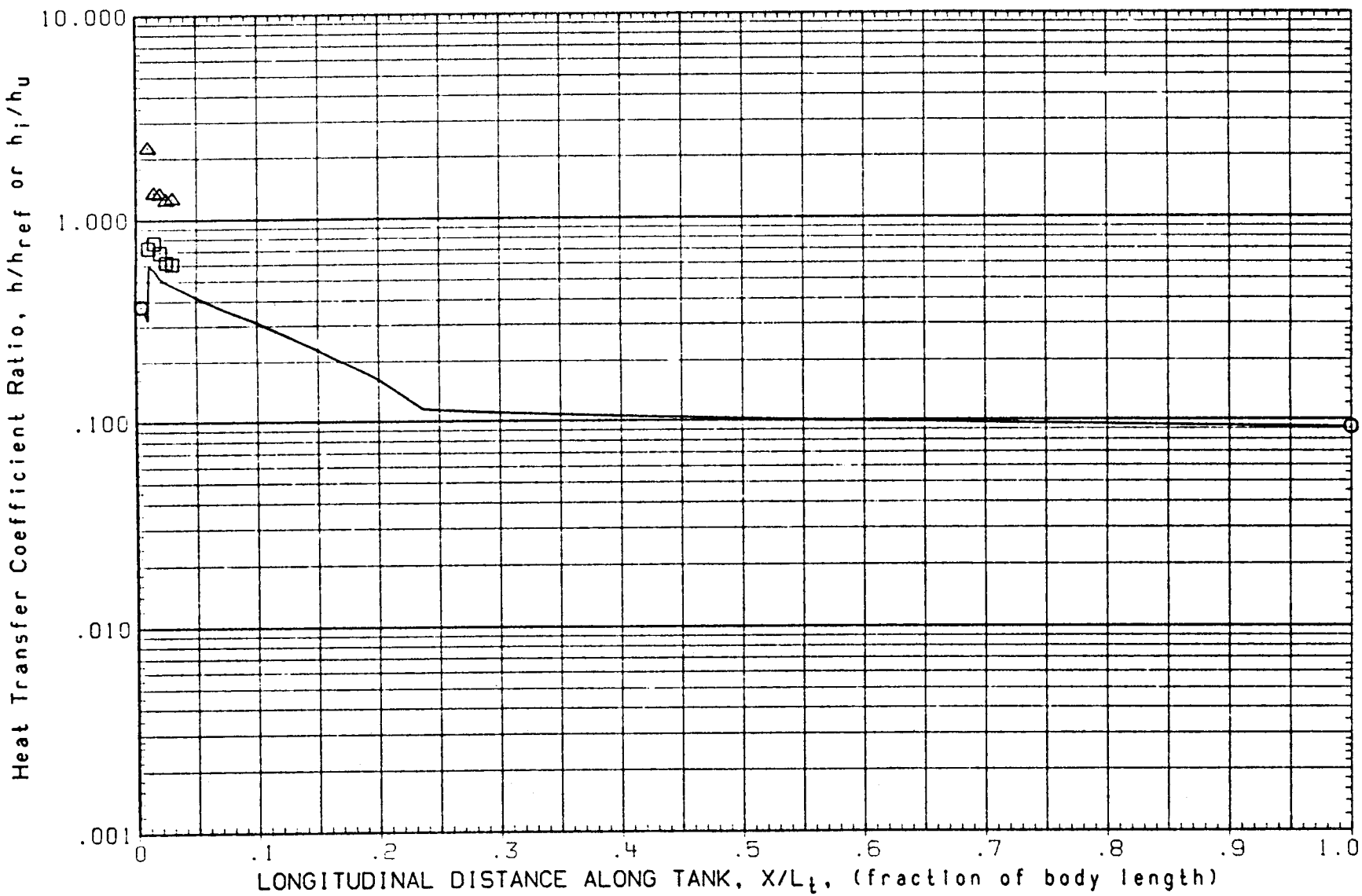

FIG. 4-2 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 180.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(C9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⬠	DATA NOT AVAILABLE		3.010	.000	.000
(Y4LT03)	□	DATA NOT AVAILABLE		3.010	.000	.000
(X4LT03)	◇	DATA NOT AVAILABLE		3.010	.000	.000
(Y4LT03)	△	DATA NOT AVAILABLE		3.010	.000	.000

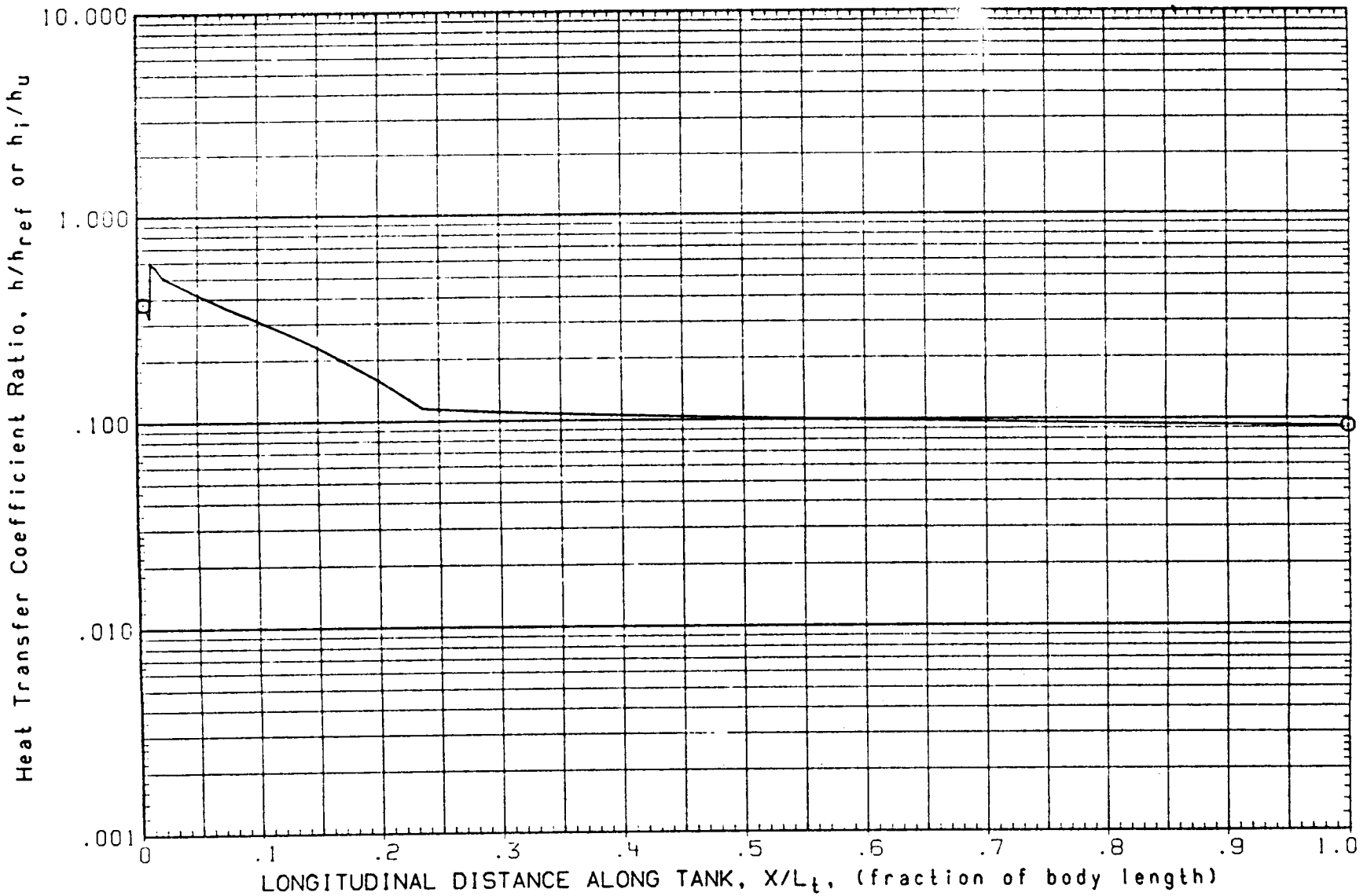

FIG. 4-2 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 235.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⬠	TANK ALONE CREATED DATA (.97 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT03)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	.000
(X4LT03)	◇	IH85 (W.L. TEST) OTS/ET = V4LT03/C9NT06=	HI/HU	3.010	.000	.000
(Y4LT03)	△	IH85 (W.L. THEORY) OTS/ET = V4LT03/A9NT06=	HI/HU	3.010	.000	.000

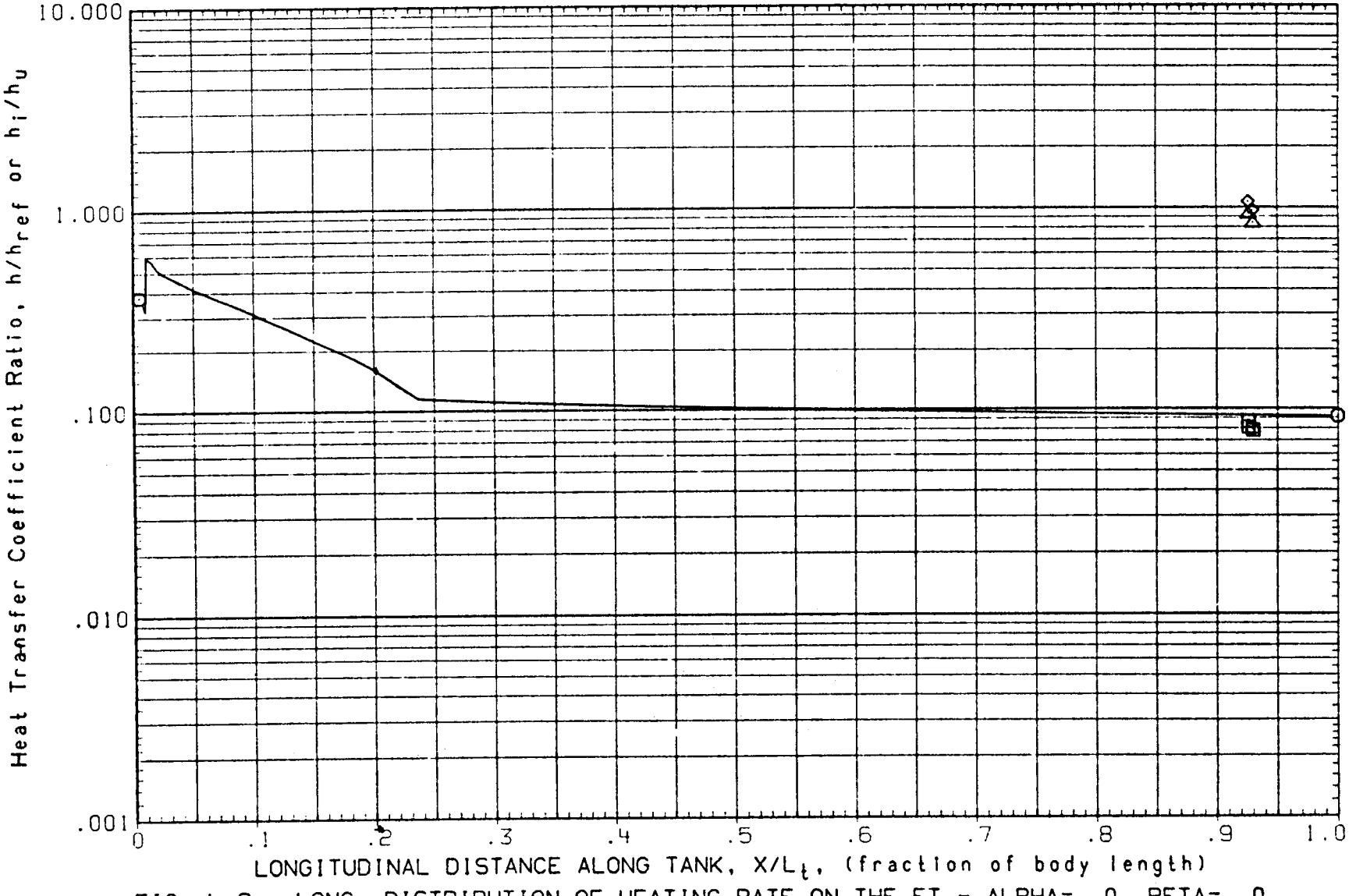

FIG. 4-2 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 247.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9MT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9MT06)	⬠	DATA NOT AVAILABLE		3.010	.000	.000
(V4LT03)	□	DATA NOT AVAILABLE		3.010	.000	.000
(X4LT03)	◇	DATA NOT AVAILABLE		3.010	.000	.000
(Y4LT03)	△	DATA NOT AVAILABLE		3.010	.000	.000

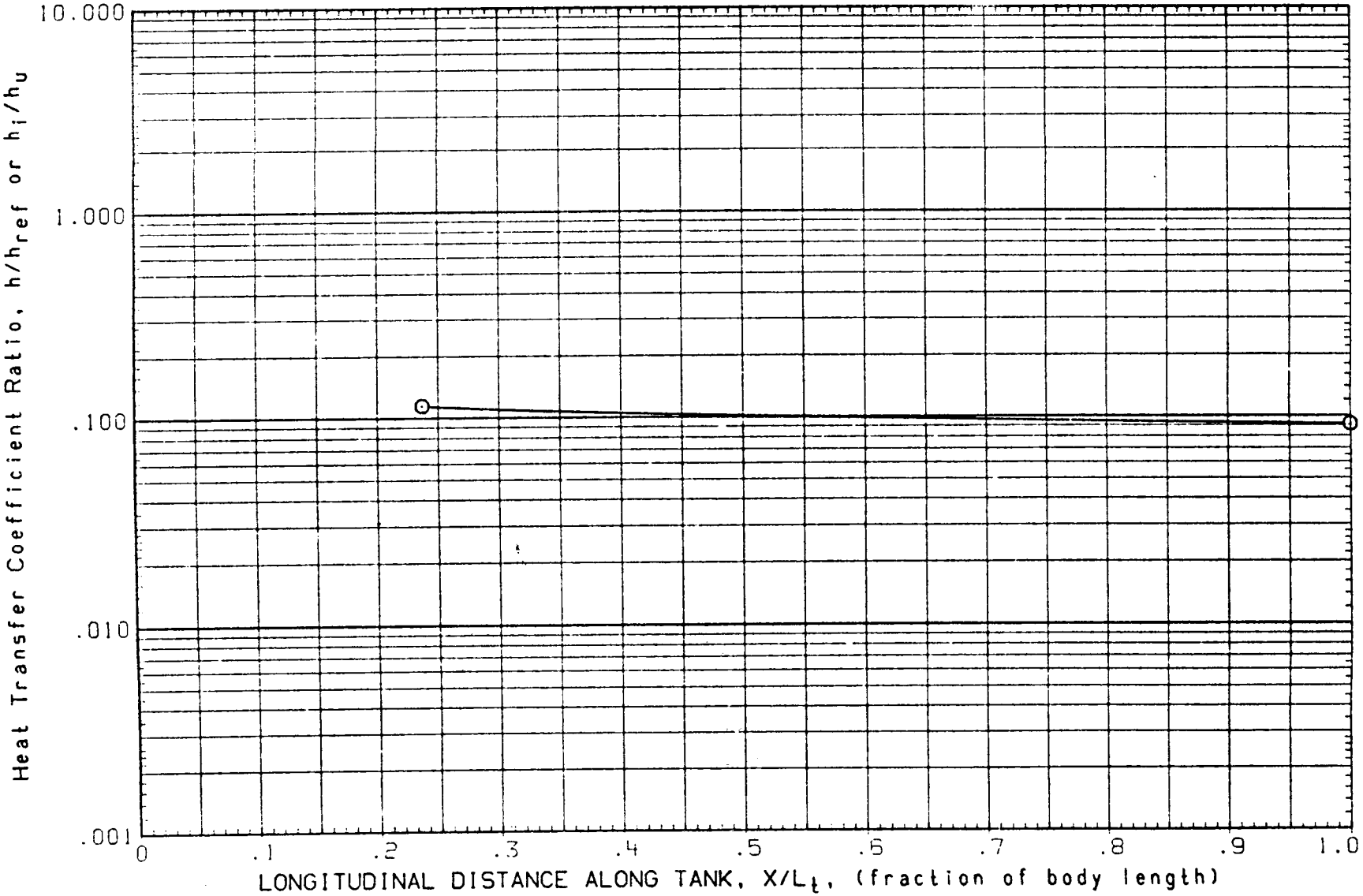

FIG. 4-2 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 247.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT03)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	.000
(X4LT03)	◇	IH85 (W.L. TEST) OTS/ET = V4LT03/C9NT06= HI/HU		3.010	.000	.000
(Y4LT03)	△	IH85 (W.L. THEORY) OTS/ET = V4LT03/A9NT06= HI/HU		3.010	.000	.000

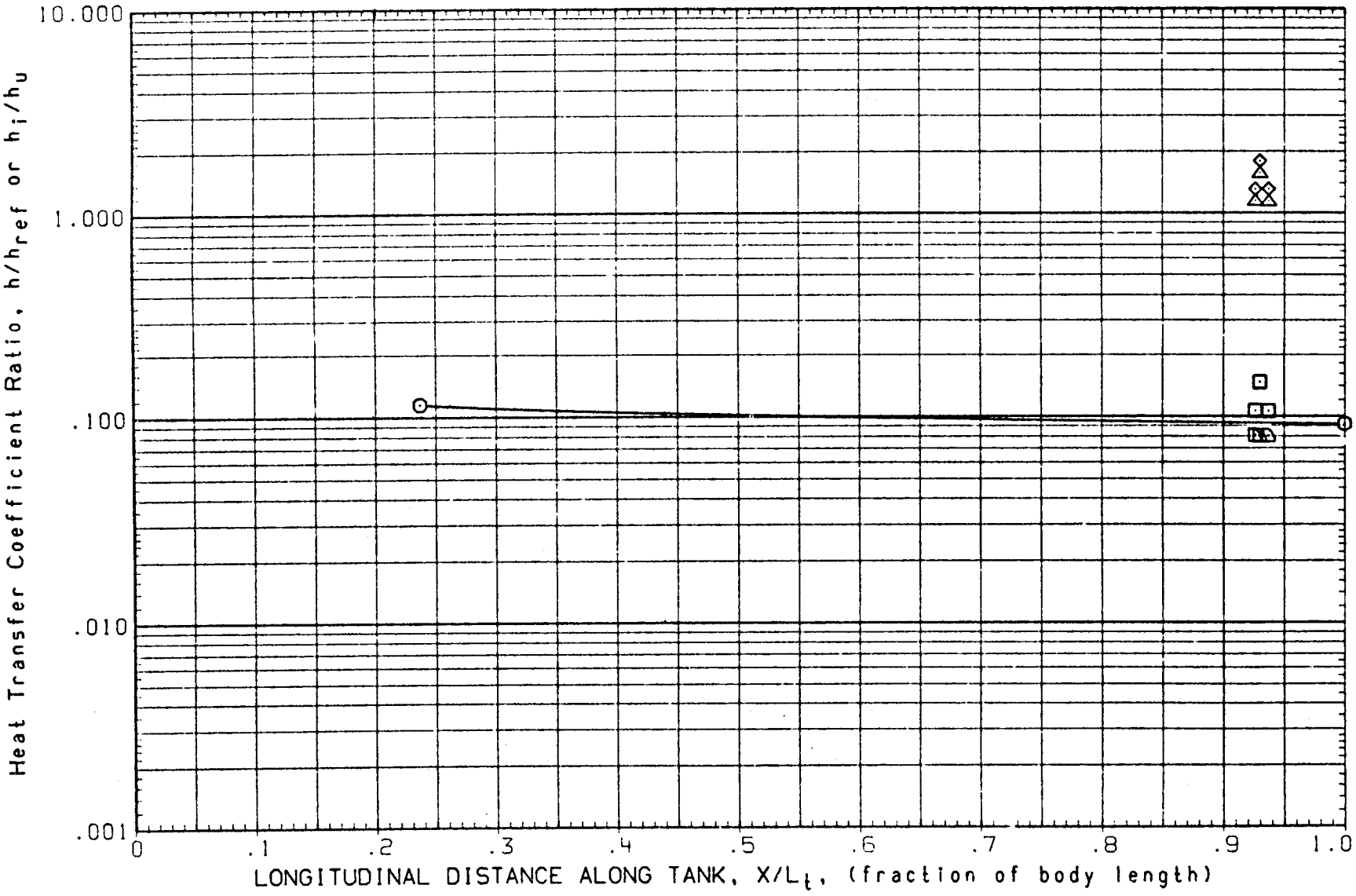

FIG. 4-2 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 250.570

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT03)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	.000
(X4LT03)	◇	IH85 (W.L. TEST) OTS/ET = V4LT03/C9NT06=	HI/HU	3.010	.000	.000
(Y4LT03)	△	IH85 (W.L. THEORY) OTS/ET = V4LT03/A9NT06=	HI/HU	3.010	.000	.000

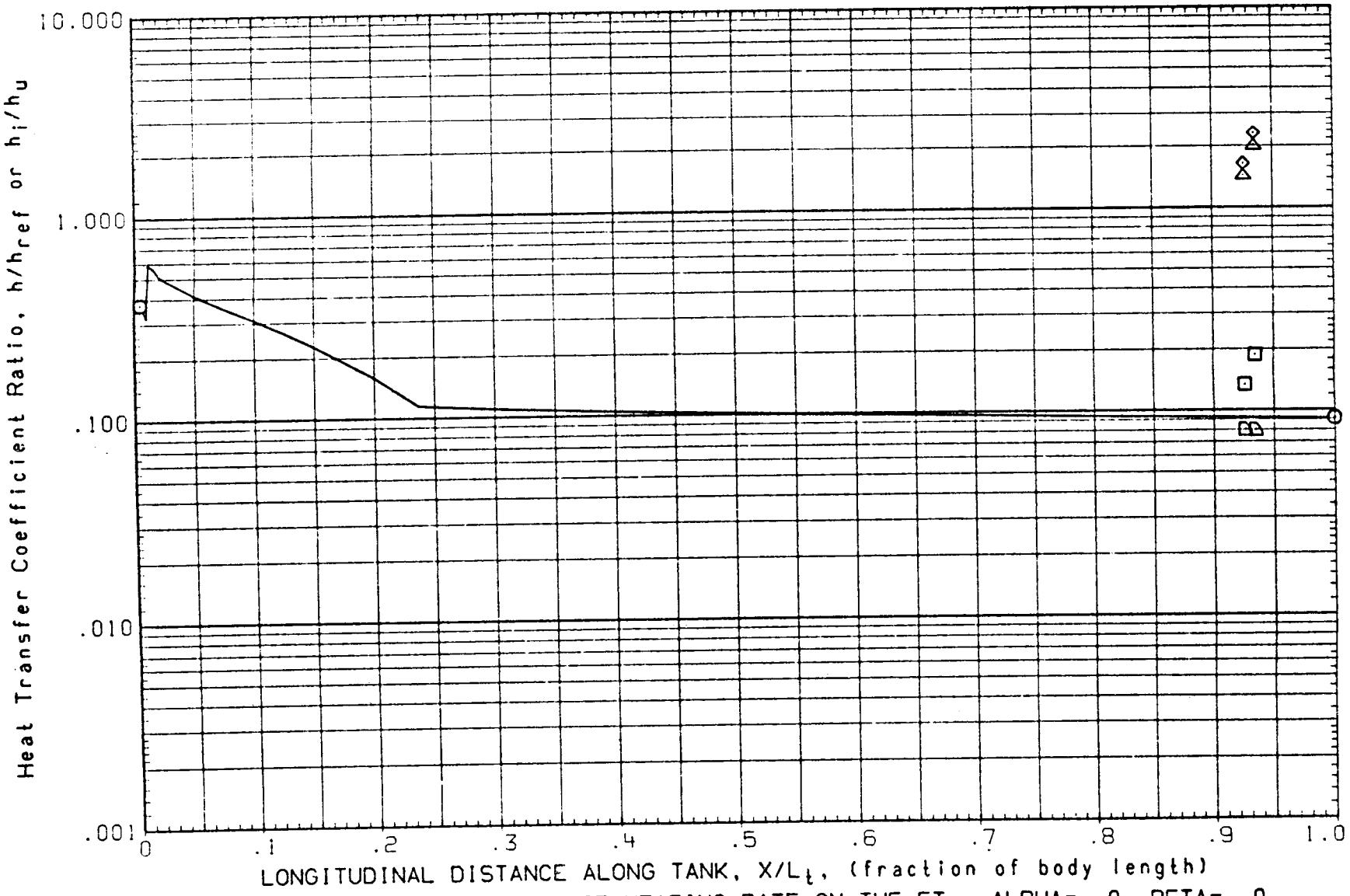

FIG. 4-2 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 258.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT03)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	.000
(X4LT03)	◇	IH85 (W.L. TEST) OTS/ET = V4LT03/C9NT06=	HI/HU	3.010	.000	.000
(Y4LT03)	△	IH85 (W.L. THEORY) OTS/ET = V4LT03/A9NT06=	HI/HU	3.010	.000	.000

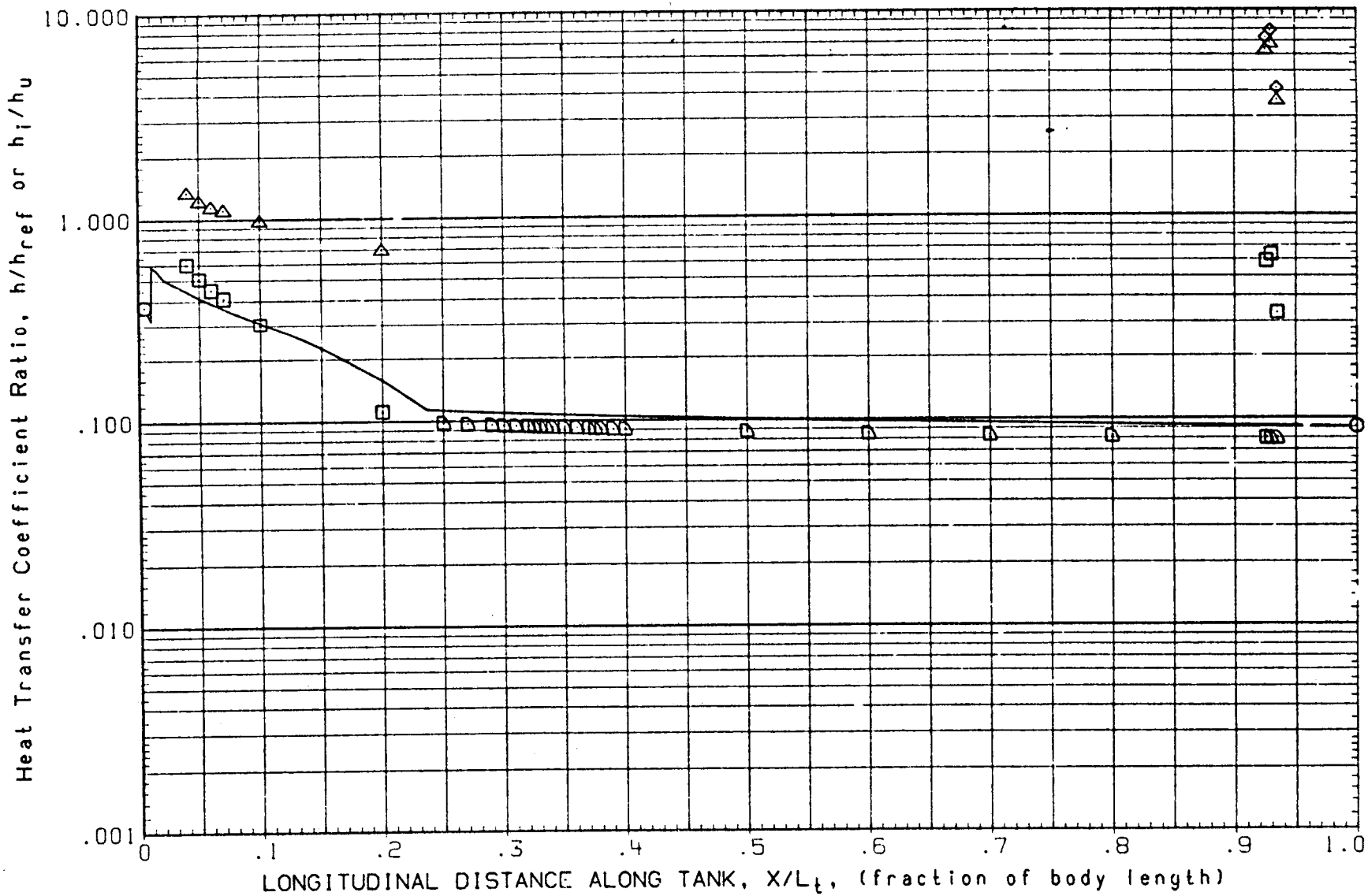

FIG. 4-2 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0≤ X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 270.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT03)	□	IH85, AEDC V41A-W5, CONFIGURATION O (T) S		3.010	.000	.000
(X4LT03)	◇	IH85 (W.L. TEST) OTS/ET = V4LT03/C9NT06=	HI/HU	3.010	.000	.000
(Y4LT03)	△	IH85 (W.L. THEORY) OTS ET = V4LT03/A9NT06=	HI/HU	3.010	.000	.000

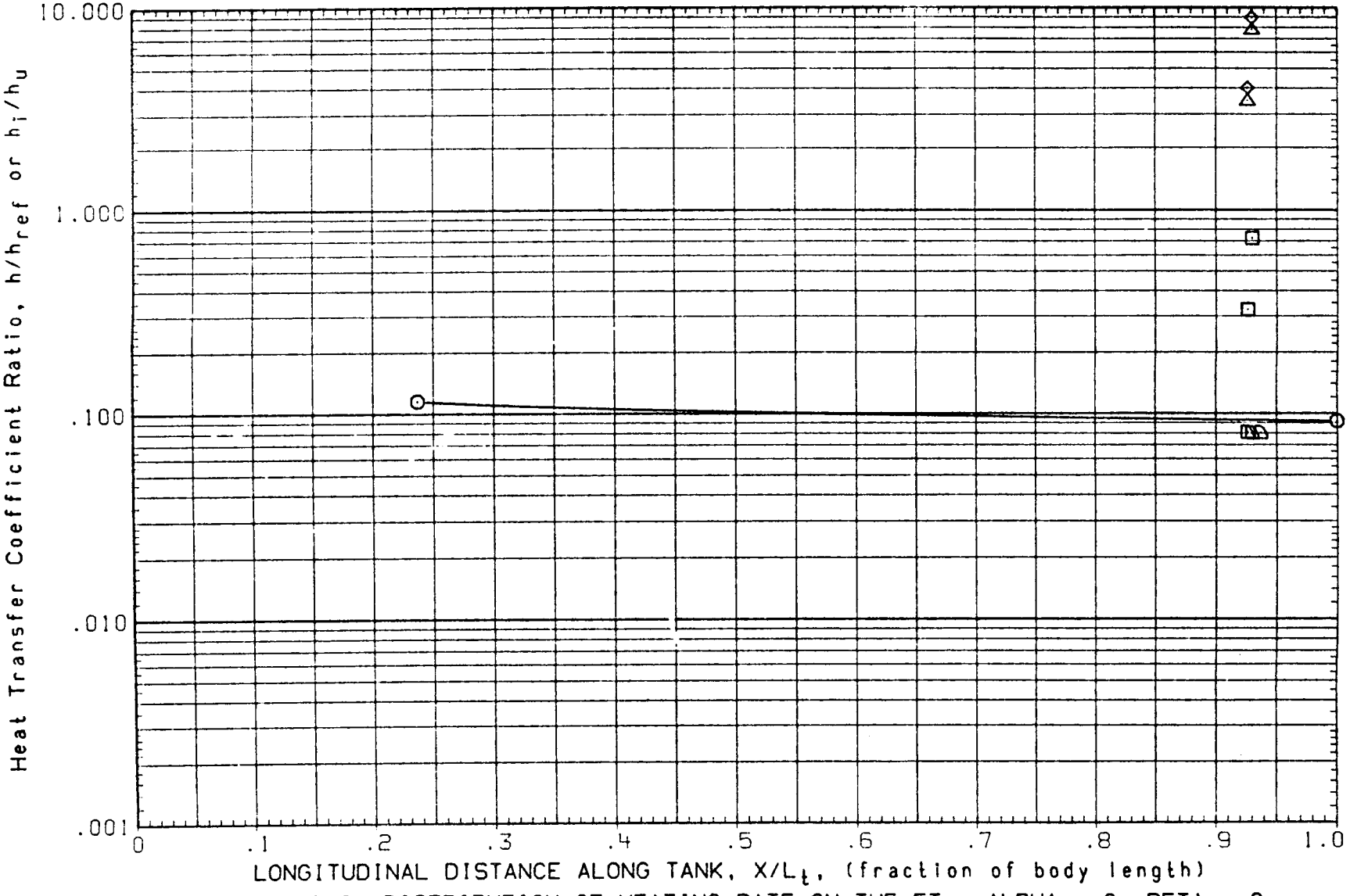

FIG. 4-2 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 289.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT03)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	.000
(X4LT03)	◇	IH85 (W.L. TEST) OTS/ET = V4LT03/C9NT06=	HI/HU	3.010	.000	.000
(Y4LT03)	△	IH85 (W.L. THEORY) OTS/ET = V4LT03/A9NT06=	HI/HU	3.010	.000	.000

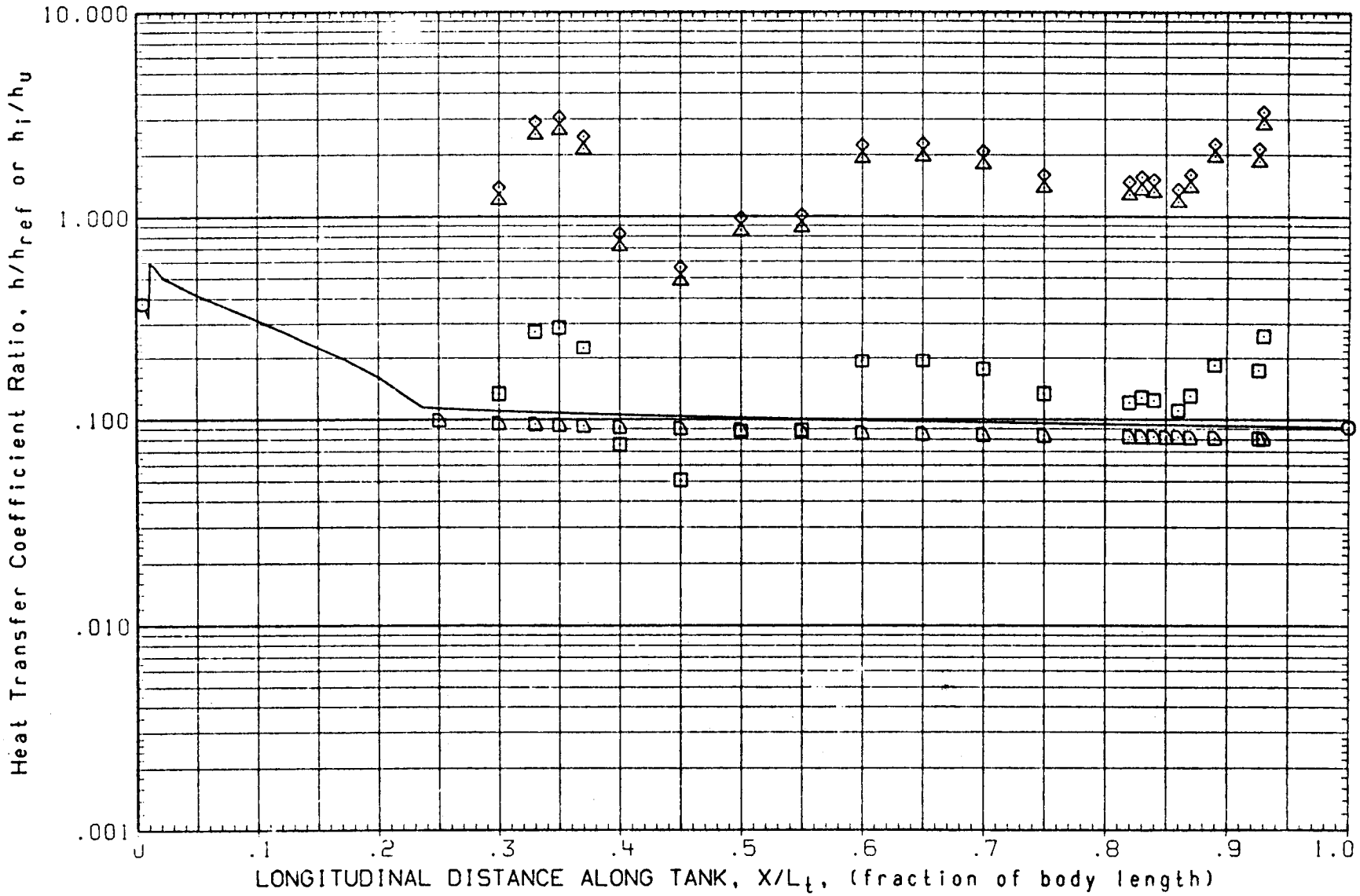

FIG. 4-2 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 292.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(C9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT03)	□	IH85, AEDC V41A-W5, CONFIGURATION C (T) S		3.010	.000	.000
(X4LT03)	◇	IH85 (W.L. TEST) OTS/ET = V4LT03/C9NT06=	HI/HU	3.010	.000	.000
(Y4LT03)	△	IH85 (W.L. THEORY) OTS/ET = V4LT03/A9NT06=	HI/HU	3.010	.000	.000

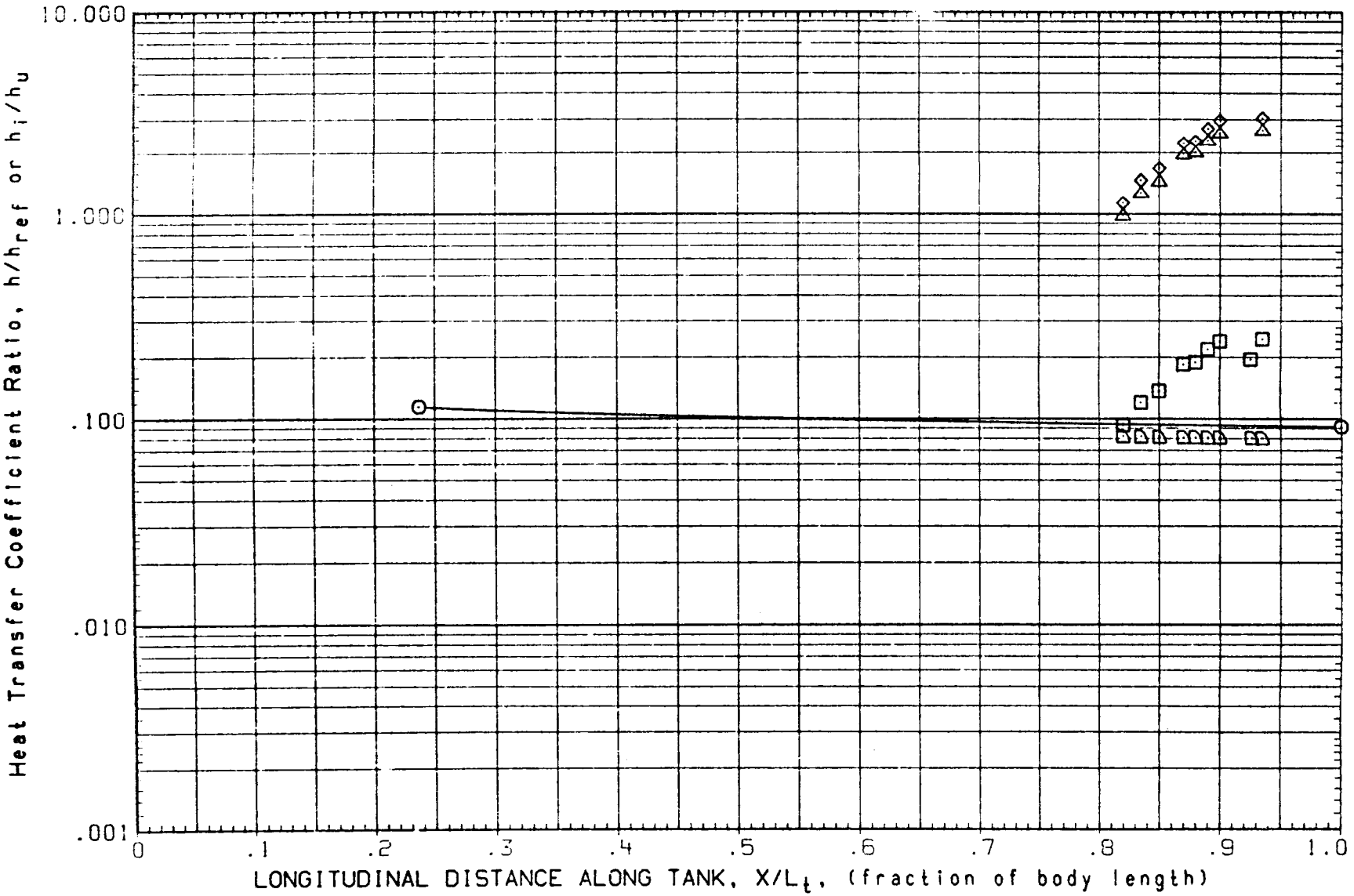

FIG. 4-2 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 301.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT03)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	.000
(X4LT03)	◇	IH85 (W.L. TEST) OTS/ET = V4LT03/C9NT06=	HI/HU	3.010	.000	.000
(Y4LT03)	△	IH85 (W.L. THEORY) OTS/ET = V4LT03/A9NT06=	HI/HU	3.010	.000	.000

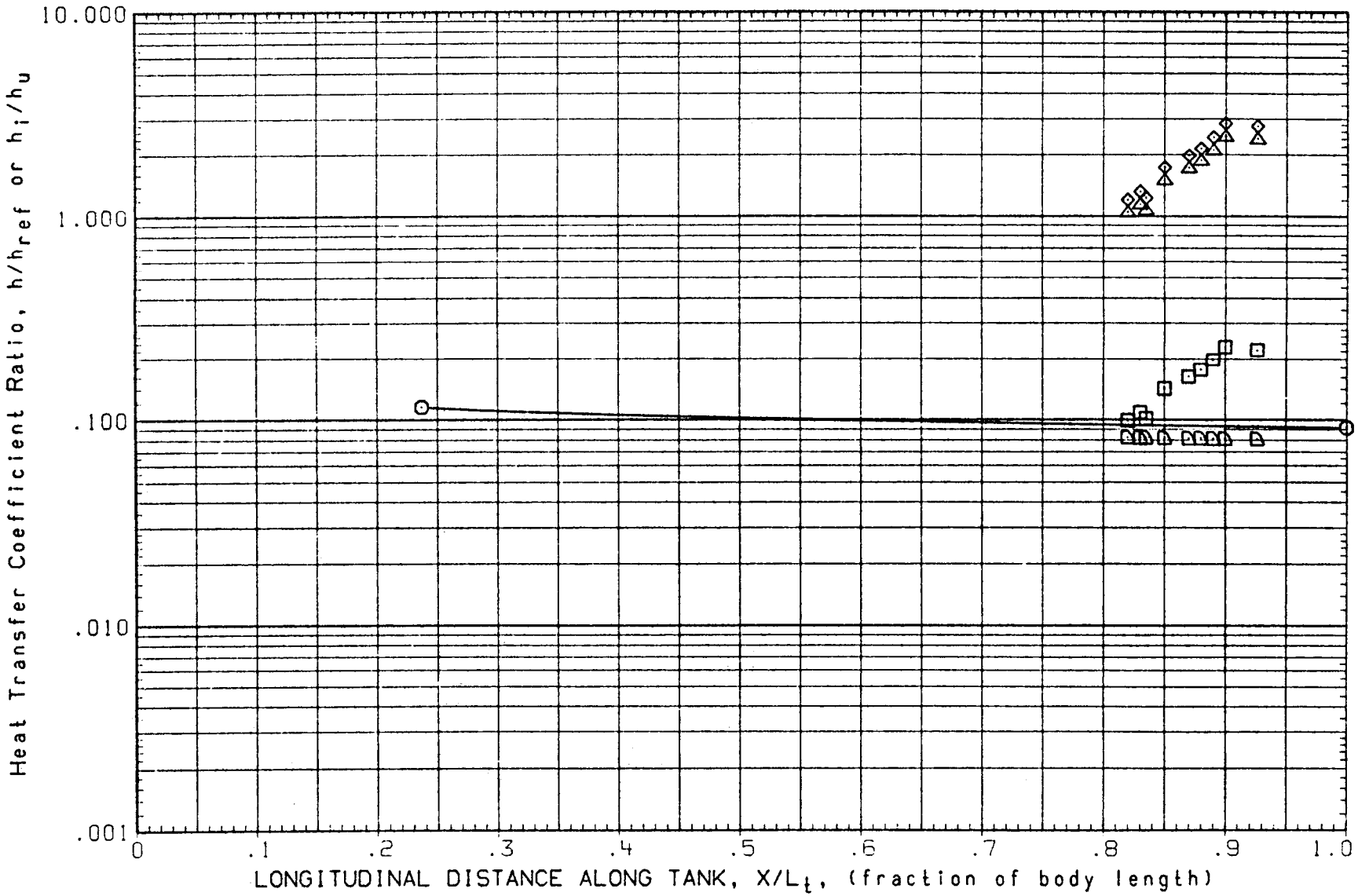

FIG. 4-2 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 305.400

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT03)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	.000
(X4LT03)	◇	IH85 (W.L. TEST) OTS/ET = V4LT03/C9NT06=	HI/HU	3.010	.000	.000
(Y4LT03)	△	IH85 (W.L. THEORY) OTS/ET = V4LT03/A9NT06=	HI/HU	3.010	.000	.000

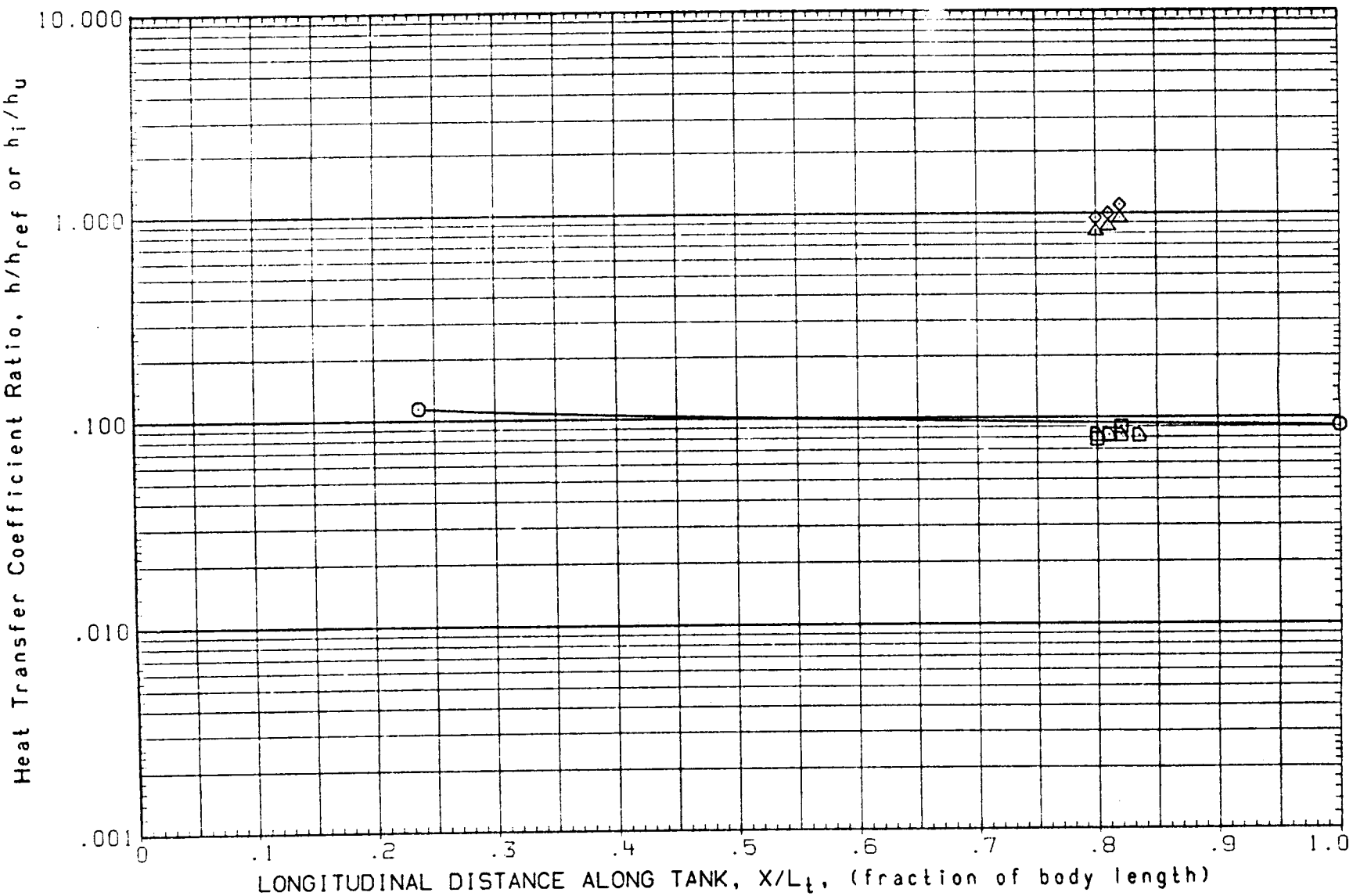

FIG. 4-2 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 309.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT03)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	.000
(X4LT03)	◇	IH85 (W.L. TEST) OTS/ET = V4LT03/C9NT06=	HI/HU	3.010	.000	.000
(Y4LT03)	△	IH85 (W.L. THEORY) OTS/ET = V4LT03/A9NT06=	HI/HU	3.010	.000	.000

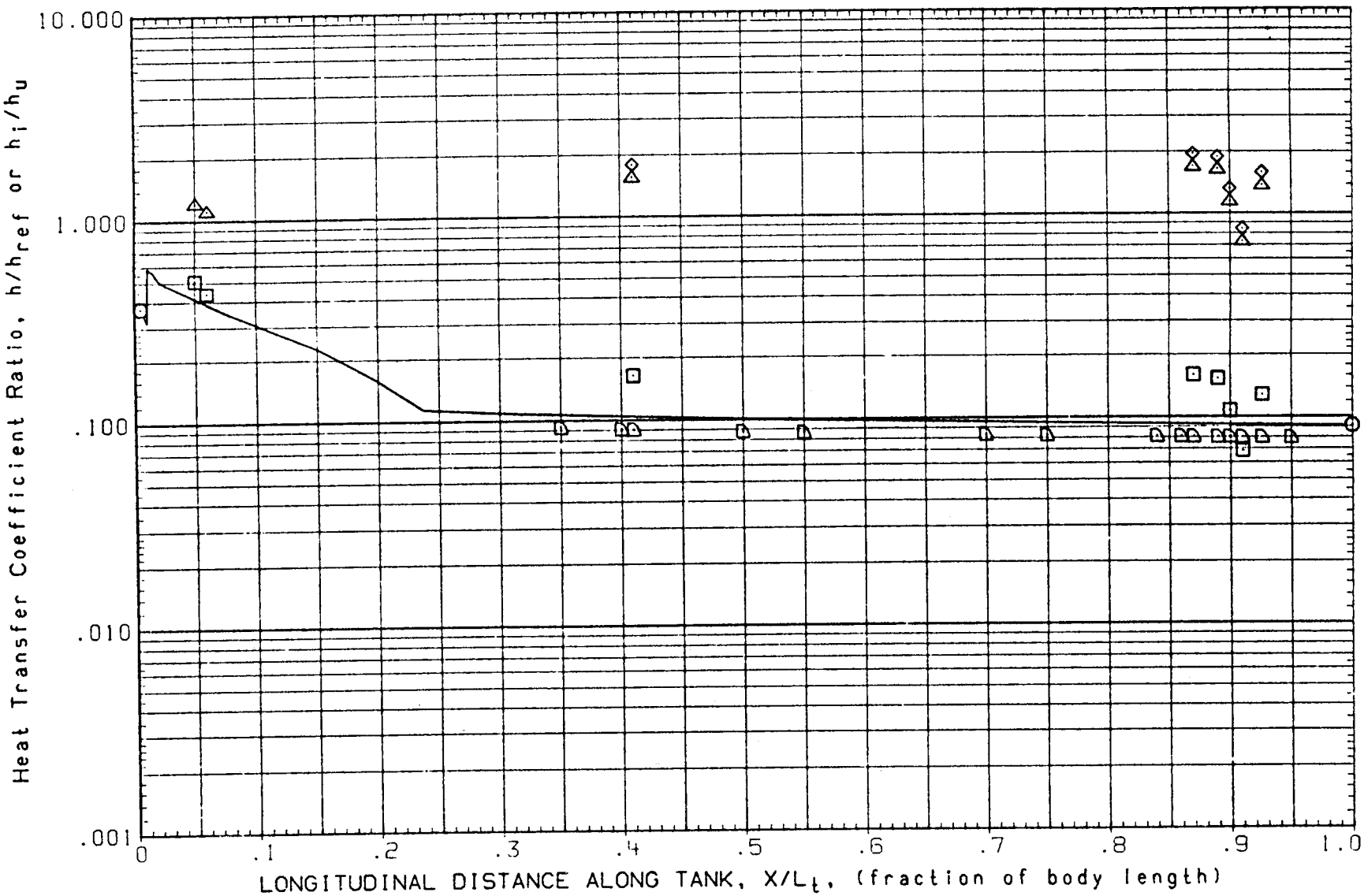

FIG. 4-2 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 315.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	3.010	.000	.000
(C9NT06)	◗	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	3.010	.000	.000
(V4LT03)	□	(H85, AEDC V41A-W5, CONFIGURATION 0 (T) S	3.010	.000	.000
(X4LT03)	◇	(H85 (W.L. TEST) OTS/ET = V4LT03/C9NT06= HI/HU	3.010	.000	.000
(Y4LT03)	△	(H85 (W.L. THEORY) OTS/ET = V4LT03/A9NT06= HI/HU	3.010	.000	.000

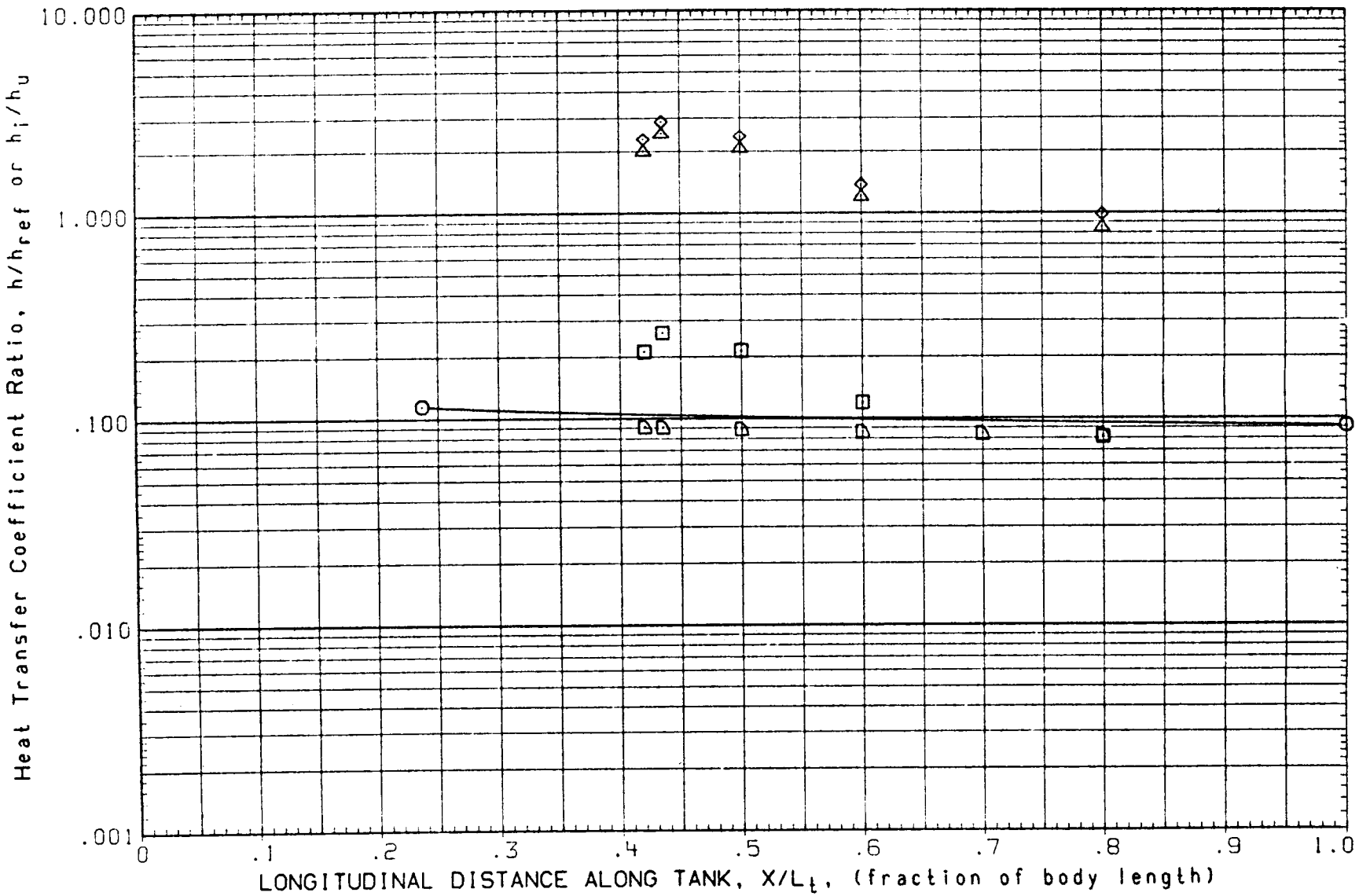

FIG. 4-2 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 322.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT03)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	.000
(X4LT03)	◇	IH85 (W.L. TEST) OTS/ET = V4LT03/C9NT06=	HI/HU	3.010	.000	.000
(Y4LT03)	△	IH85 (W.L. THEORY) OTS/ET = V4LT03/A9NT06=	HI/HU	3.010	.000	.000

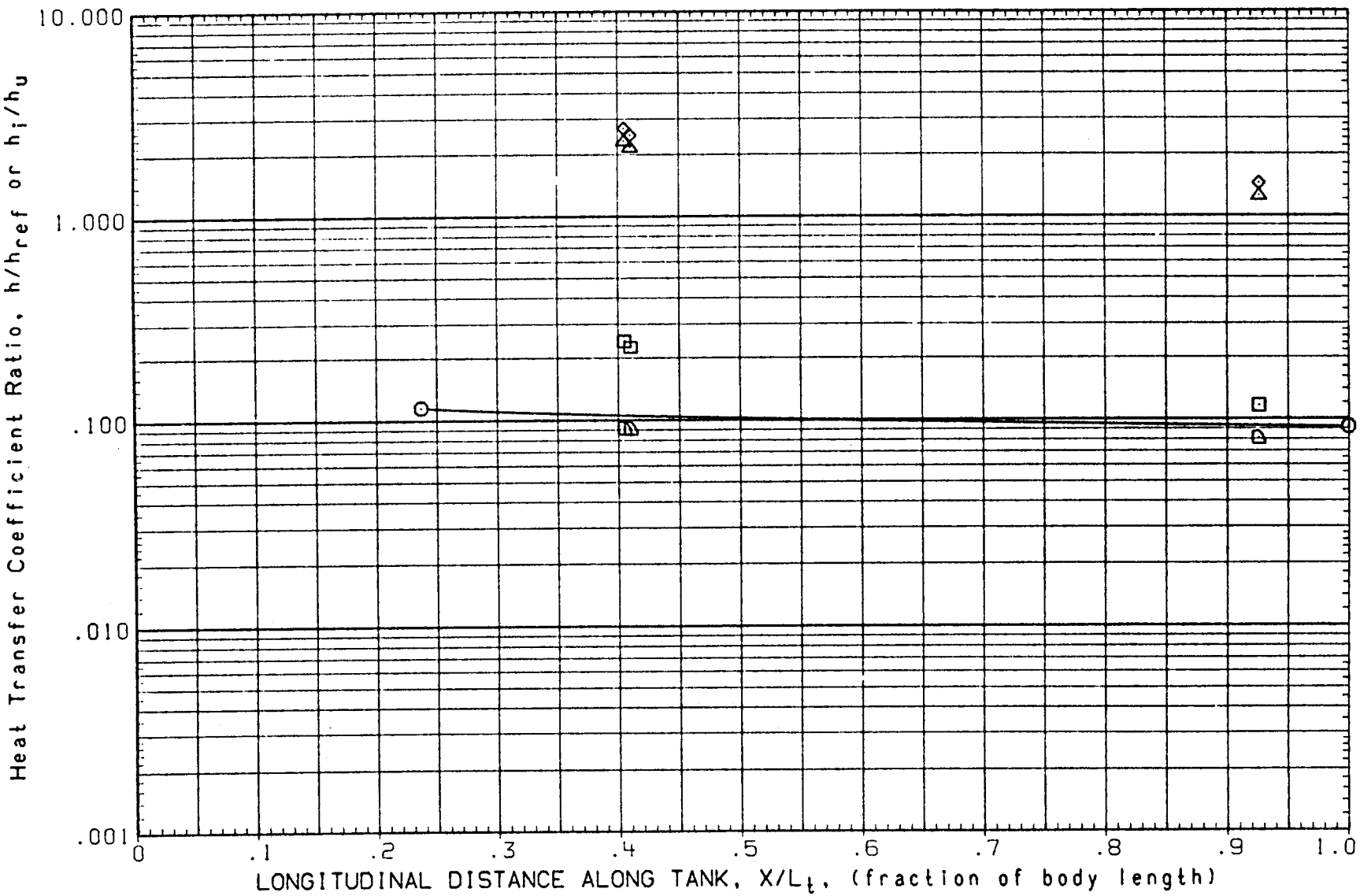

FIG. 4-2 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 324.450

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT03)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	.000
(X4LT03)	◇	IH85 (W.L. TEST) OTS/ET = V4LT03/C9NT06=	HI/HU	3.010	.000	.000
(Y4LT03)	△	IH85 (W.L. THEORY) OTS/ET = V4LT03/A9NT06=	HI/HU	3.010	.000	.000

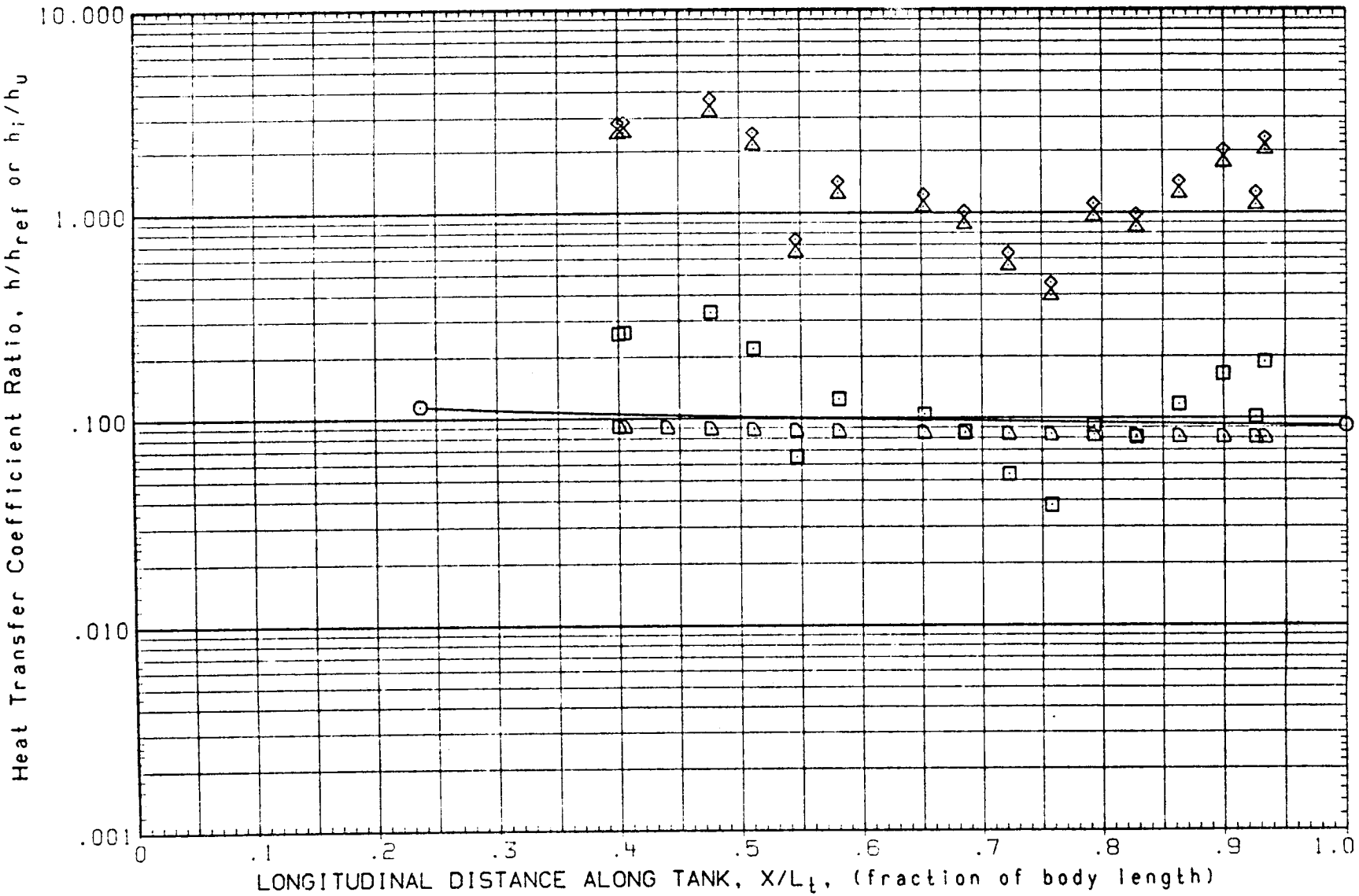

FIG. 4-2 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 326.850

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT03)	□	IH85, AEDC V41A-W5, CONFIGURATION O (T) S		3.010	.000	.000
(X4LT03)	◇	IH85 (W.L. TEST) OTS/ET = V4LT03/C9NT06=	HI/HU	3.010	.000	.000
(Y4LT03)	△	IH85 (W.L. THEORY) OTS/ET = V4LT03/A9NT06=	HI/HU	3.010	.000	.000

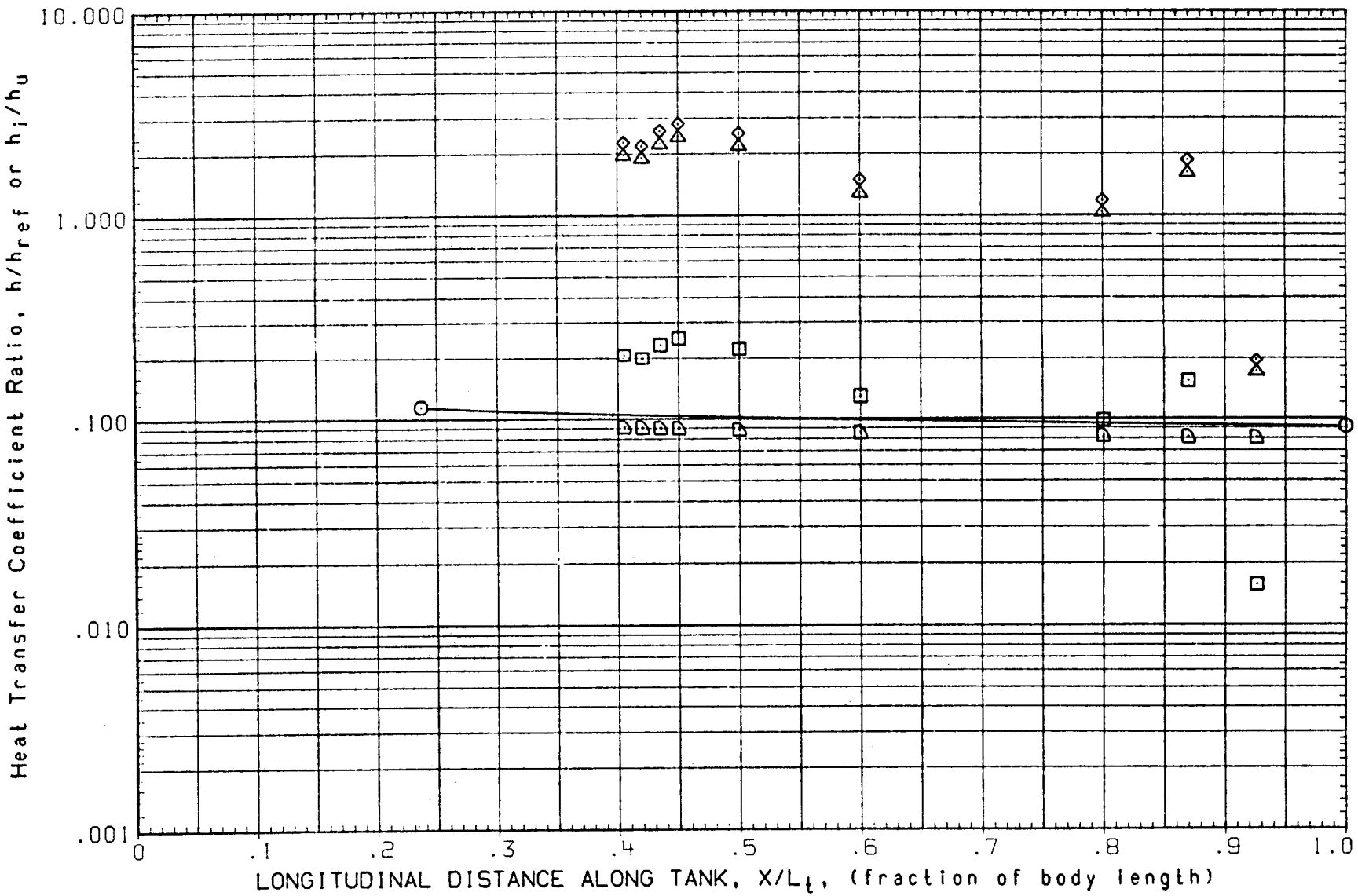

FIG. 4-2 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 330.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT03)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	.000
(X4LT03)	◇	IH85 (W.L. TEST) OTS/ET = V4LT03/C9NT06=	HI/HU	3.010	.000	.000
(Y4LT03)	△	IH85 (W.L. THEORY) OTS/ET = V4LT03/A9NT06=	HI/HU	3.010	.000	.000

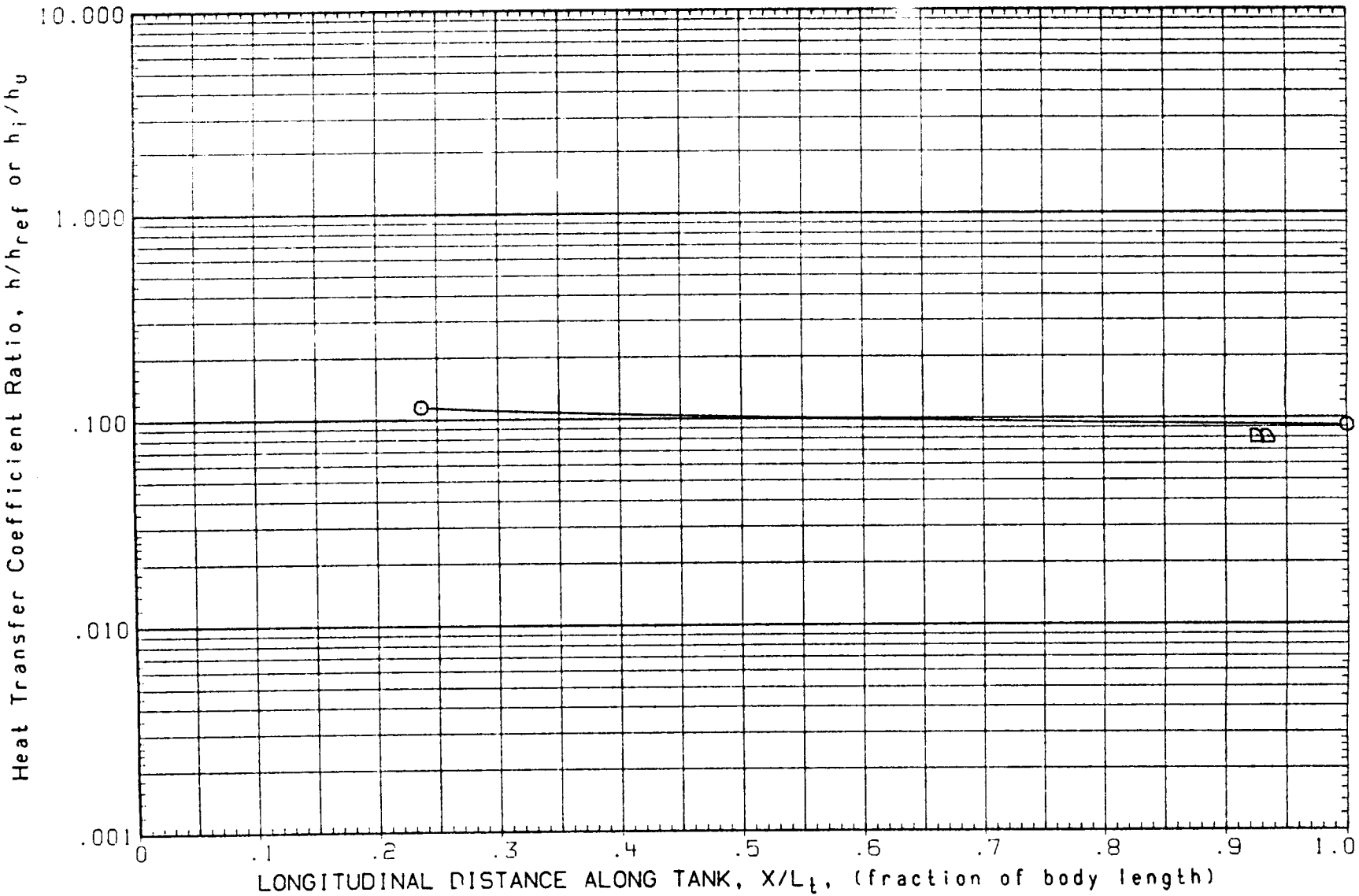

FIG. 4-2 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 334.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT03)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	.000
(X4LT03)	◇	IH85 (W.L. TEST) OTS/ET = V4LT03/C9NT06=	HI/HU	3.010	.000	.000
(Y4LT03)	△	IH85 (W.L. THEORY) OTS/ET = V4LT03/A9NT06=	HI/HU	3.010	.000	.000

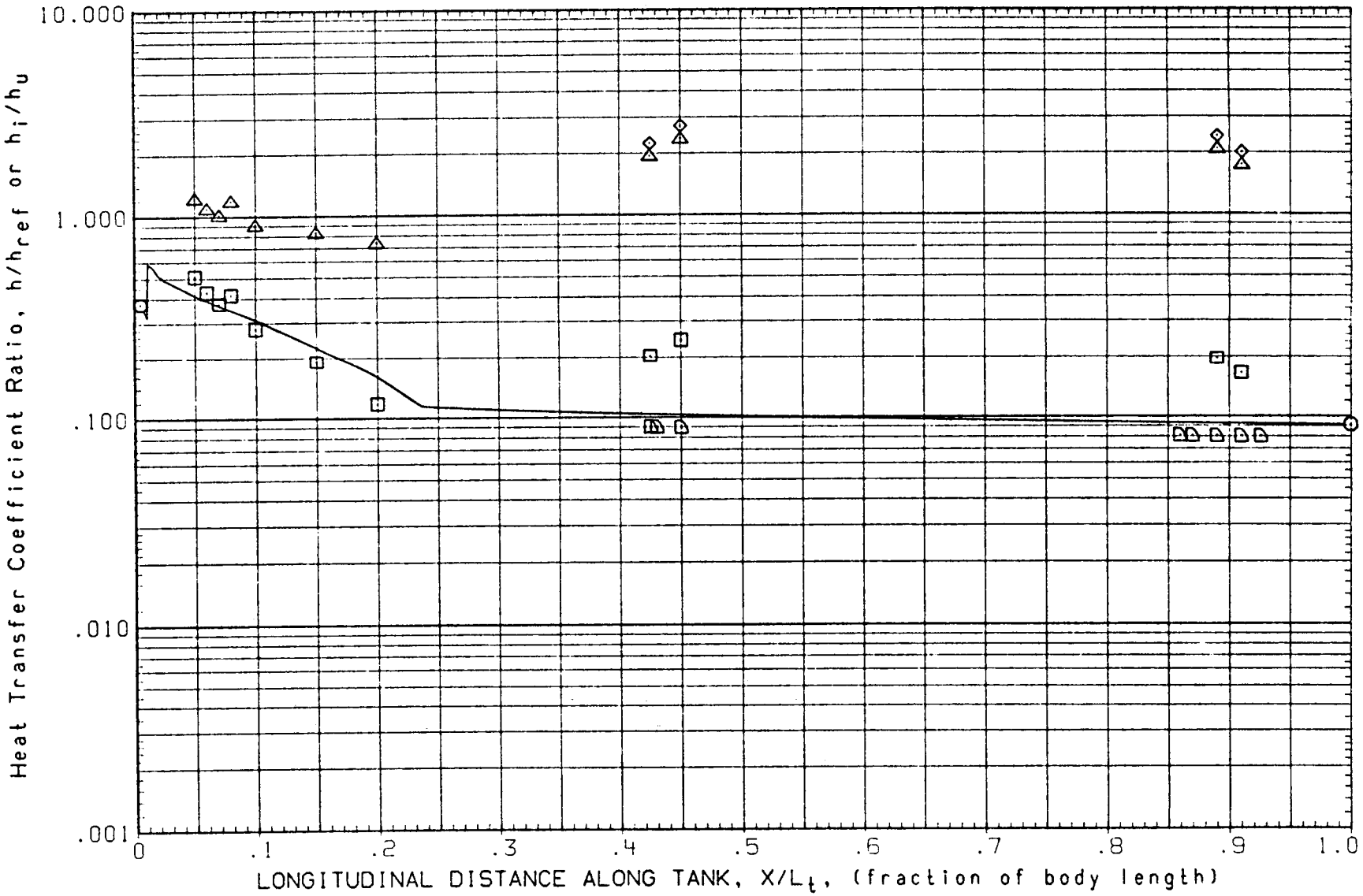

FIG. 4-2 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 337.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(D9NT06)	◺	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(Y4LT03)	□	DATA NOT AVAILABLE		3.010	.000	.000
(X4LT03)	◇	DATA NOT AVAILABLE		3.010	.000	.000
(Y4LT03)	△	DATA NOT AVAILABLE		3.010	.000	.000

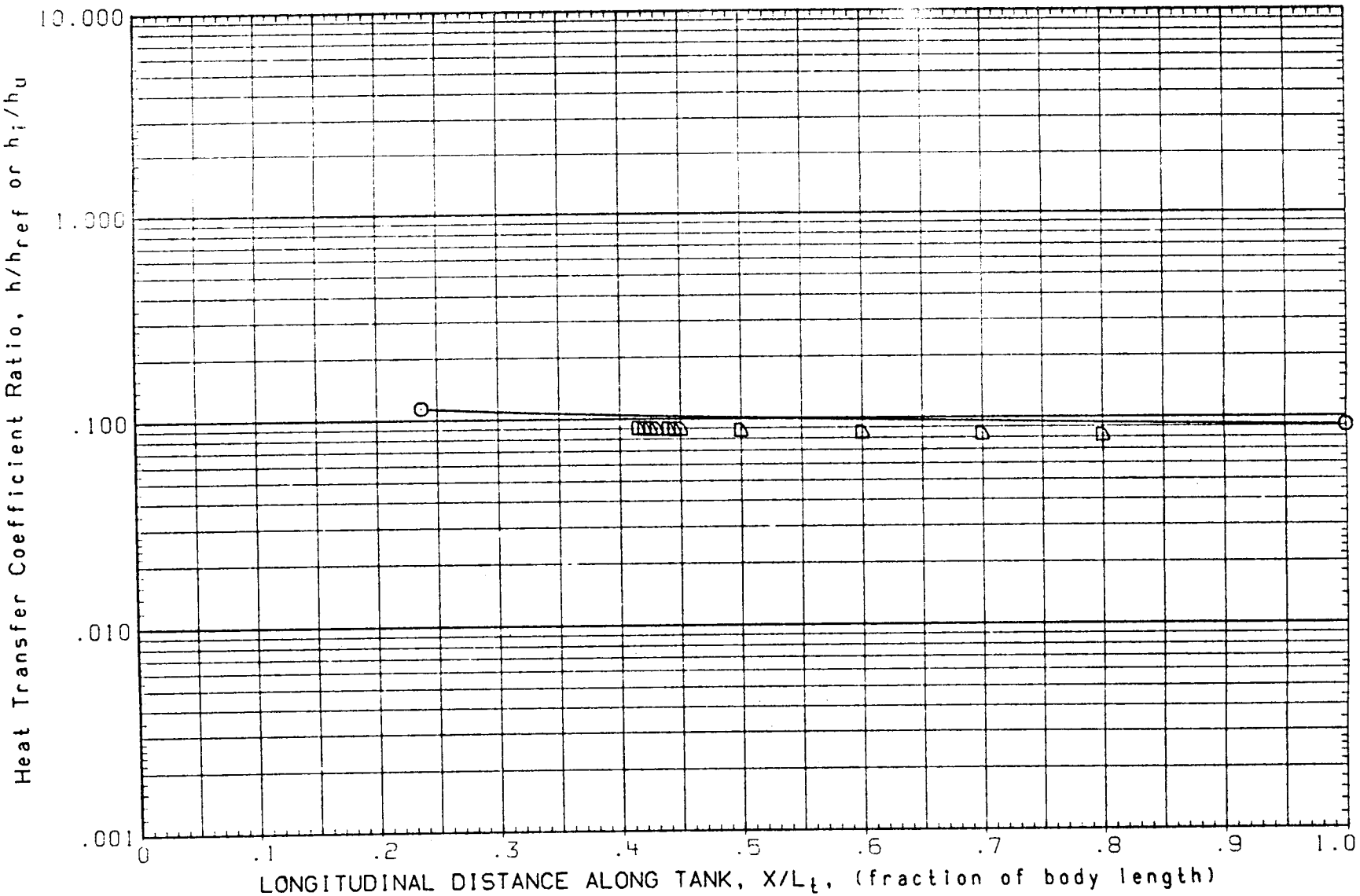

FIG. 4-2 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 343.120

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	3.010	.000	.000
(C9NT06)	⬠	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	3.010	.000	.000
(V4LT03)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	3.010	.000	.000
(X4LT03)	◇	IH85 (W.L. TEST) OTS/ET = V4LT03/C9NT06= HI/HU	3.010	.000	.000
(Y4LT03)	△	IH85 (W.L. THEORY) OTS/ET = V4LT03/A9NT06= HI/HU	3.010	.000	.000

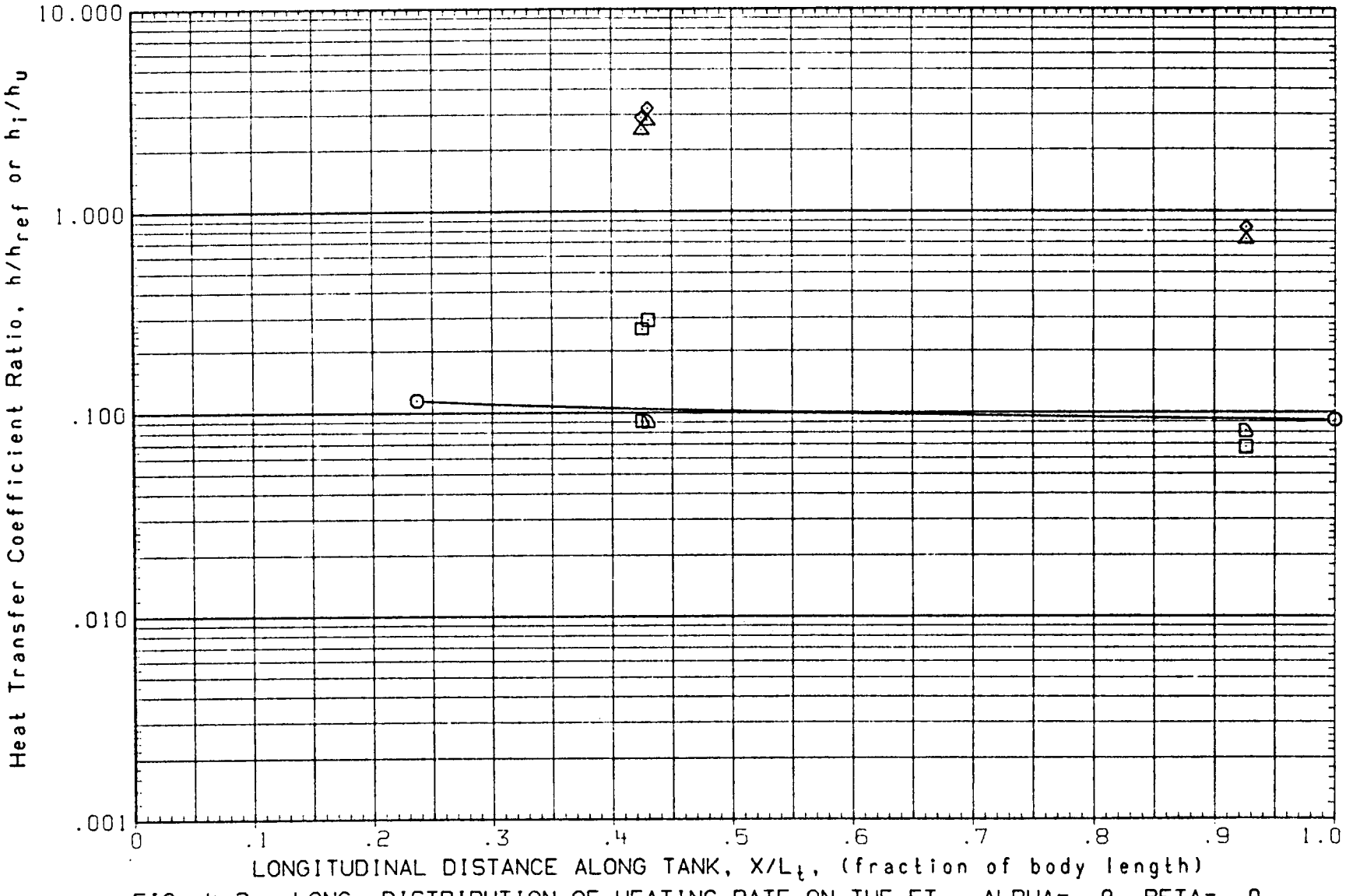

FIG. 4-2 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 345.560

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	◻	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT03)	◻	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	.000
(X4LT03)	◇	IH85 (W.L. TEST) OTS/ET = V4LT03/C9NT06=	HI/HU	3.010	.000	.000
(Y4LT03)	△	IH85 (W.L. THEORY) OTS/ET = V4LT03/A9NT06=	HI/HU	3.010	.000	.000

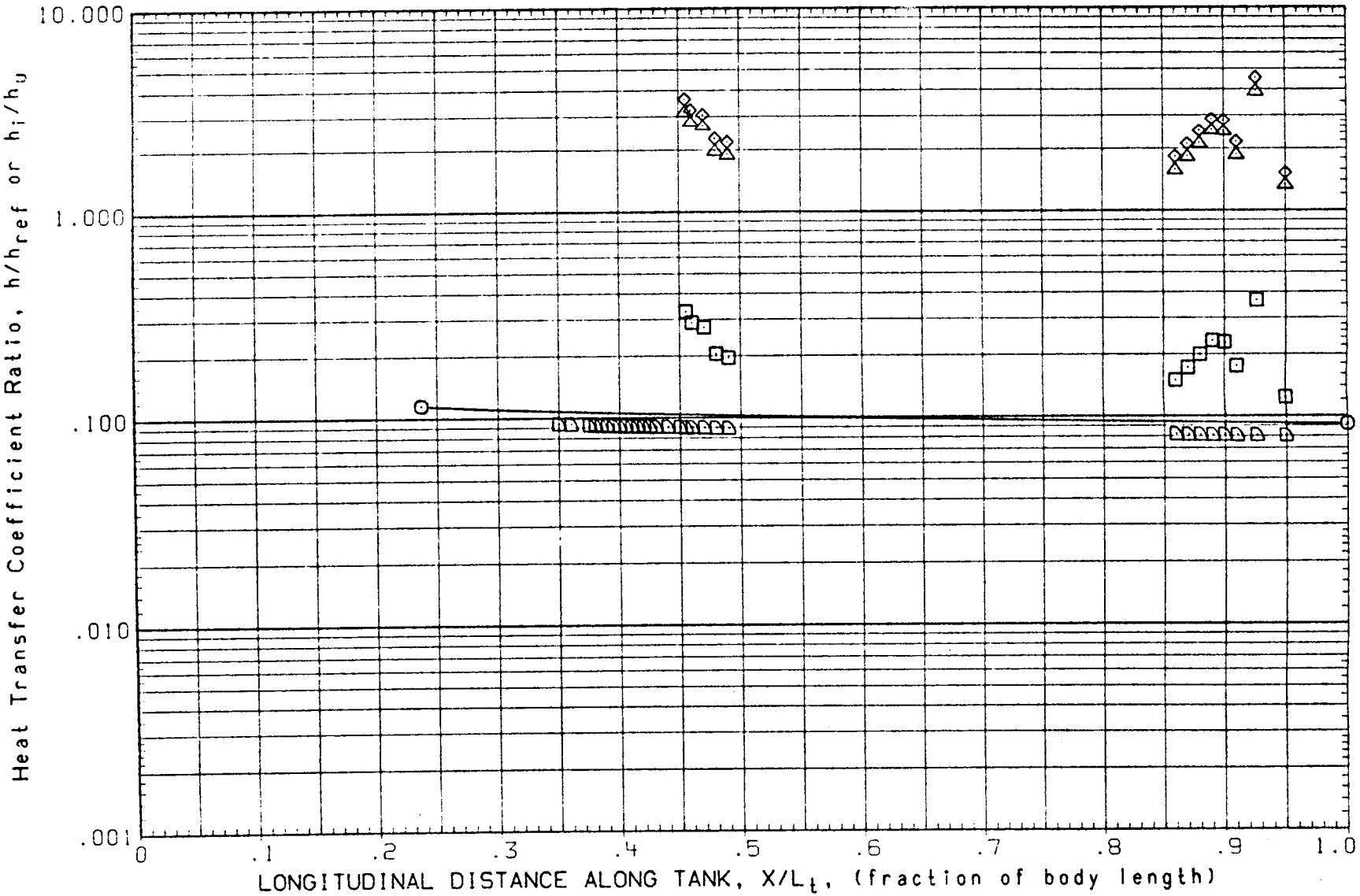

FIG. 4-2 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 348.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT03)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	.000
(X4LT03)	◇	IH85 (W.L. TEST) OTS/ET = V4LT03/C9NT06=	HI/HU	3.010	.000	.000
(Y4LT03)	△	IH85 (W.L. THEORY) OTS/ET = V4LT03/A9NT06=	HI/HU	3.010	.000	.000

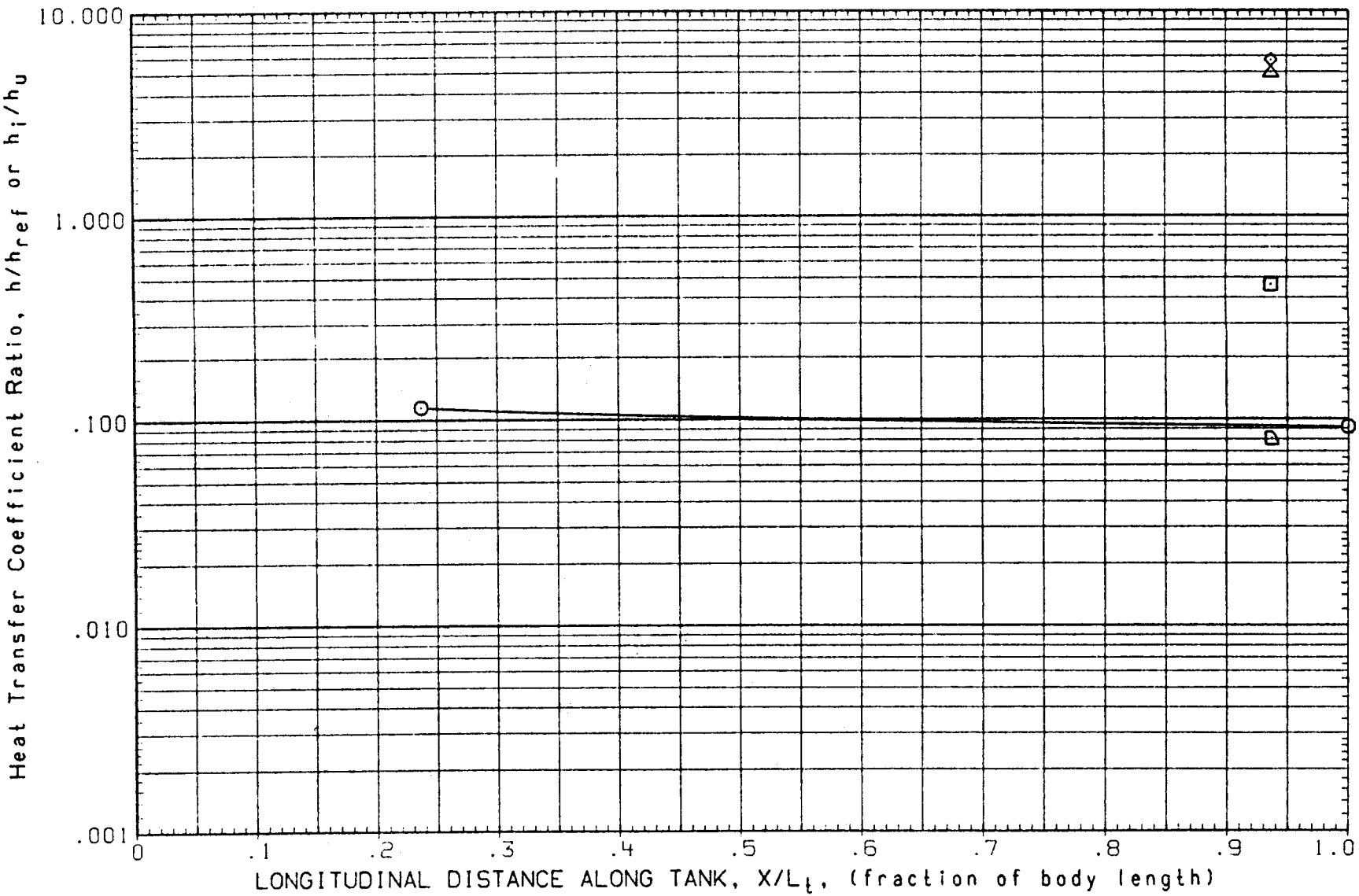

FIG. 4-2 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 352.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT03)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	.000
(X4LT03)	◇	IH85 (W.L. TEST) OTS/ET = V4LT03/C9NT06= HI/HU		3.010	.000	.000
(Y4LT03)	△	IH85 (W.L. THEORY) OTS/ET = V4LT03/A9NT06= HI/HU		3.010	.000	.000

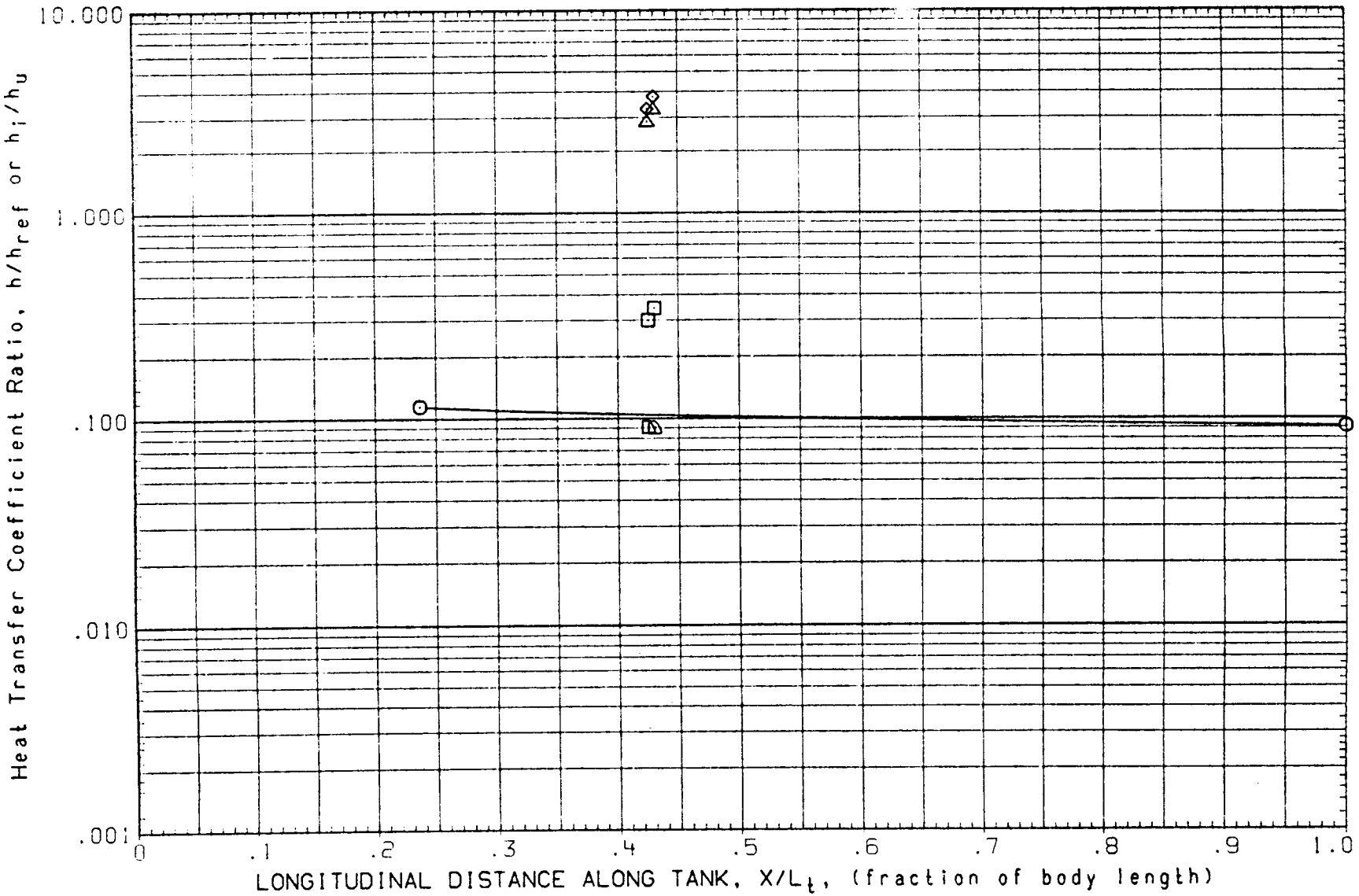

FIG. 4-2 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 354.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⬠	DATA NOT AVAILABLE		3.010	.000	.000
(V4LT03)	□	DATA NOT AVAILABLE		3.010	.000	.000
(X4LT03)	◇	DATA NOT AVAILABLE		3.010	.000	.000
(Y4LT03)	△	DATA NOT AVAILABLE		3.010	.000	.000

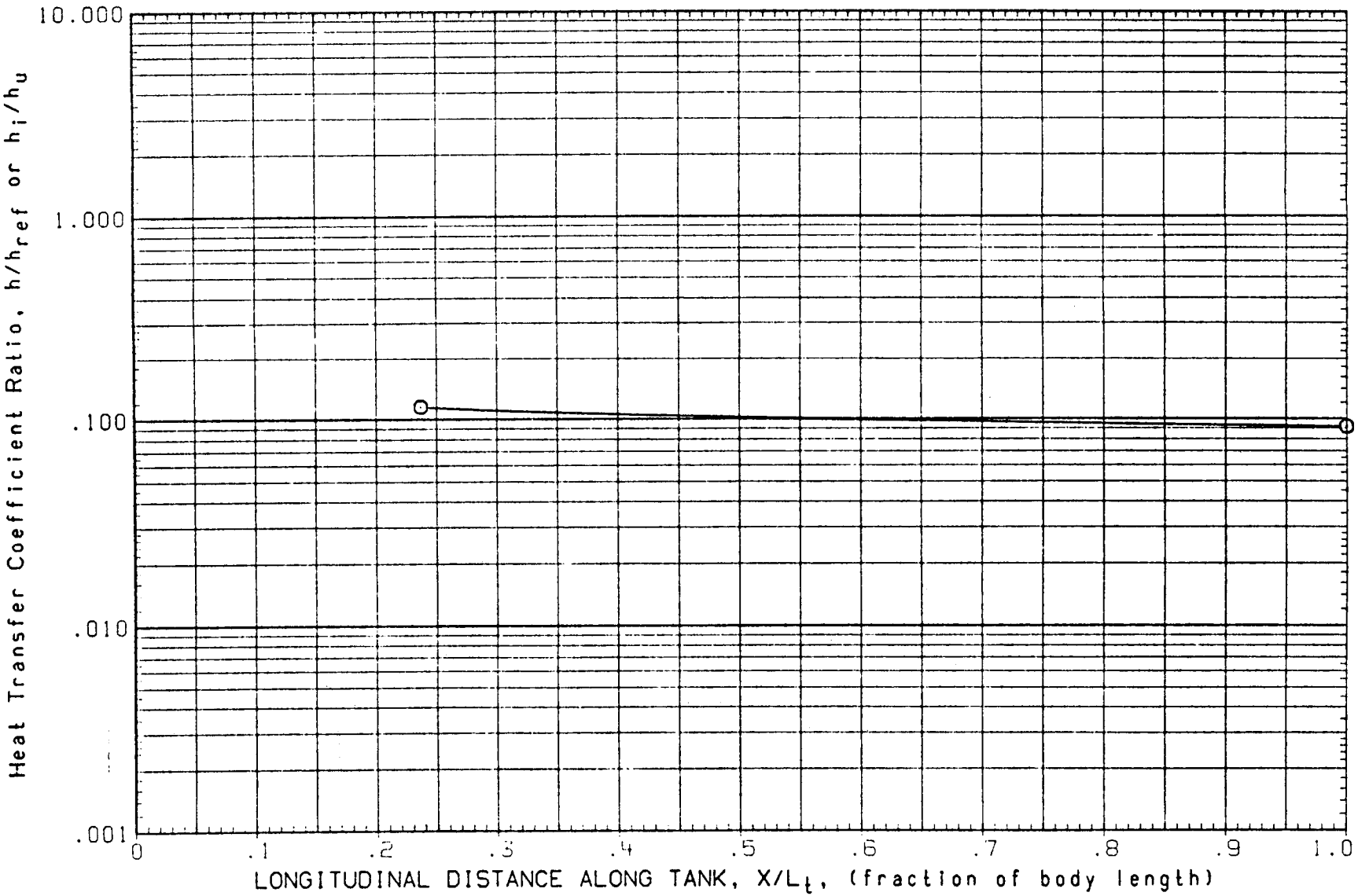

FIG. 4-2 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 355.160

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(09NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(09NT06)	□	DATA NOT AVAILABLE		3.010	.000	.000
(X4LT03)	◇	DATA NOT AVAILABLE		3.010	.000	.000
(X4LT03)	◁	DATA NOT AVAILABLE		3.010	.000	.000
(Y4LT03)	△	DATA NOT AVAILABLE		3.010	.000	.000

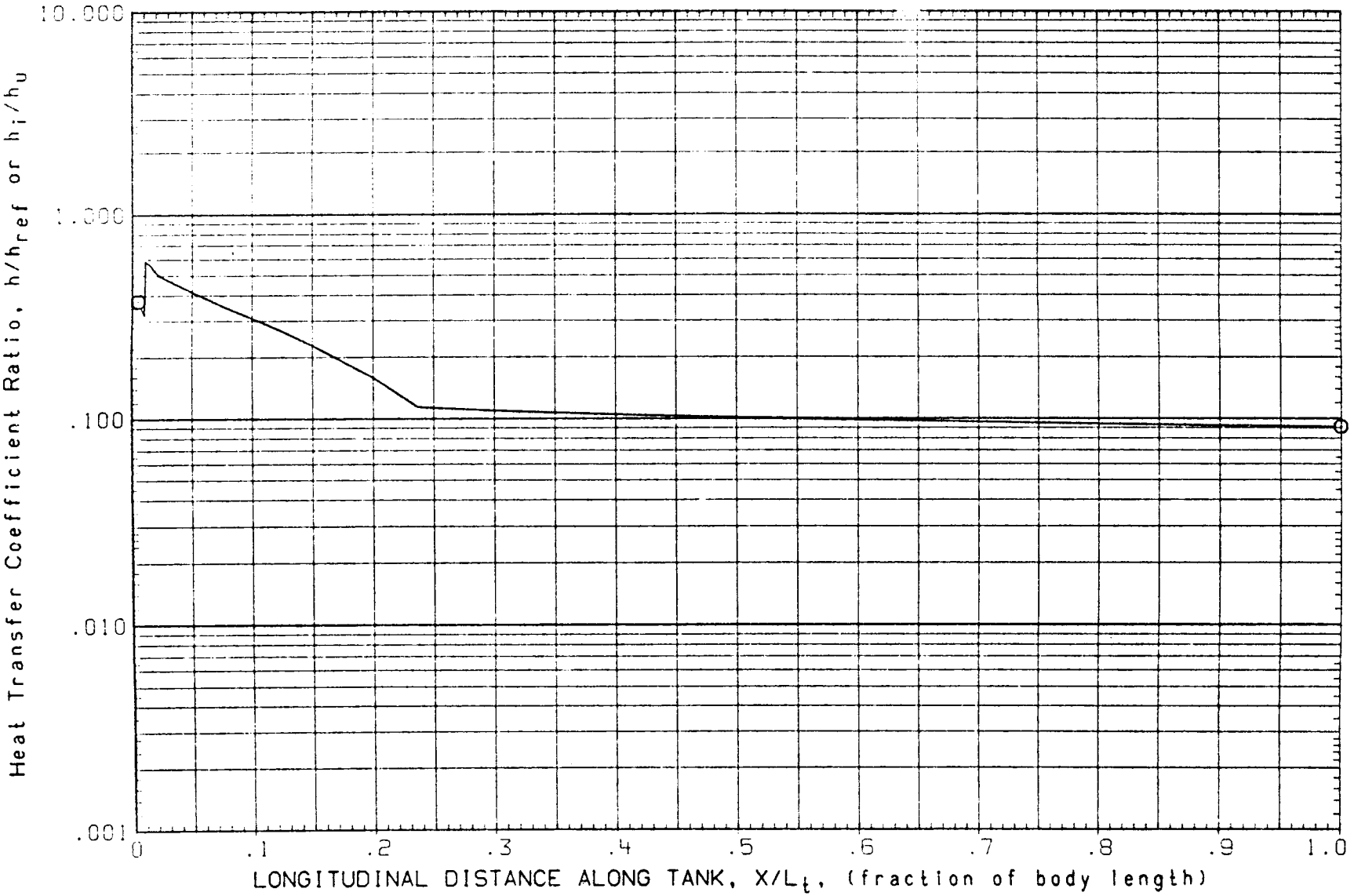

FIG. 4-2 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 360.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT04)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	3.000
(X4LT04)	◇	IH85 (W.L. TEST) OTS/ET = V4LT04/C9NT07= HI/HU		3.010	.000	3.000
(Y4LT04)	△	IH85 (W.L. THEORY) OTS/ET = V4LT04/A9NT07= HI/HU		3.010	.000	3.000

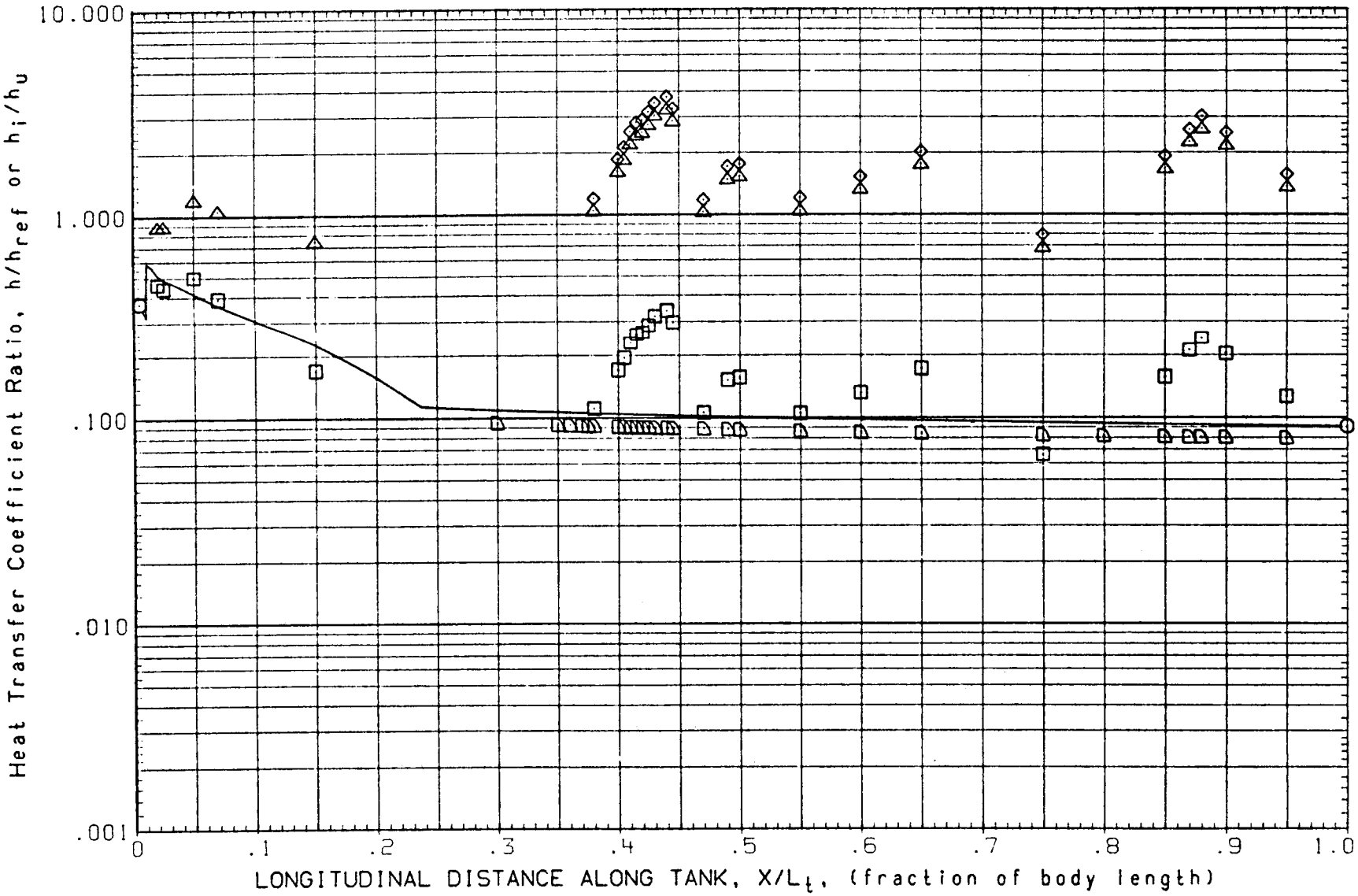

FIG. 4-3 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/L < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = .000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(C9NT07)	○	DATA NOT AVAILABLE	3.010	.000	3.000
(C9NT07)	⬠	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	3.010	.000	3.000
(V4LT04)	□	IH85. AEDC V41A-W5. CONFIGURATION 0 (T) 5	3.010	.000	3.000
(X4LT04)	◇	IH85 (W.L. TEST) OTS/ET = V4LT04/C9NT07= HI/HU	3.010	.000	3.000
(Y4LT04)	△	IH85 (W.L. THEORY) OTS/ET = V4LT04/A9NT07= HI/HU	3.010	.000	3.000

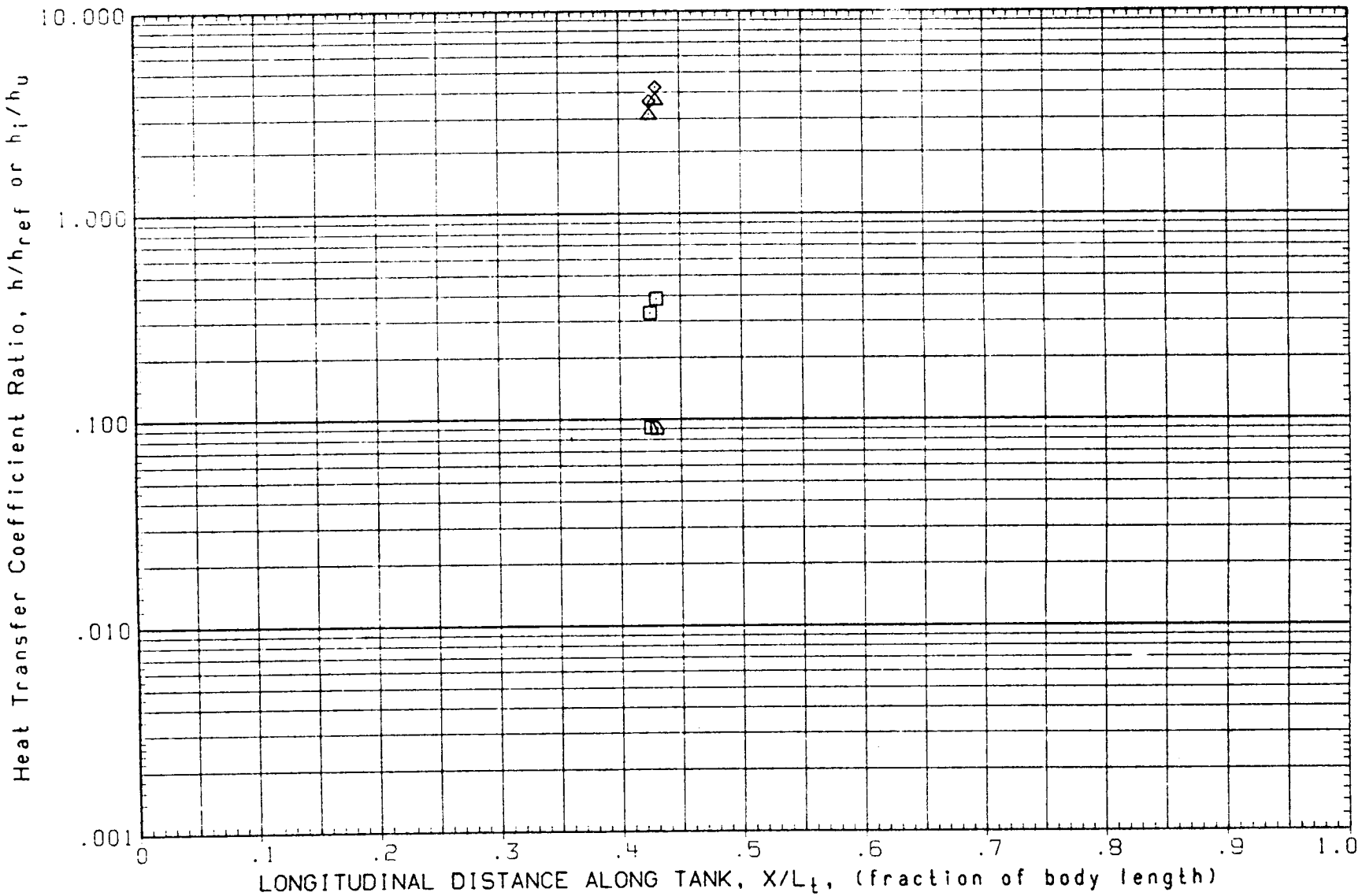

FIG. 4-3 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 5.625

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⬠	DATA NOT AVAILABLE		3.010	.000	3.000
(V4LT04)	□	DATA NOT AVAILABLE		3.010	.000	3.000
(X4LT04)	◇	DATA NOT AVAILABLE		3.010	.000	3.000
(Y4LT04)	△	DATA NOT AVAILABLE		3.010	.000	3.000

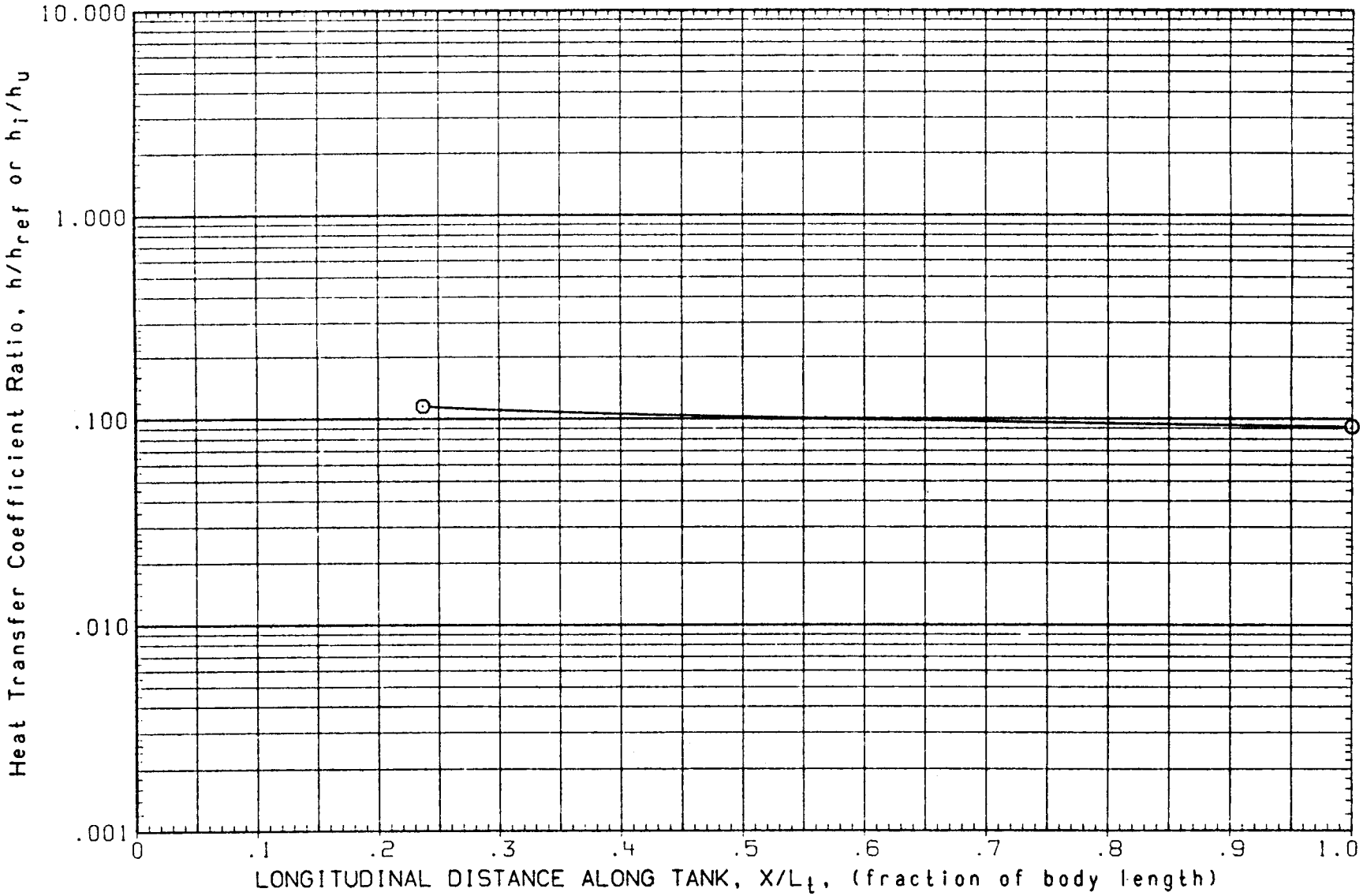

FIG. 4-3 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 5.630

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT04)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	3.000
(X4LT04)	◇	IH85 (W.L. TEST) OTS/ET = V4LT04/C9NT07=	HI/HU	3.010	.000	3.000
(Y4LT04)	△	IH85 (W.L. THEORY) OTS/ET = V4LT04/A9NT07=	HI/HU	3.010	.000	3.000

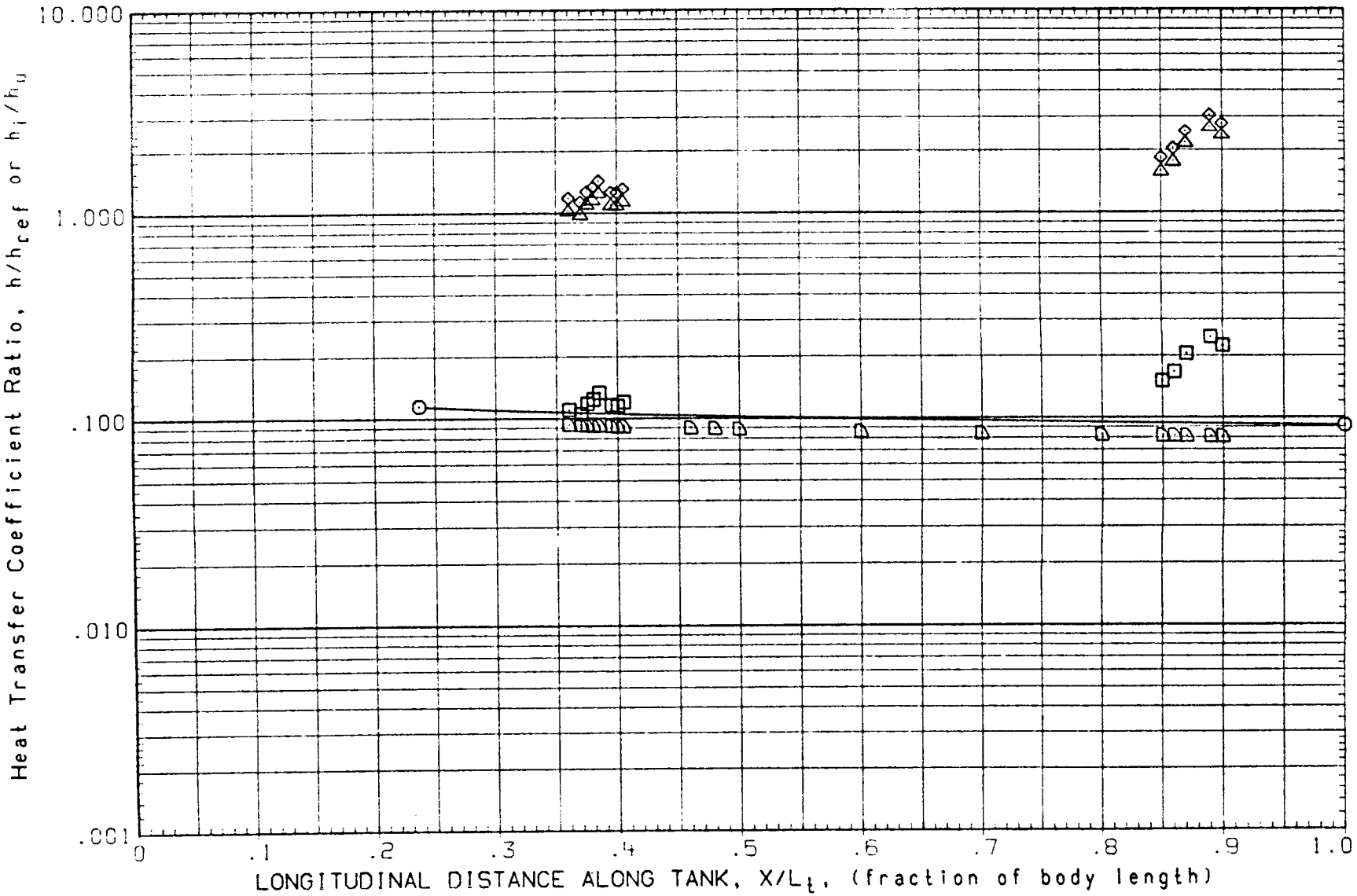

FIG. 4-3 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 11.250

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT04)	□	IH85, AEDC V4;A-W5, CONFIGURATION 0 (T) S		3.010	.000	3.000
(X4LT04)	◇	IH85 (W.L. TEST) OTS/ET = V4LT04/C9NT07=	HI/HU	3.010	.000	3.000
(Y4LT04)	△	IH85 (W.L. THEORY) OTS/ET = V4LT04/A9NT07=	HI/HU	3.010	.000	3.000

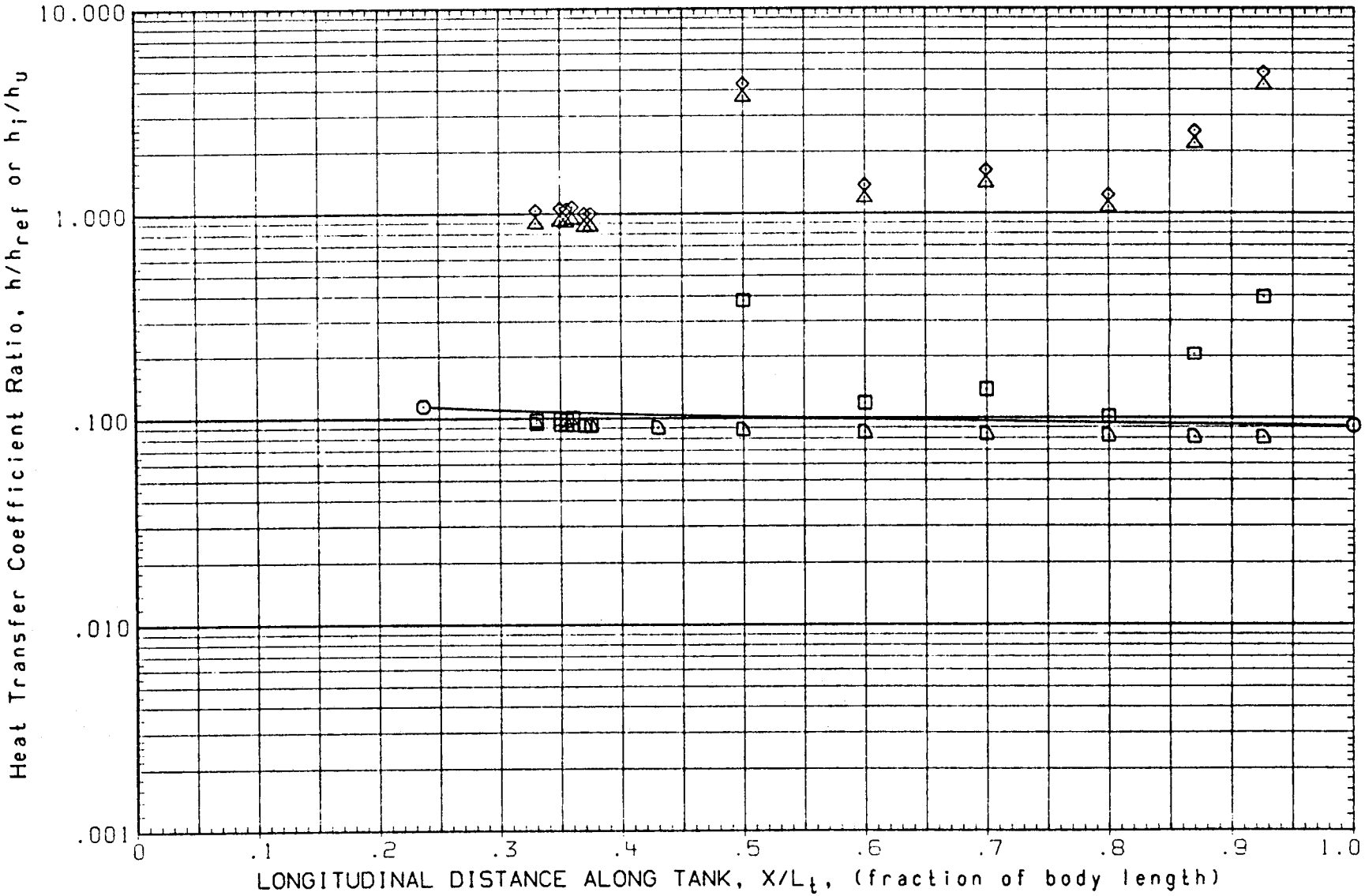

FIG. 4-3 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 17.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT04)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	3.000
(X4LT04)	◇	IH85 (W.L. TEST) OTS/ET = V4LT04/C9NT07=	HI/HU	3.010	.000	3.000
(Y4LT04)	△	IH85 (W.L. THEORY) OTS/ET = V4LT04/A9NT07=	HI/HU	3.010	.000	3.000

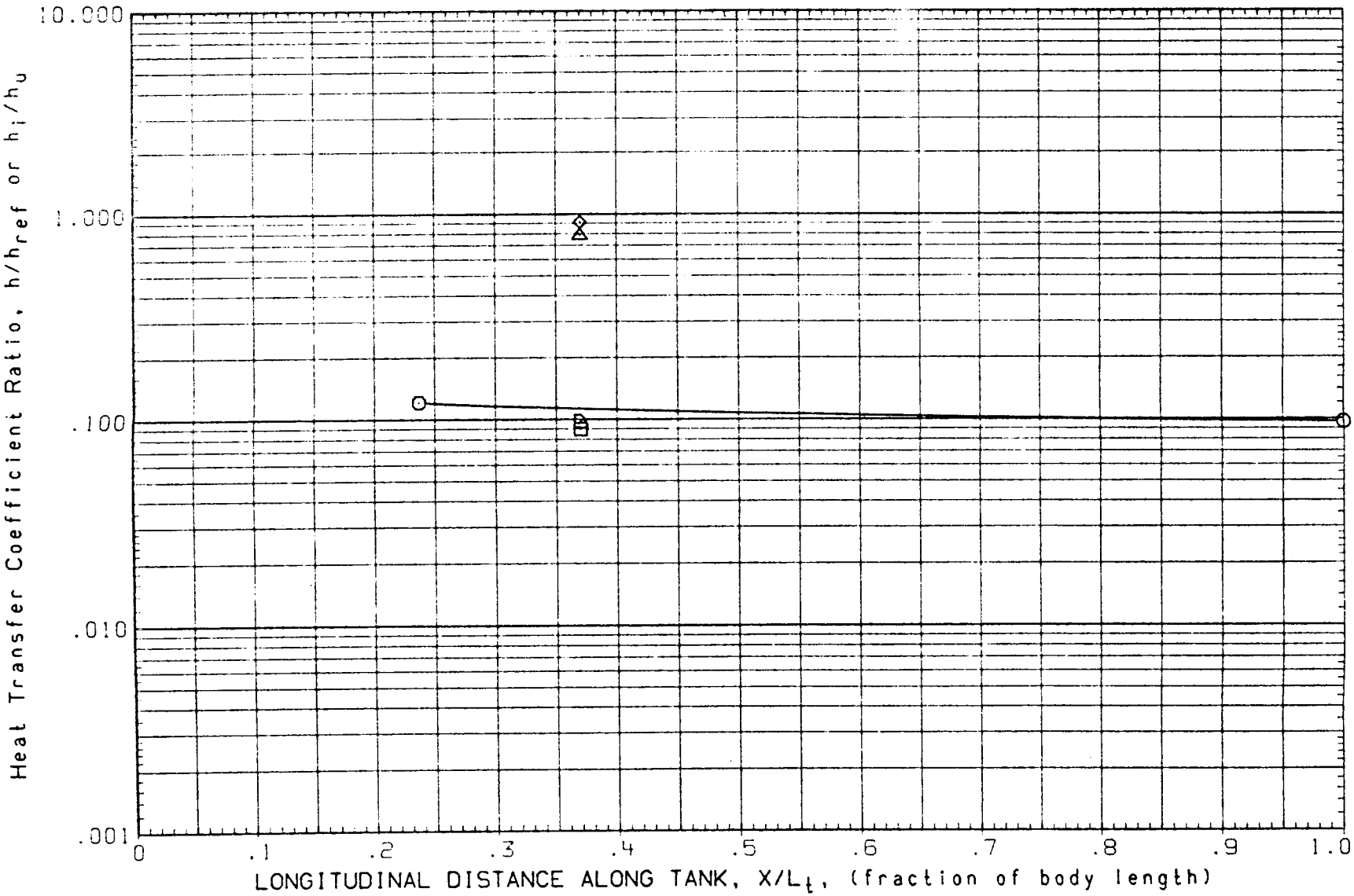

FIG. 4-3 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 20.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(C9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	3.010	.000	3.000
(C9NT07)	⬡	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	3.010	.000	3.000
(V4LT04)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	3.010	.000	3.000
(X4LT04)	◇	IH85 (W.L. TEST) OTS/ET = V4LT04/C9NT07= HI/HU	3.010	.000	3.000
(Y4LT04)	△	IH85 (W.L. THEORY) OTS/ET = V4LT04/A9NT07= HI/HU	3.010	.000	3.000

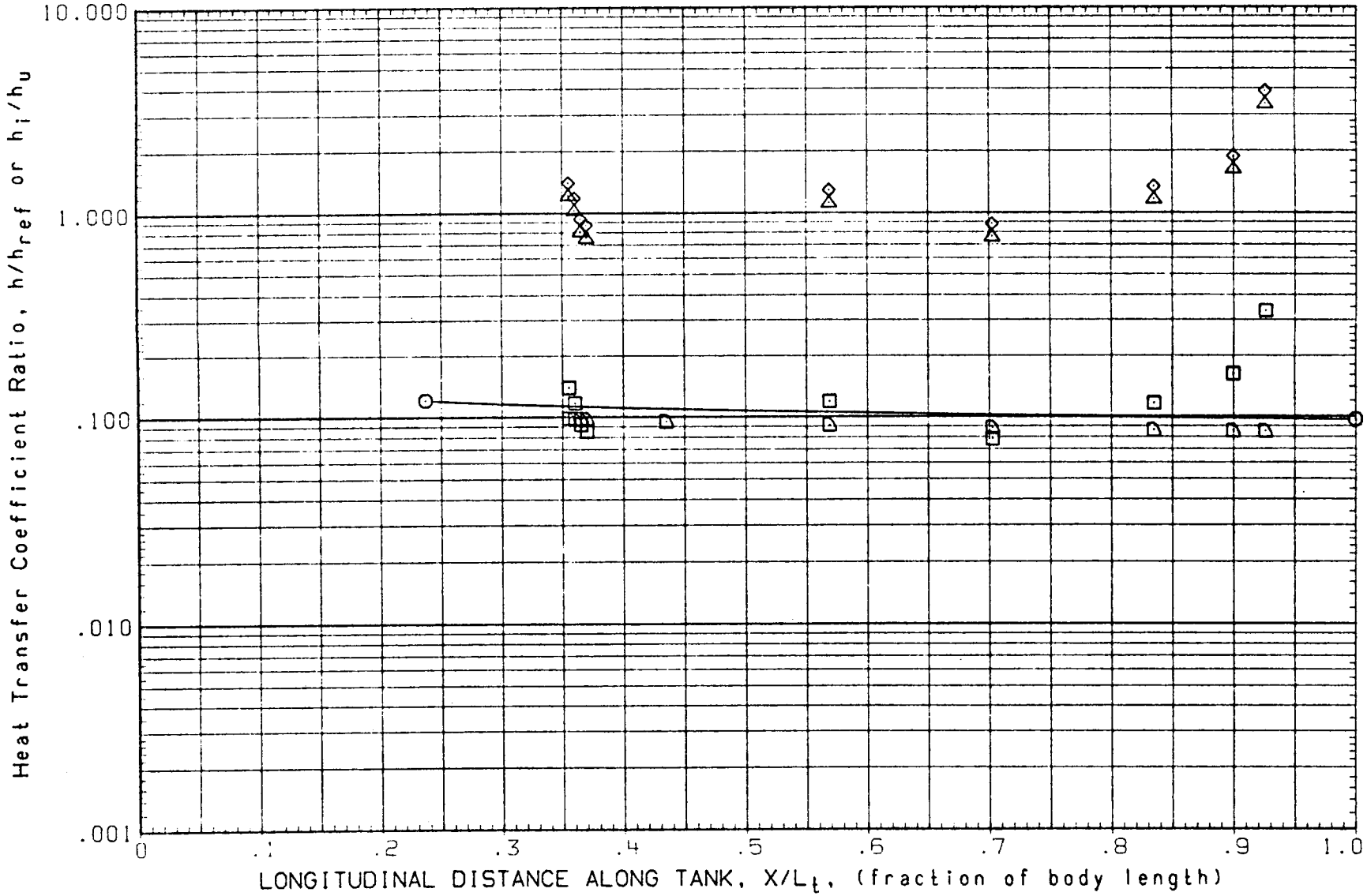

FIG. 4-3 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 23.070

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	□	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT04)	⊡	IH85, AEDC V41A-WS, CONFIGURATION C (T) S		3.010	.000	3.000
(X4LT04)	◇	IH85 (W.L. TEST) OTS/ET = V4LT04/C9NT07=	HI/HU	3.010	.000	3.000
(Y4LT04)	△	IH85 (W.L. THEORY) OTS/ET = V4LT04/A9NT07=	HI/HU	3.010	.000	3.000

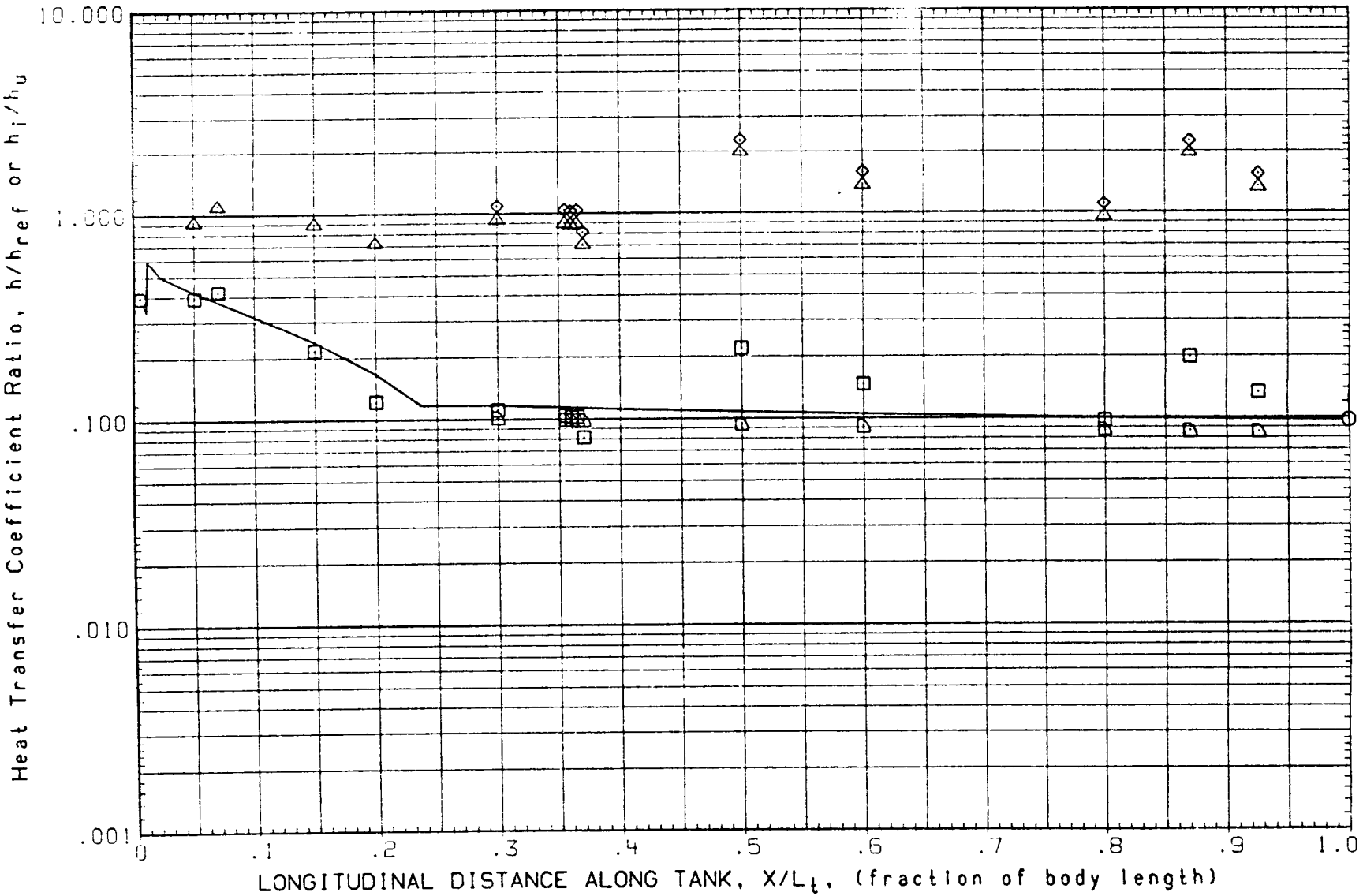

FIG. 4-3 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 29.800

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT04)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	3.000
(X4LT04)	◇	IH85 (W.L. TEST) OTS/ET = V4LT04/C9NT07=	HI/HU	3.010	.000	3.000
(Y4LT04)	△	IH85 (W.L. THEORY) OTS/ET = V4LT04/A9NT07=	HI/HU	3.010	.000	3.000

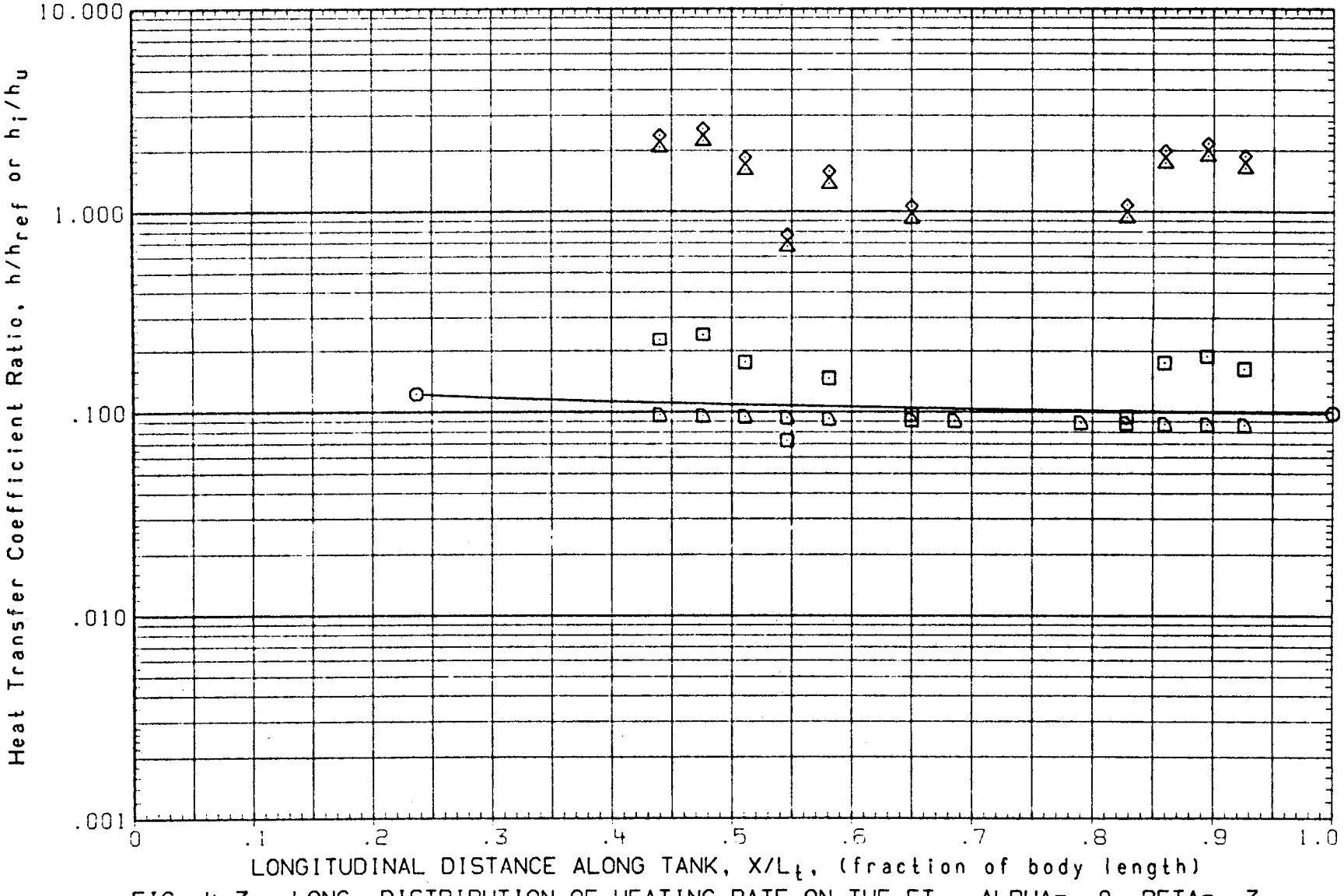

FIG. 4-3 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 31.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(C9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⬚	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT04)	⬚	(H65, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	3.000
(V4LT04)	◇	(H85 (W.L. TEST) OTS/ET = V4LT04/C9NT07=	HI/HU	3.010	.000	3.000
(V4LT04)	△	(H65 (W.L. THEORY) OTS/ET = V4LT04/A9NT07=	HI/HU	3.010	.000	3.000

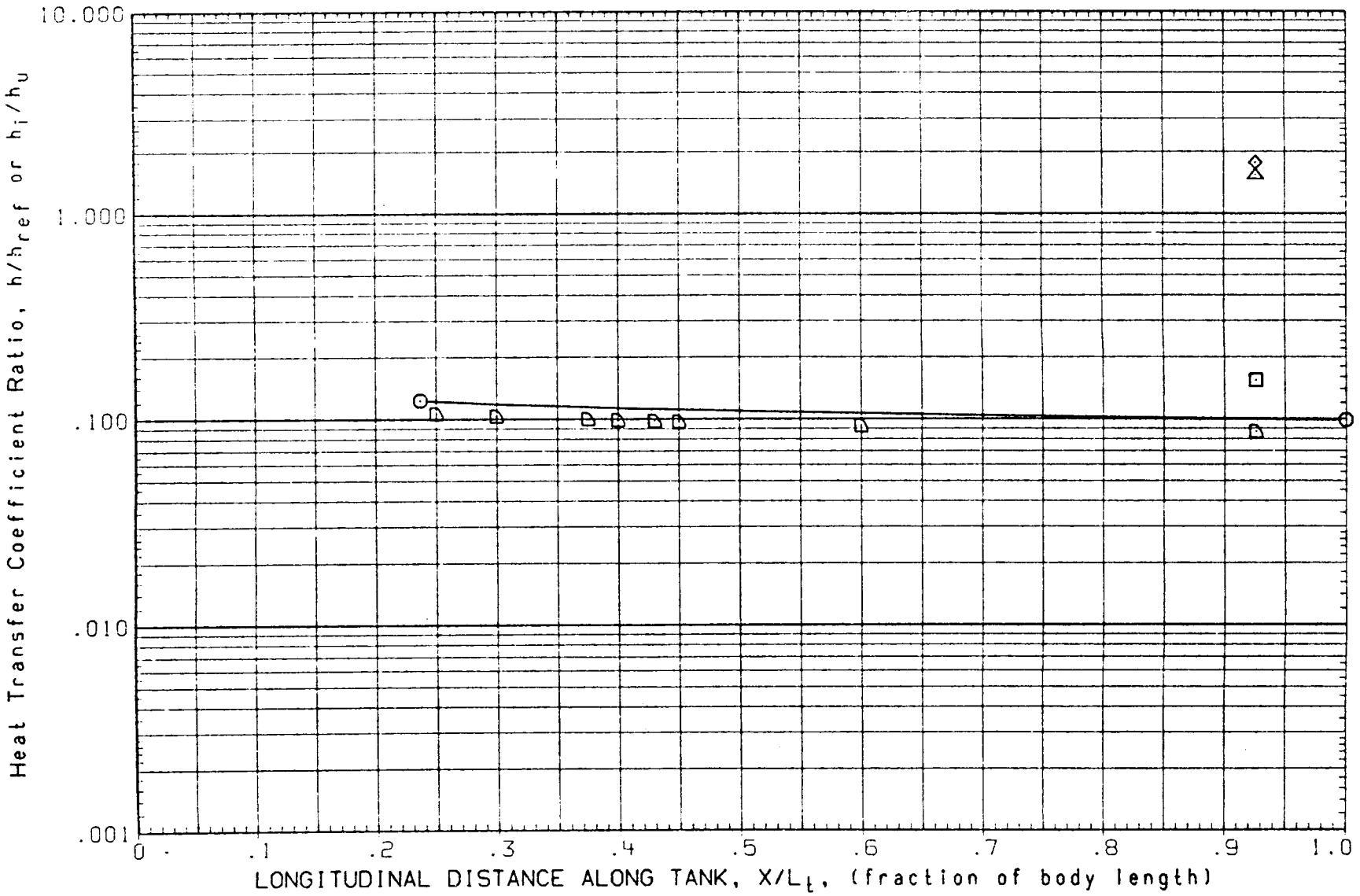

FIG. 4-3 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 33.750

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT04)	□	IH85, AEDC V41A-W5, CONFIGURATION C (T) S		3.010	.000	3.000
(X4LT04)	◇	IH85 (W.L. TEST) OTS/ET = V4LT04/C9NT07=	HI/HU	3.010	.000	3.000
(Y4LT04)	△	IH85 (W.L. THEORY) OTS/ET = V4LT04/A9NT07=	HI/HU	3.010	.000	3.000

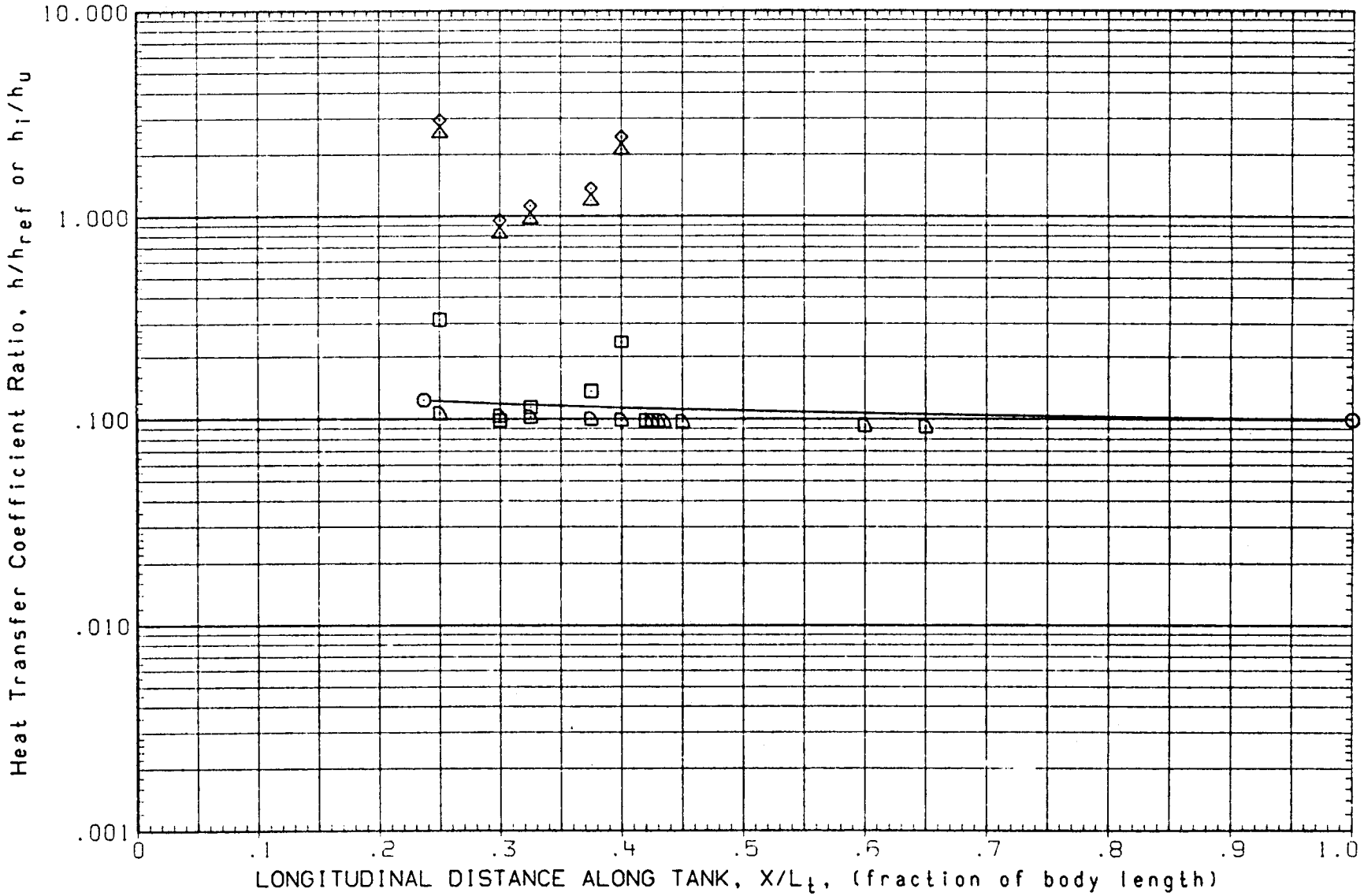

FIG. 4-3 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 36.320

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT04)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	3.000
(X4LT04)	◇	IH85 (W.L. TEST) OTS/ET = V4LT04/C9NT07=	HI/HU	3.010	.000	3.000
(Y4LT04)	△	IH85 (W.L. THEORY) OTS/ET = V4LT04/A9NT07=	HI/HU	3.010	.000	3.000

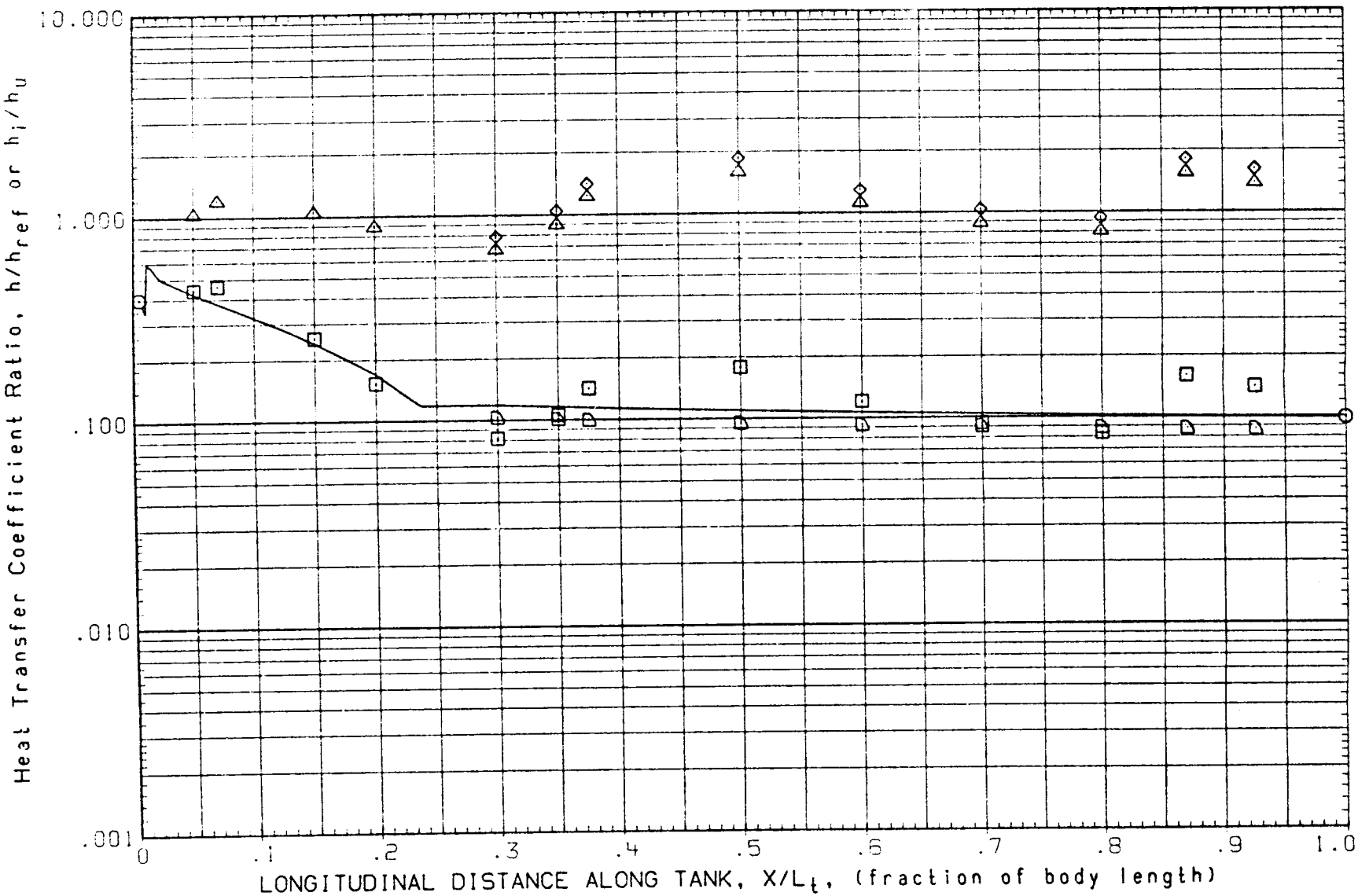

FIG. 4-3 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 37.700

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⌂	DATA NOT AVAILABLE		3.010	.000	3.000
(V4LT04)	□	DATA NOT AVAILABLE		3.010	.000	3.000
(X4LT04)	◇	DATA NOT AVAILABLE		3.010	.000	3.000
(Y4LT04)	△	DATA NOT AVAILABLE		3.010	.000	3.000

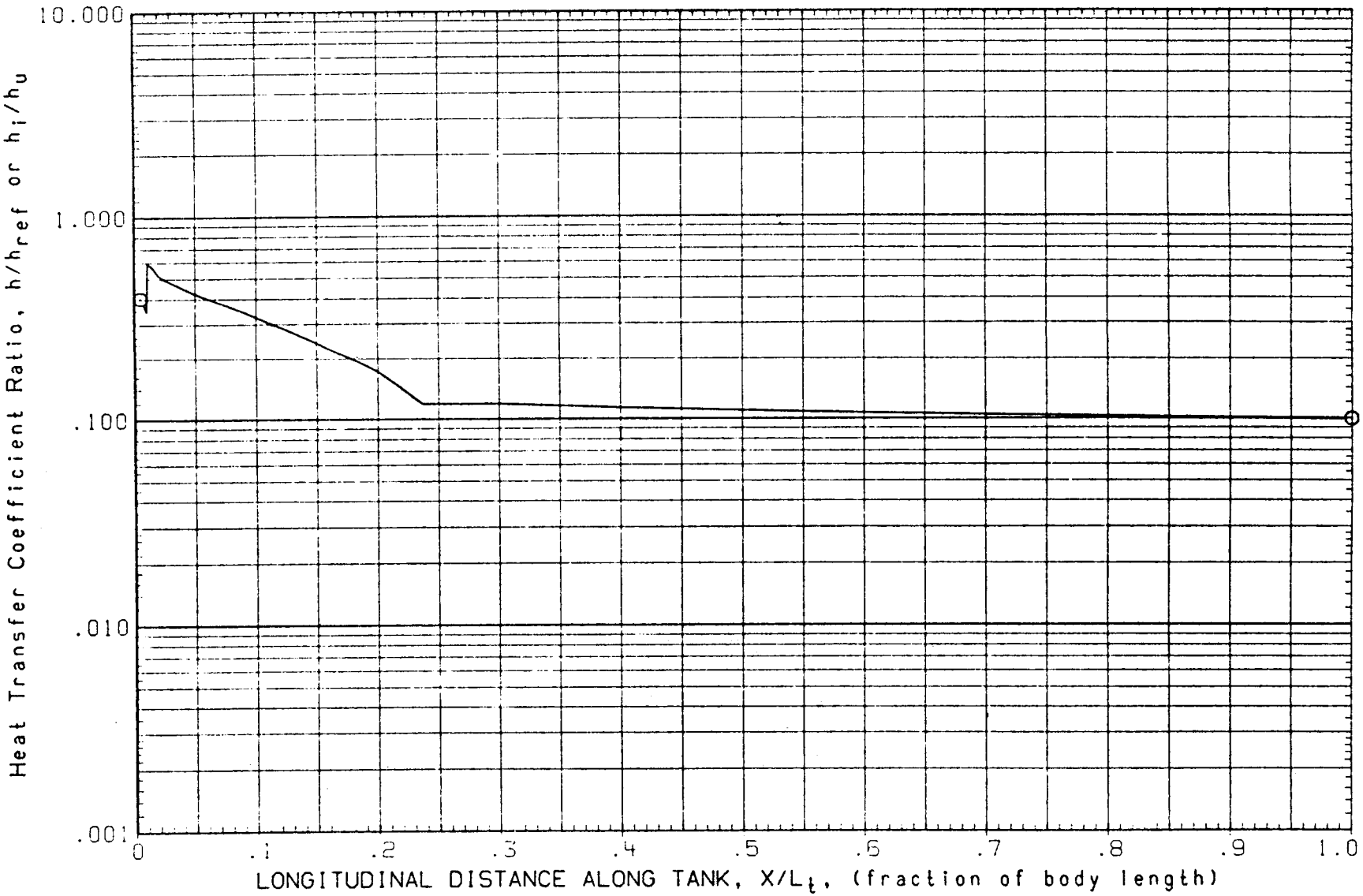

FIG. 4-3 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 39.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	□	TANK ALONE (CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT04)	□	(H85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	3.000
(X4LT04)	◇	(H85 (W.L. TEST) OTS/ET = V4LT04/C9NT07=	HI/HU	3.010	.000	3.000
(Y4LT04)	△	(H85 (W.L. THEORY) OTS/ET = V4LT04/A9NT07=	HI/HU	3.010	.000	3.000

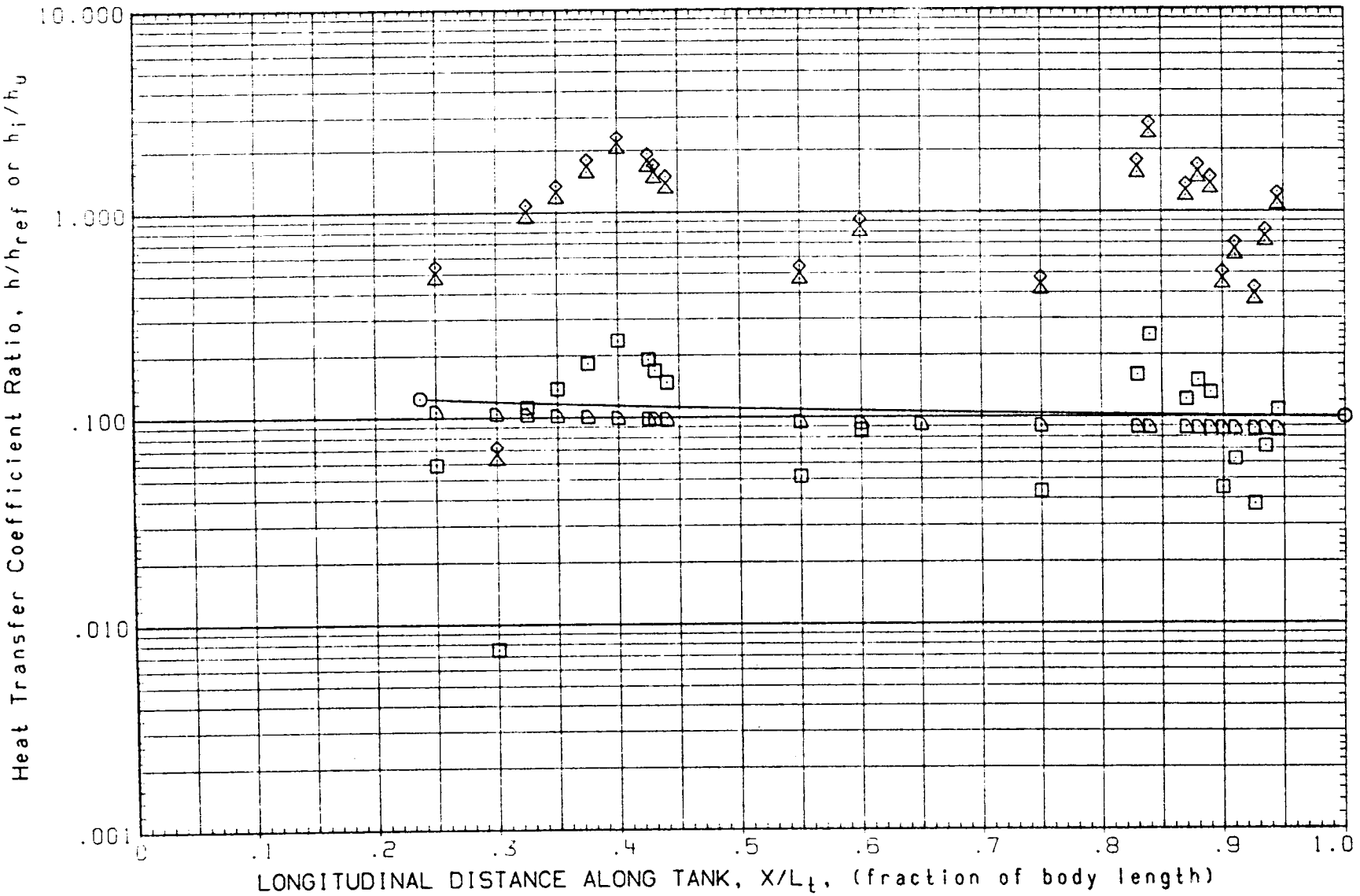

FIG. 4-3 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 45.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	3.010	.000	3.000
(C9NT07)	⌂	DATA NOT AVAILABLE	3.010	.000	3.000
(V4LT04)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	3.010	.000	3.000
(X4LT04)	◇	DATA NOT AVAILABLE	3.010	.000	3.000
(Y4LT04)	△	IH85 (W.L. THEORY) OTS/ET = V4LT04/A9NT07= HI/HU	3.010	.000	3.000

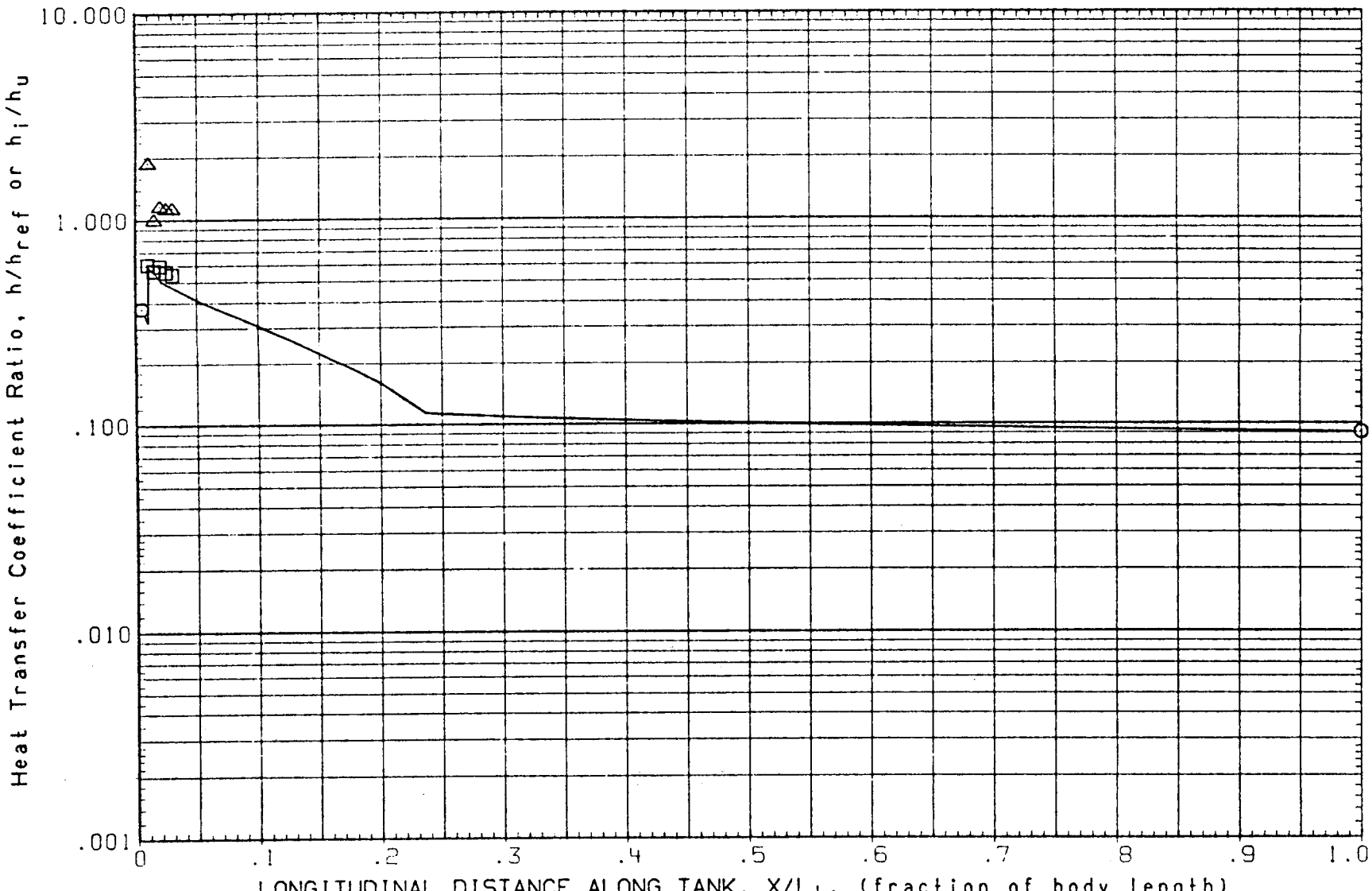

FIG. 4-3 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 180.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⬠	DATA NOT AVAILABLE		3.010	.000	3.000
(Y4LT04)	□	DATA NOT AVAILABLE		3.010	.000	3.000
(X4LT04)	◇	DATA NOT AVAILABLE		3.010	.000	3.000
(Y4LT04)	△	DATA NOT AVAILABLE		3.010	.000	3.000

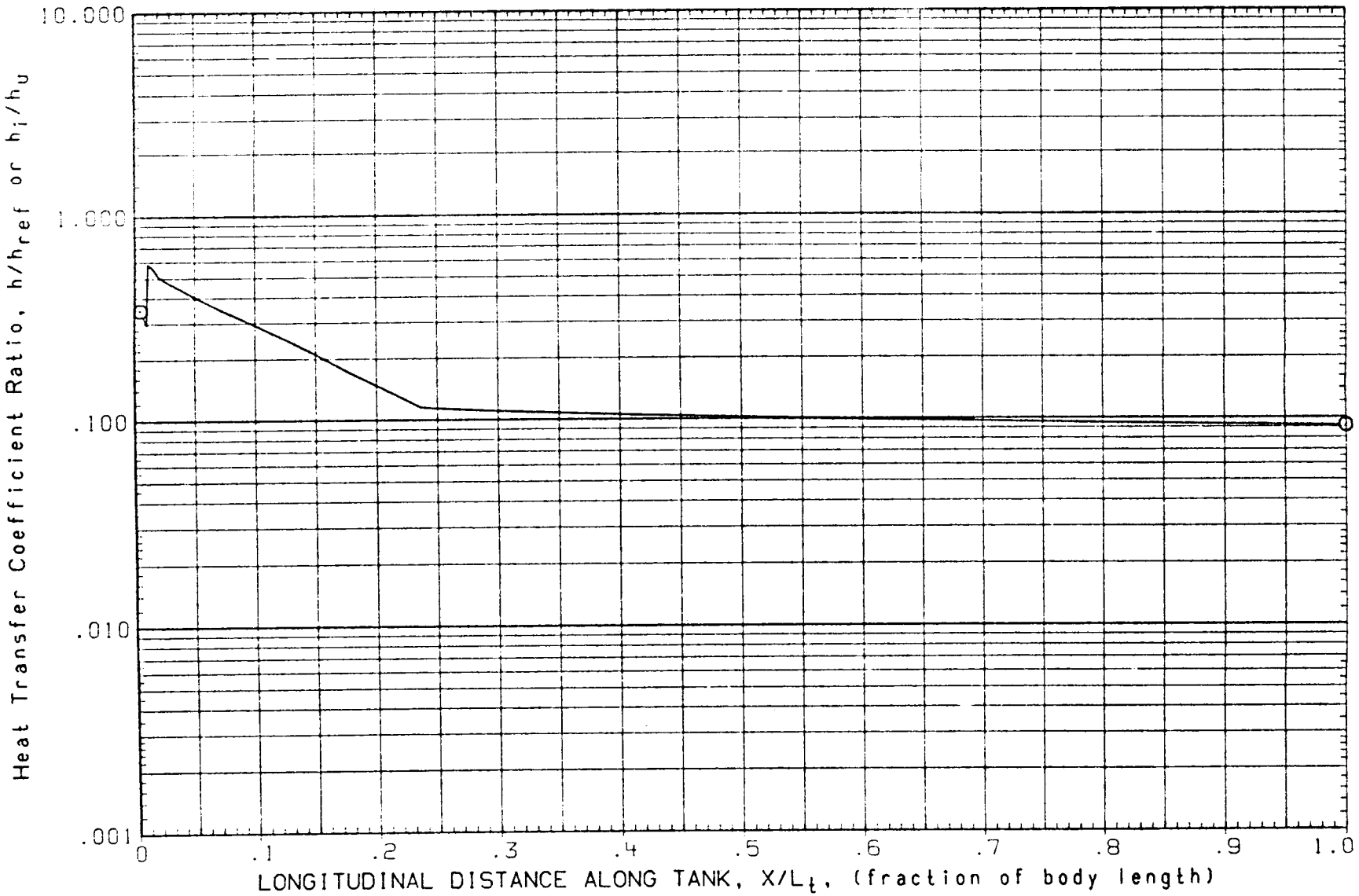

FIG. 4-3 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 235.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⊃	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT04)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	3.000
(X4LT04)	◇	IH85 (W.L. TEST) OTS/ET = V4LT04/C9NT07=	HI/HU	3.010	.000	3.000
(Y4LT04)	△	IH85 (W.L. THEORY) OTS/ET = V4LT04/A9NT07=	HI/HU	3.010	.000	3.000

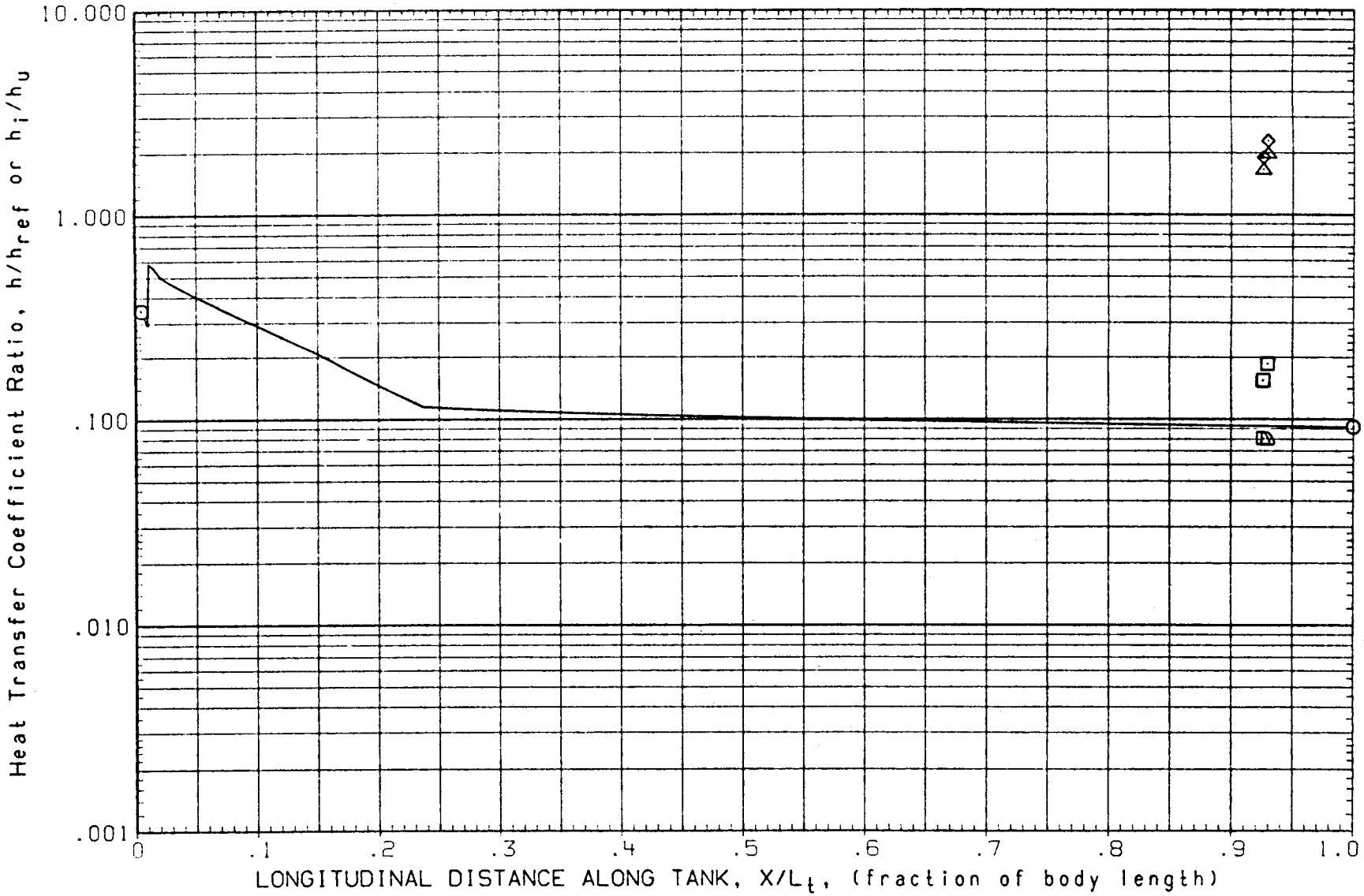

FIG. 4-3 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 247.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⊐	DATA NOT AVAILABLE		3.010	.000	3.000
(Y4LT04)	□	DATA NOT AVAILABLE		3.010	.000	3.000
(X4LT04)	◇	DATA NOT AVAILABLE		3.010	.000	3.000
(Y4LT04)	△	DATA NOT AVAILABLE		3.010	.000	3.000

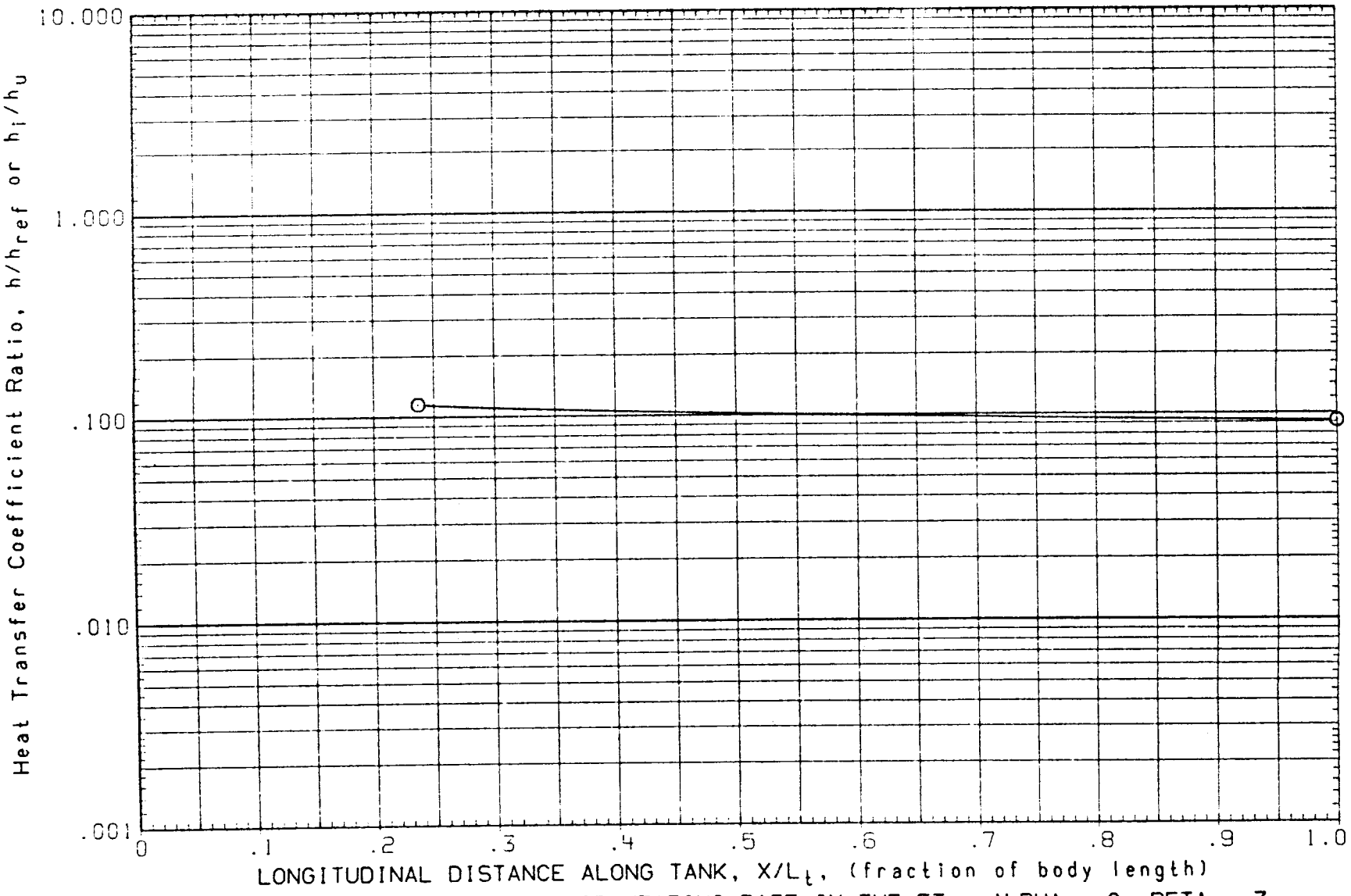

FIG. 4-3 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 247.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(C9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT04)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	3.000
(X4LT04)	◇	IH85 (W.L. TEST) OTS/ET = V4LT04/C9NT07=	HI/HU	3.010	.000	3.000
(Y4LT04)	△	IH85 (W.L. THEORY) OTS/ET = V4LT04/A9NT07=	HI/HU	3.010	.000	3.000

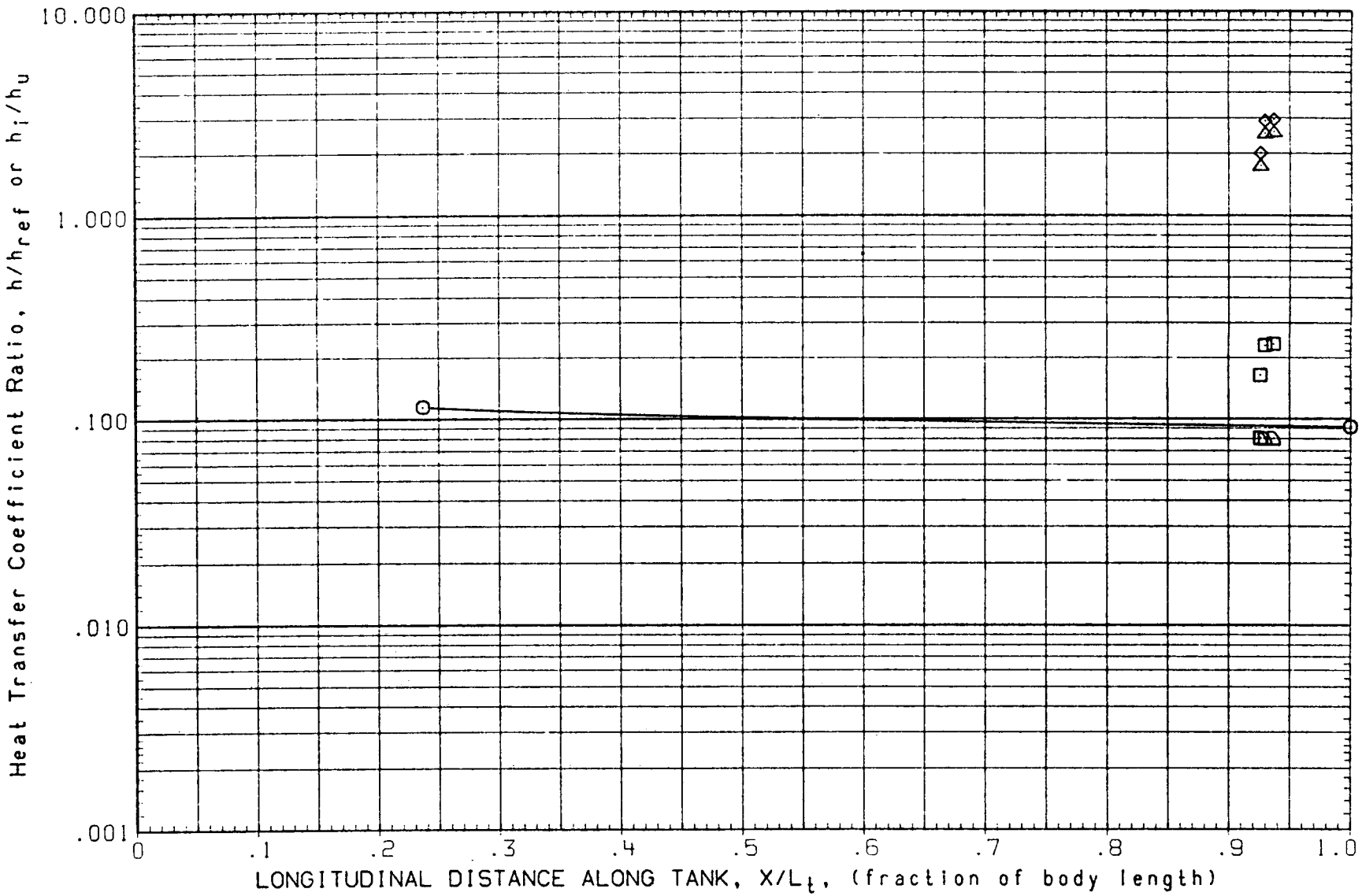

FIG. 4-3 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (L,NEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 250.570

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⊂⊃	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT04)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	3.000
(X4LT04)	◇	IH85 (W.L. TEST) OTS/ET = V4LT04/C9NT07=	HI/HU	3.010	.000	3.000
(Y4LT04)	△	IH85 (W.L. THEORY) OTS/ET = V4LT04/A9NT07=	HI/HU	3.010	.000	3.000

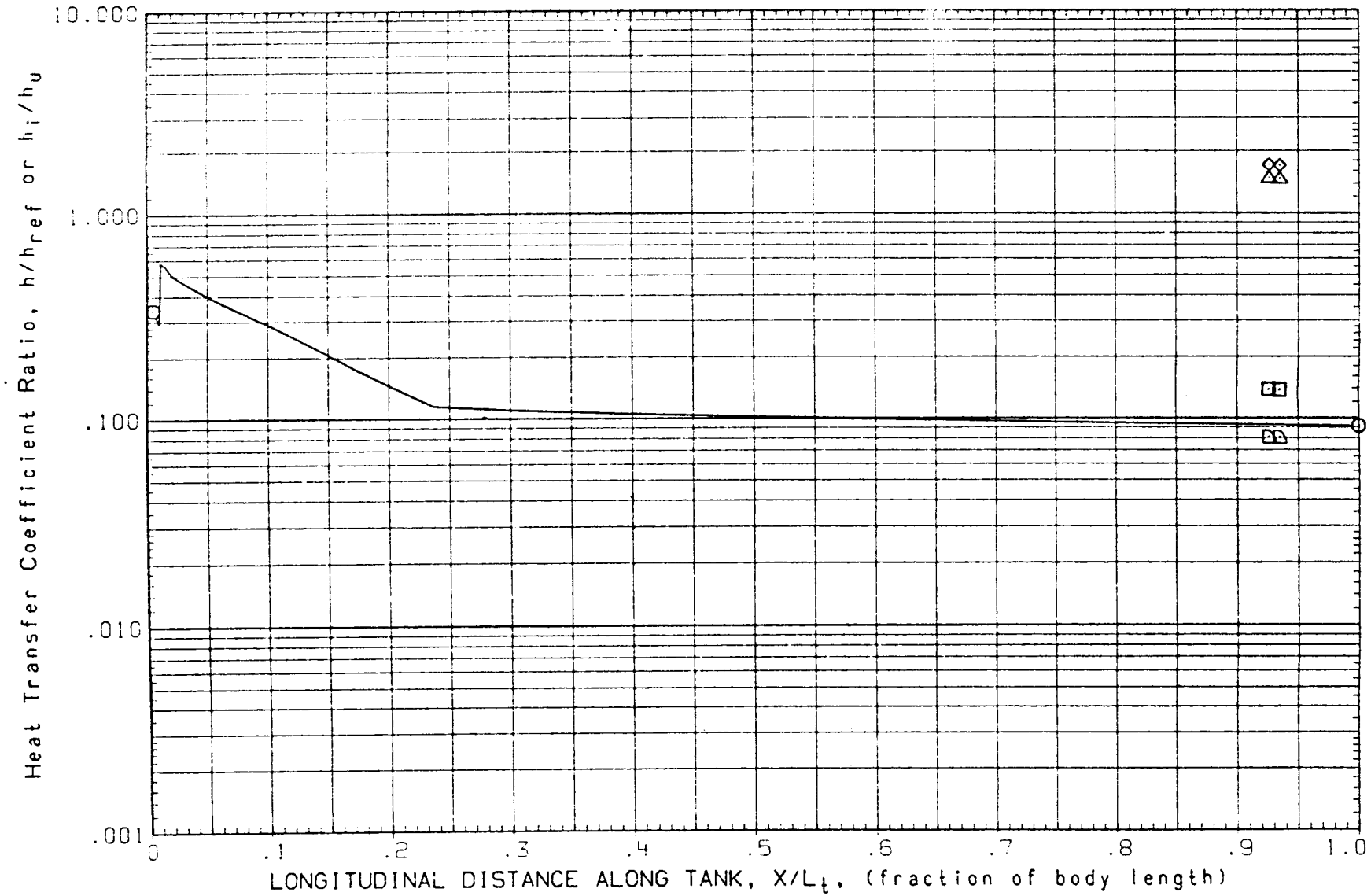

FIG. 4-3 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 258.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT04)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	3.000
(X4LT04)	◇	IH85 (W.L. TEST) OTS/ET = V4LT04/C9NT07=	HI/HU	3.010	.000	3.000
(Y4LT04)	△	IH85 (W.L. THEORY) OTS/ET = V4LT04/A9NT07=	HI/HU	3.010	.000	3.000

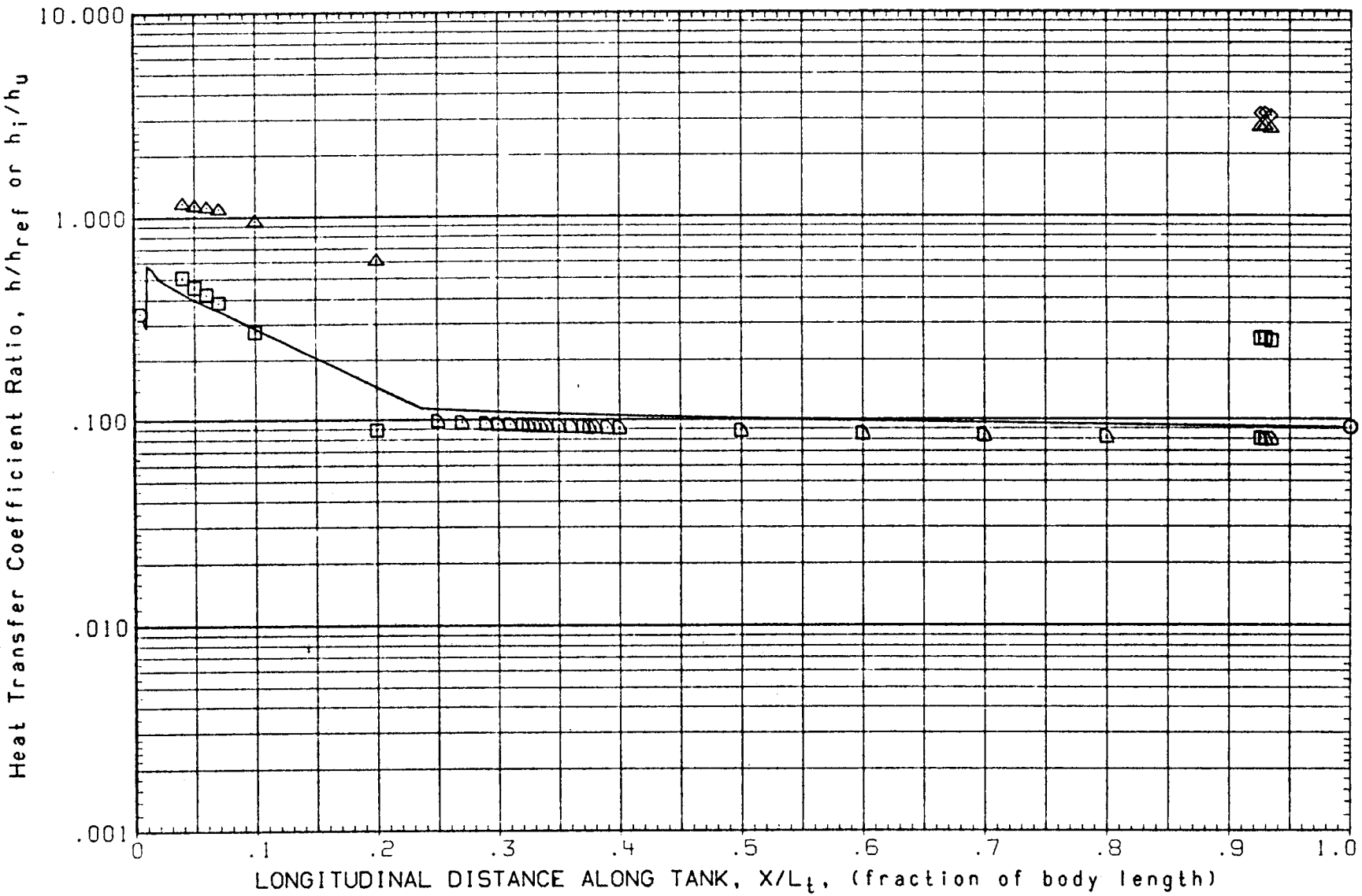

FIG. 4-3 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0≤ X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 270.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT04)	⊡	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	3.000
(X4LT04)	◇	IH85 (W.L. TEST) OTS/ET = V4LT04/C9NT07= HI/HU		3.010	.000	3.000
(Y4LT04)	△	IH85 (W.L. THEORY) OTS/ET = V4LT04/A9NT07= HI/HU		3.010	.000	3.000

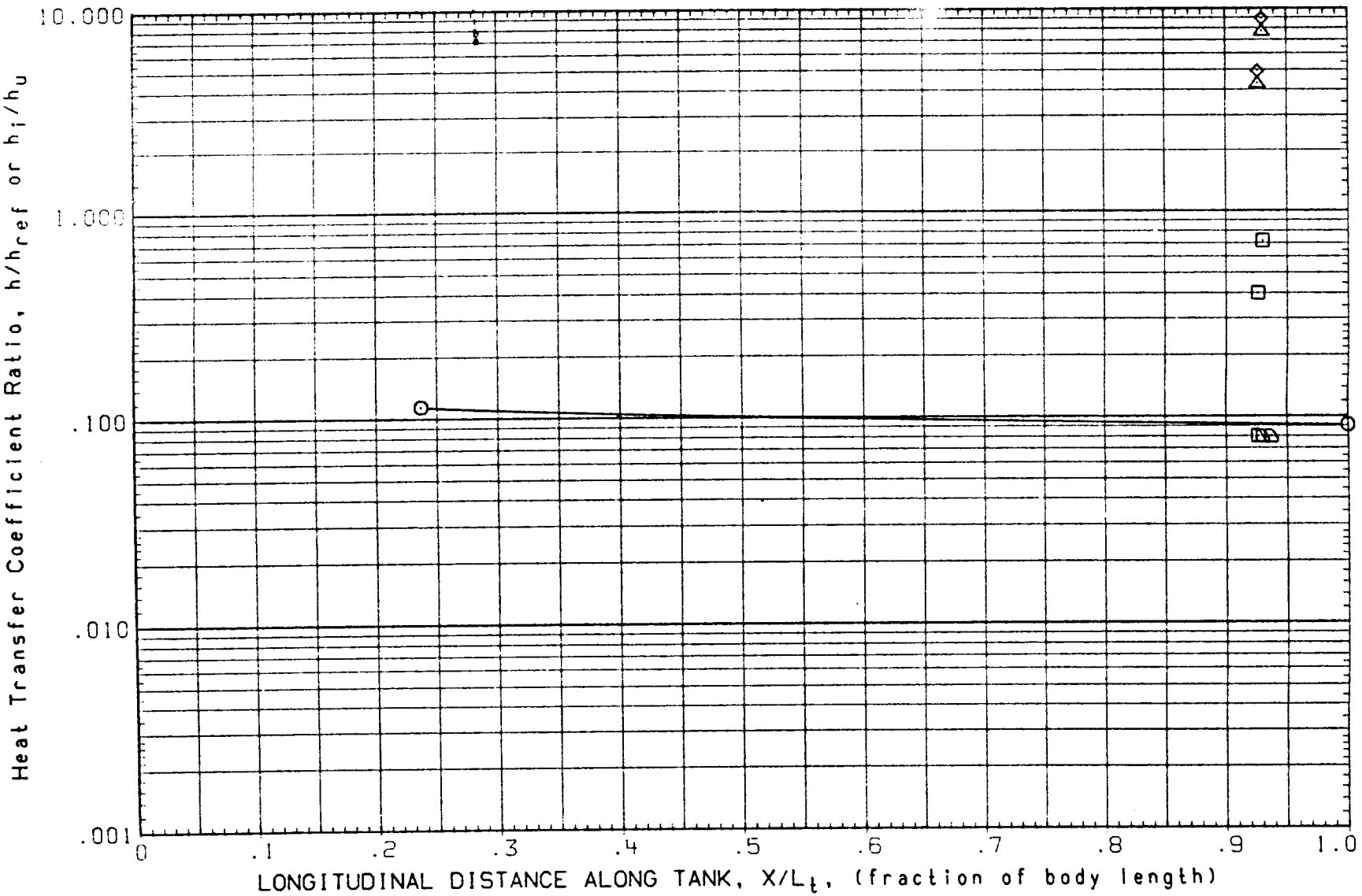

FIG. 4-3 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PrII = 289.430

4-3

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	3.010	.000	3.000
(C9NT07)	⊐	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	3.010	.000	3.000
(V4LT04)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	3.010	.000	3.000
(X4LT04)	◇	IH85 (W.L. TEST) OTS/ET = V4LT04/C9NT07= HI/HU	3.010	.000	3.000
(Y4LT04)	△	IH85 (W.L. THEORY) OTS/ET = V4LT04/A9NT07= HI/HU	3.010	.000	3.000

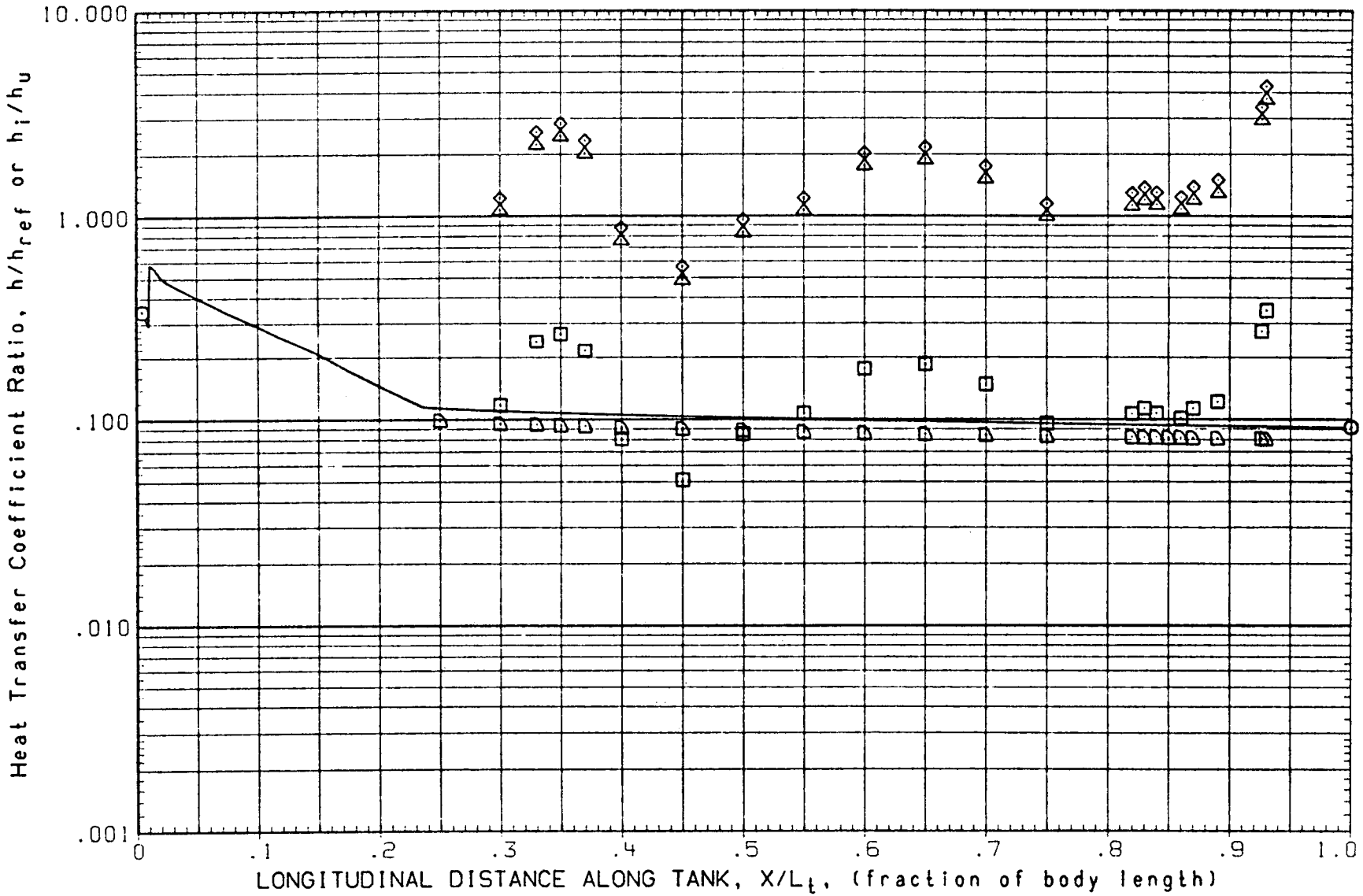

FIG. 4-3 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 292.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	◐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT04)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	3.000
(X4LT04)	◇	IH85 (W.L. TEST) OTS/ET = V4LT04/C9NT07=	HI/HU	3.010	.000	3.000
(Y4LT04)	△	IH85 (W.L. THEORY) OTS/ET = V4LT04/A9NT07=	HI/HU	3.010	.000	3.000

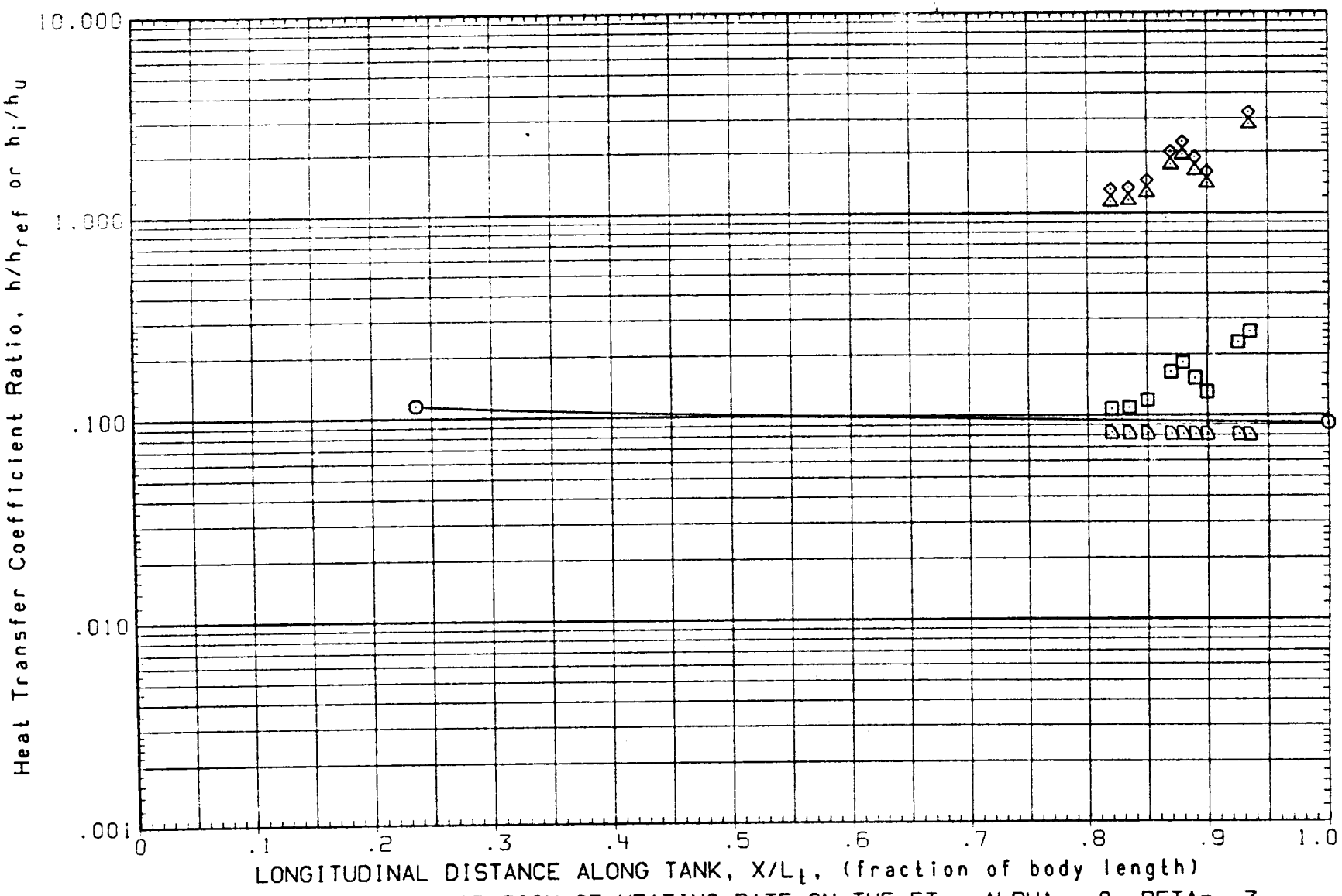

FIG. 4-3 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 301.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	3.010	.000	3.000
(C9NT07)	⌂	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	3.010	.000	3.000
(V4LT04)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	3.010	.000	3.000
(X4LT04)	◇	IH85 (W.L. TEST) OTS/ET = V4LT04/C9NT07= HI/HU	3.010	.000	3.000
(Y4LT04)	△	IH85 (W.L. THEORY) OTS/ET = V4LT04/A9NT07= HI/HU	3.010	.000	3.000

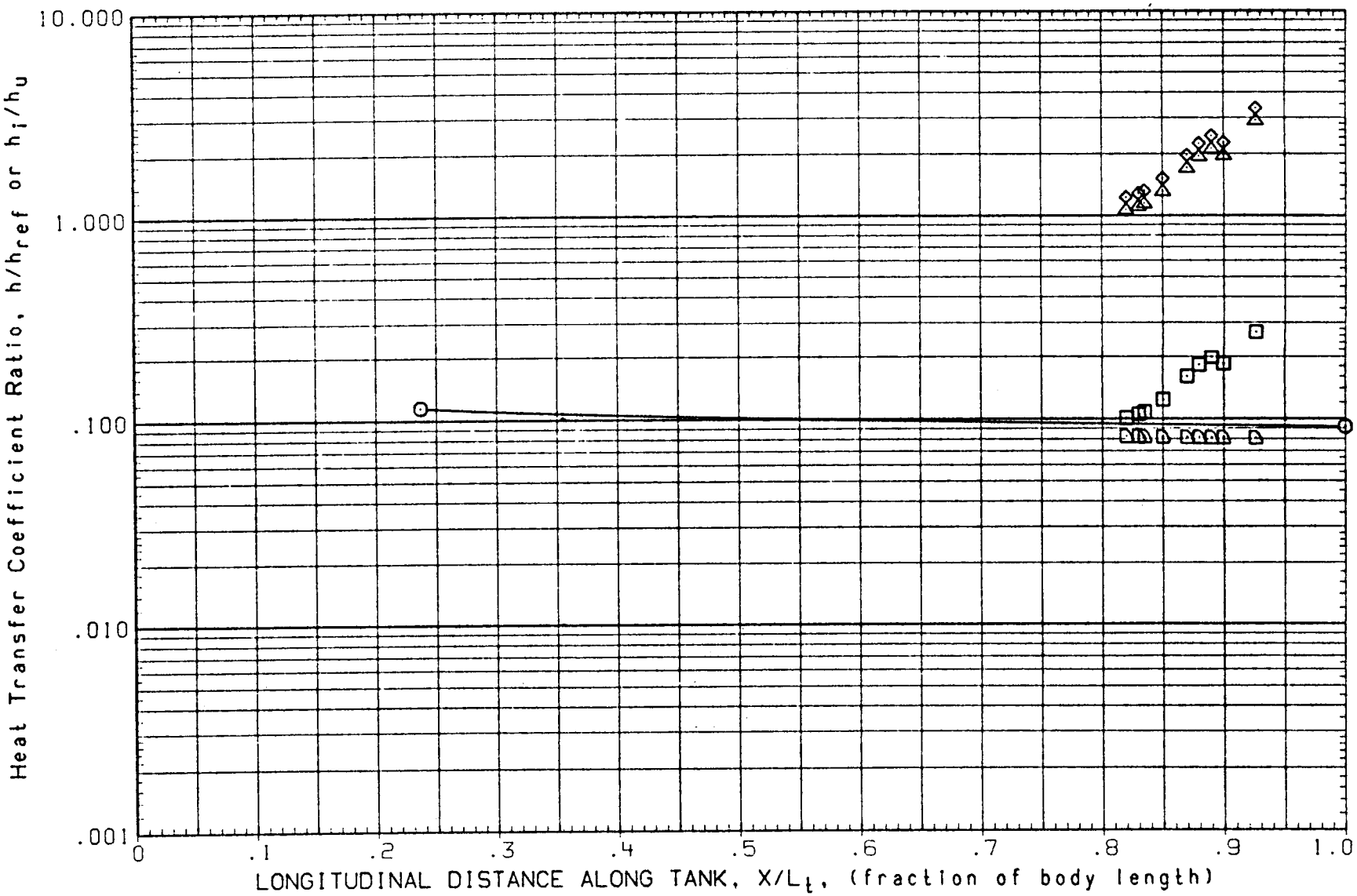

FIG. 4-3 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 305.400

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT04)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	3.000
(X4LT04)	◇	IH85 (W.L. TEST) OTS/ET = V4LT04/C9NT07=	HI/HU	3.010	.000	3.000
(Y4LT04)	△	IH85 (W.L. THEORY) OTS/ET = V4LT04/A9NT07=	HI/HU	3.010	.000	3.000

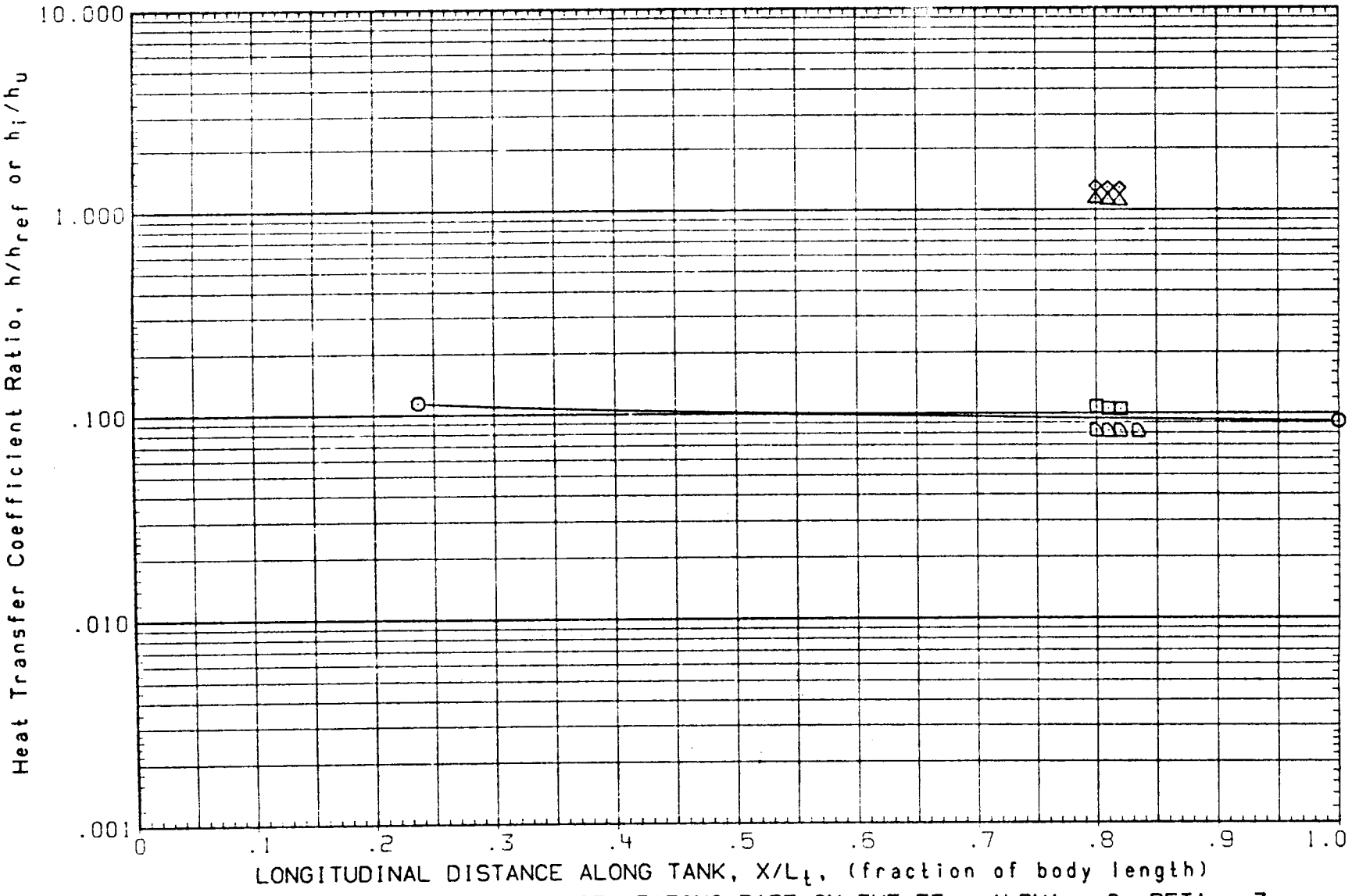

FIG. 4-3 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 309.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	D	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT04)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	3.000
(X4LT04)	◇	IH85 (W.L. TEST) OTS/ET = V4LT04/C9NT07=	HI/HU	3.010	.000	3.000
(Y4LT04)	△	IH85 (W.L. THEORY) OTS/ET = V4LT04/A9NT07=	HI/HU	3.010	.000	3.000

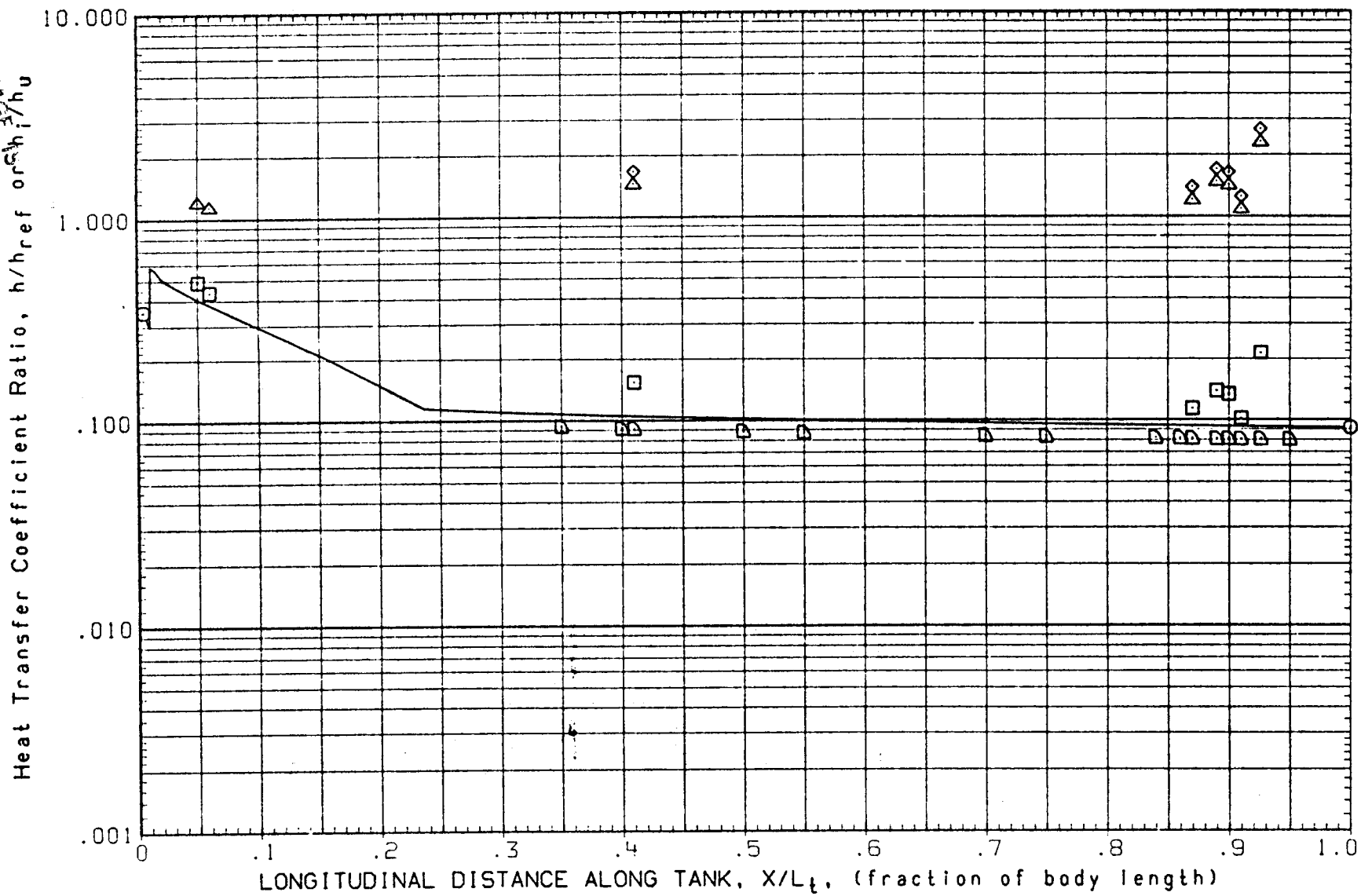

FIG. 4-3 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 315.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT04)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	3.000
(X4LT04)	◇	IH85 (W.L. TEST) OTS/ET = V4LT04/C9NT07=	HI/HU	3.010	.000	3.000
(Y4LT04)	△	IH85 (W.L. THEORY) OTS/ET = V4LT04/A9NT07=	HI/HU	3.010	.000	3.000

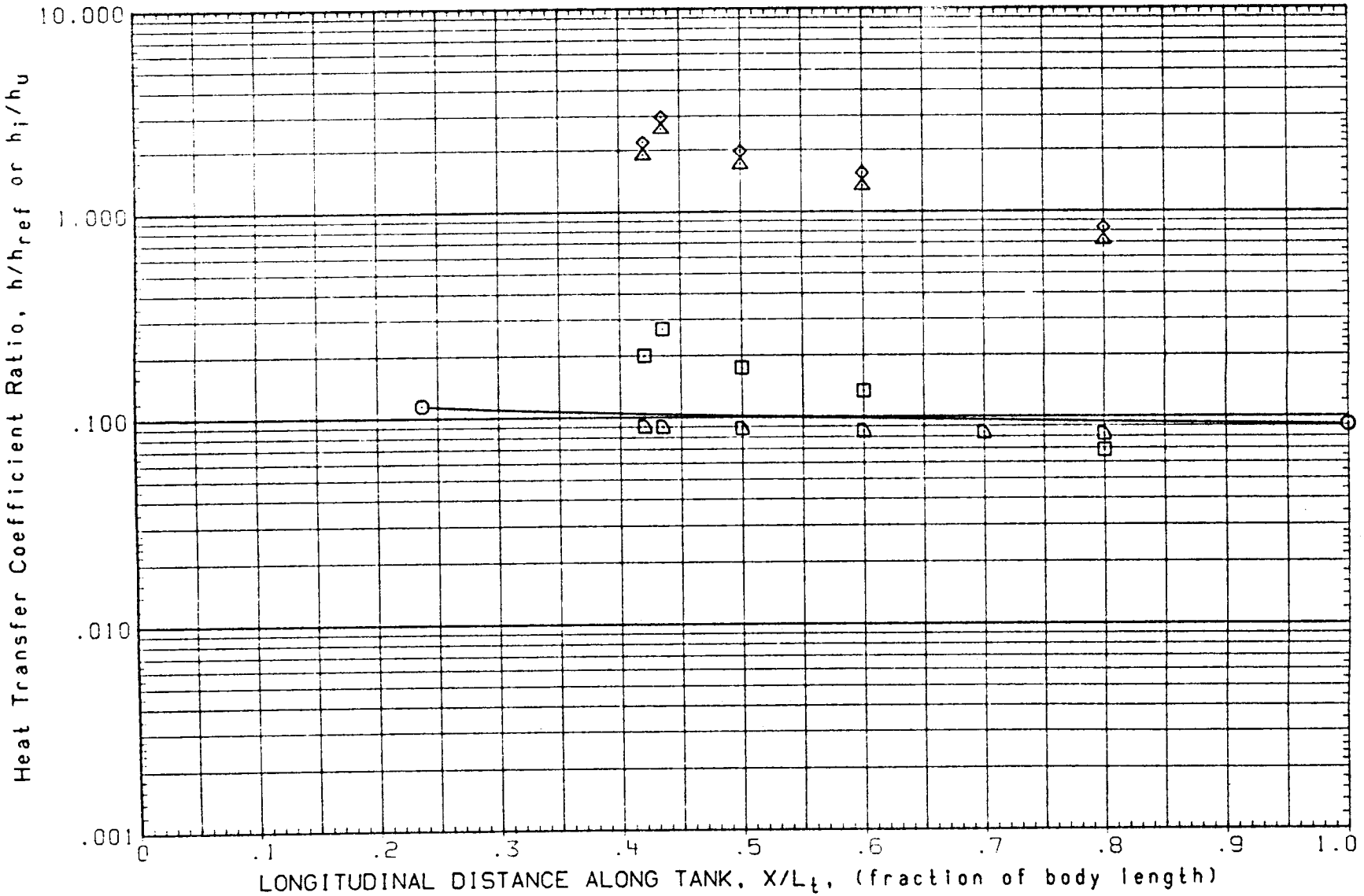

FIG. 4-3 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 322.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT04)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	3.000
(X4LT04)	◇	IH85 (W.L. TEST) OTS/ET = V4LT04/C9NT07=	HI/HU	3.010	.000	3.000
(Y4LT04)	△	IH85 (W.L. THEORY) OTS/ET = V4LT04/A9NT07=	HI/HU	3.010	.000	3.000

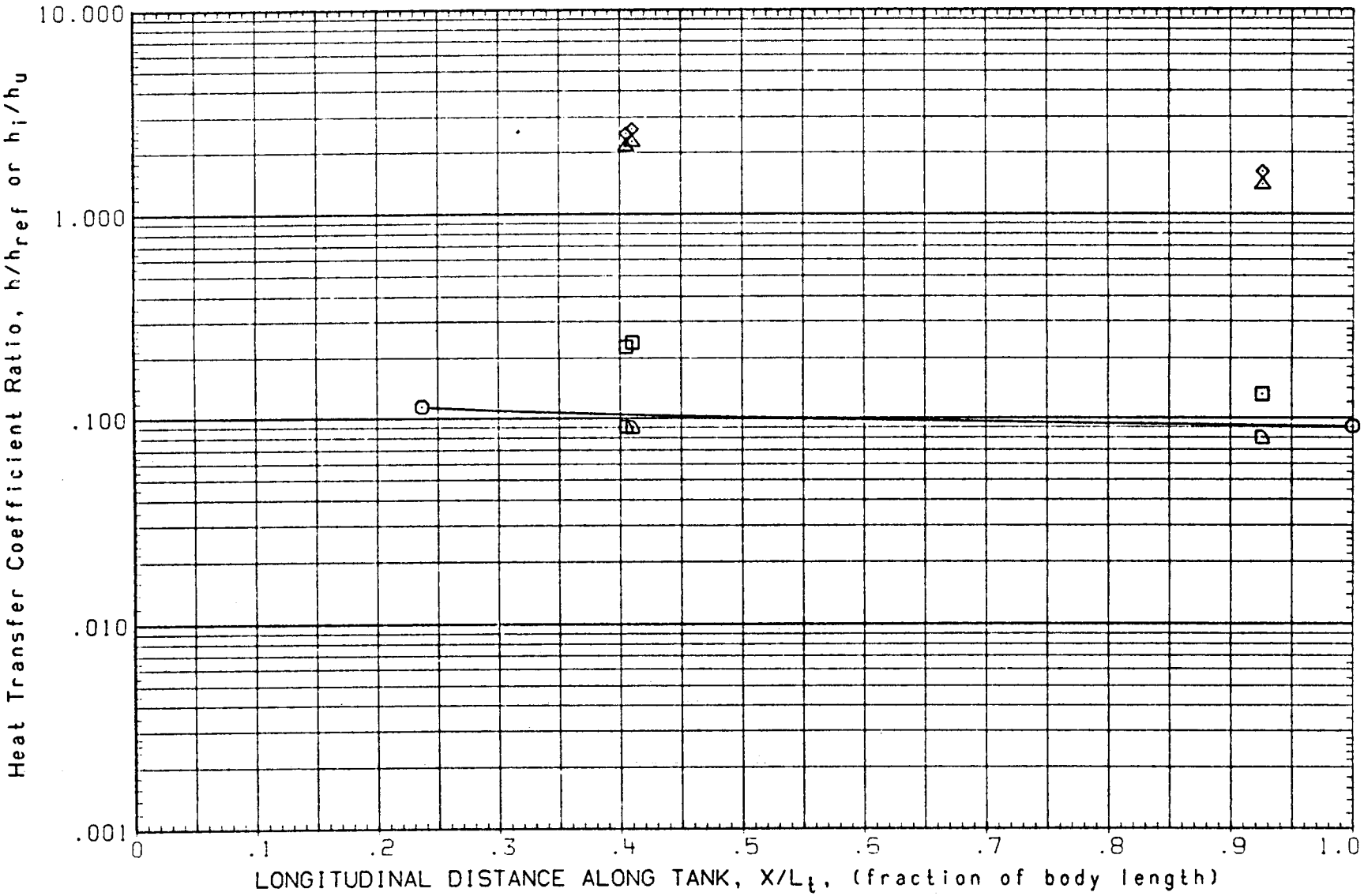

FIG. 4-3 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 324.450

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT04)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	3.000
(X4LT04)	◇	IH85 (W.L. TEST) OTS/ET = V4LT04/C9NT07=	HI/HU	3.010	.000	3.000
(Y4LT04)	△	IH85 (W.L. THEORY) OTS/ET = V4LT04/A9NT07=	HI/HU	3.010	.000	3.000

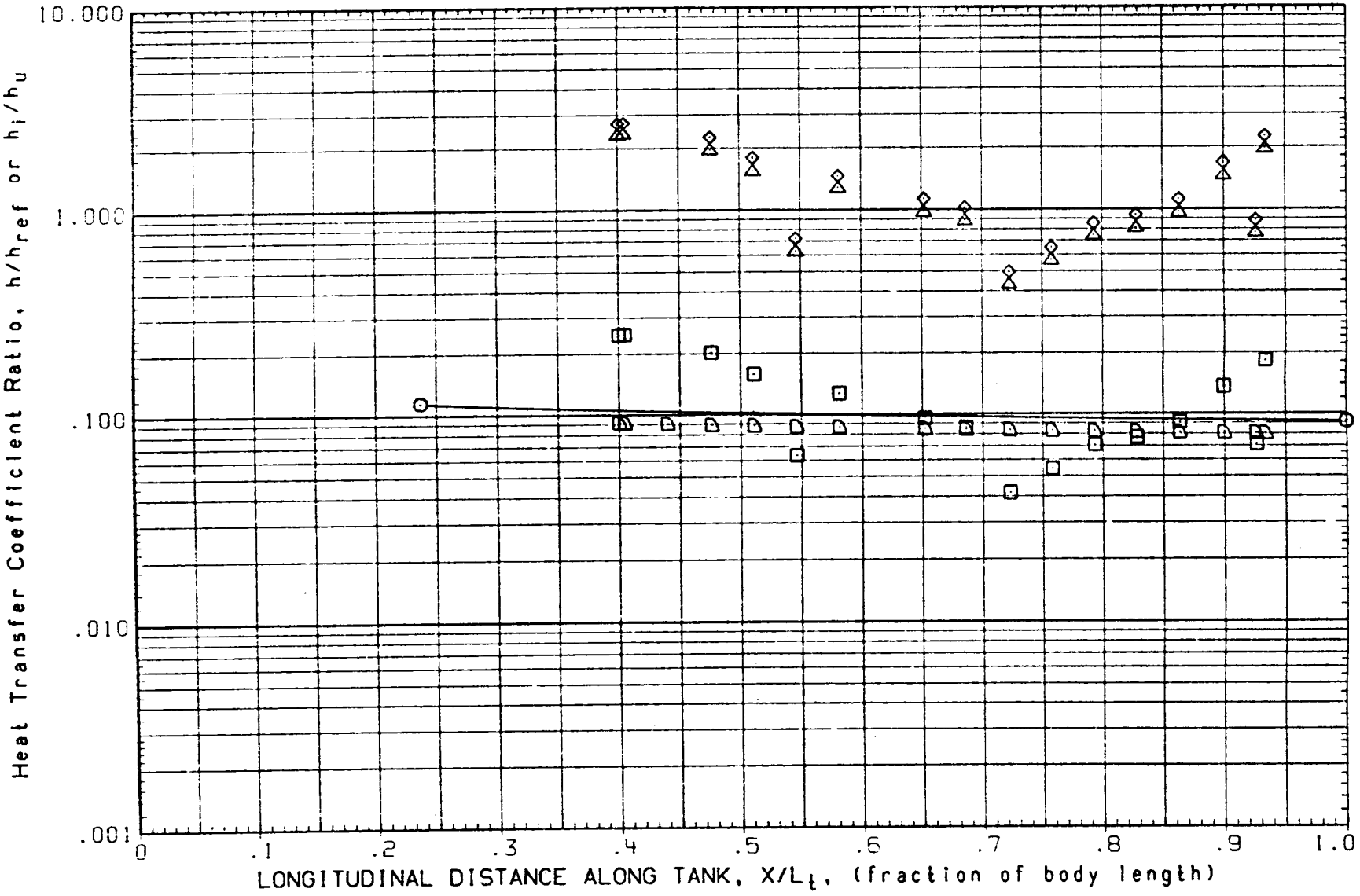

FIG. 4-3 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 326.850

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	3.010	.000	3.000
(C9NT07)	⬠	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	3.010	.000	3.000
(V4LT04)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	3.010	.000	3.000
(X4LT04)	◇	IH85 (W.L. TEST) OTS/ET = V4LT04/C9NT07= HI/HU	3.010	.000	3.000
(Y4LT04)	△	IH85 (W.L. THEORY) OTS/ET = V4LT04/A9NT07= HI/HU	3.010	.000	3.000

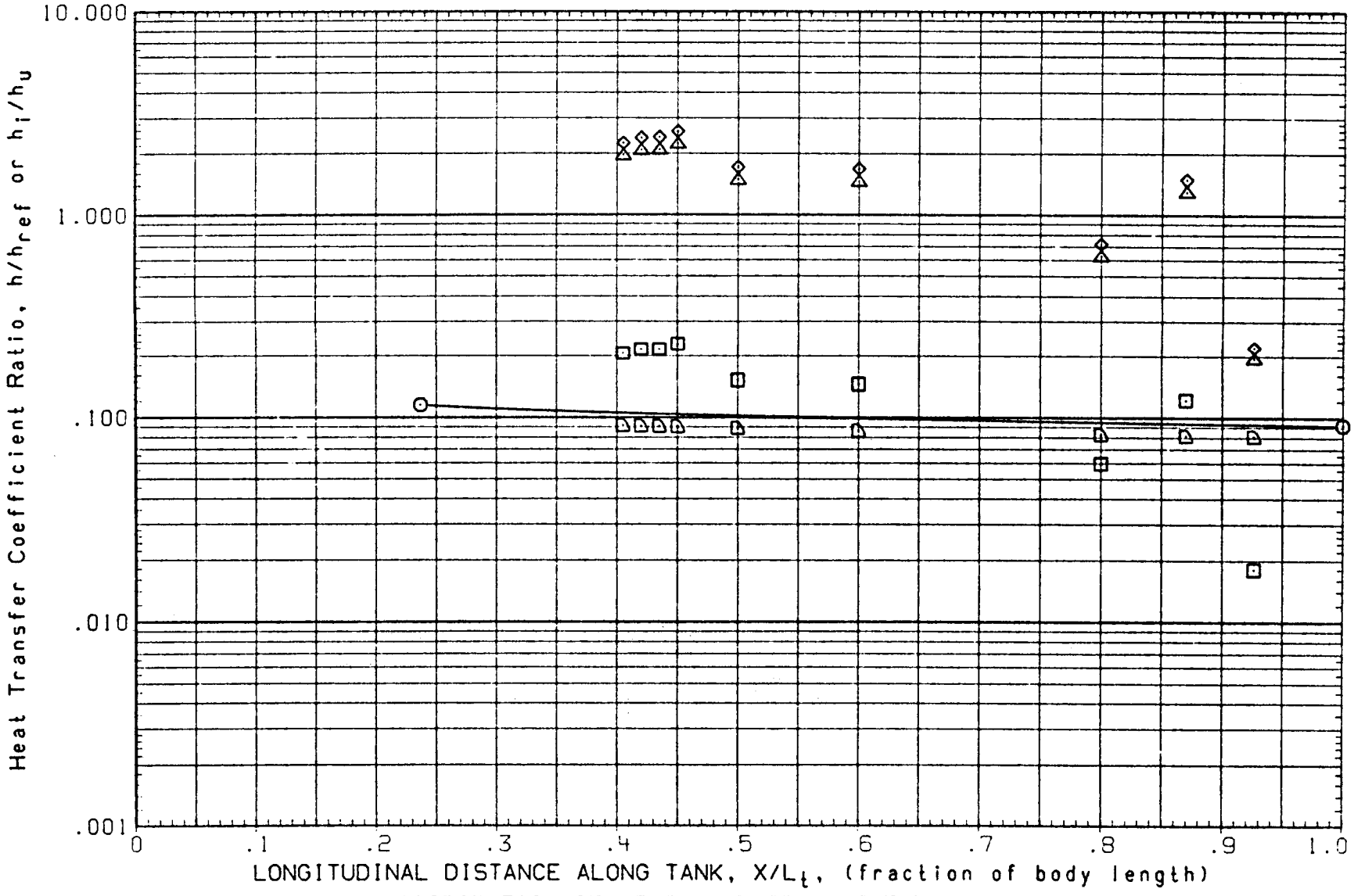

FIG. 4-3 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 330.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⊃	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT04)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	3.000
(X4LT04)	◇	IH85 (W.L. TEST) OTS/ET = V4LT04/C9NT07=	HI/HU	3.010	.000	3.000
(Y4LT04)	△	IH85 (W.L. THEORY) OTS/ET = V4LT04/A9NT07=	HI/HU	3.010	.000	3.000

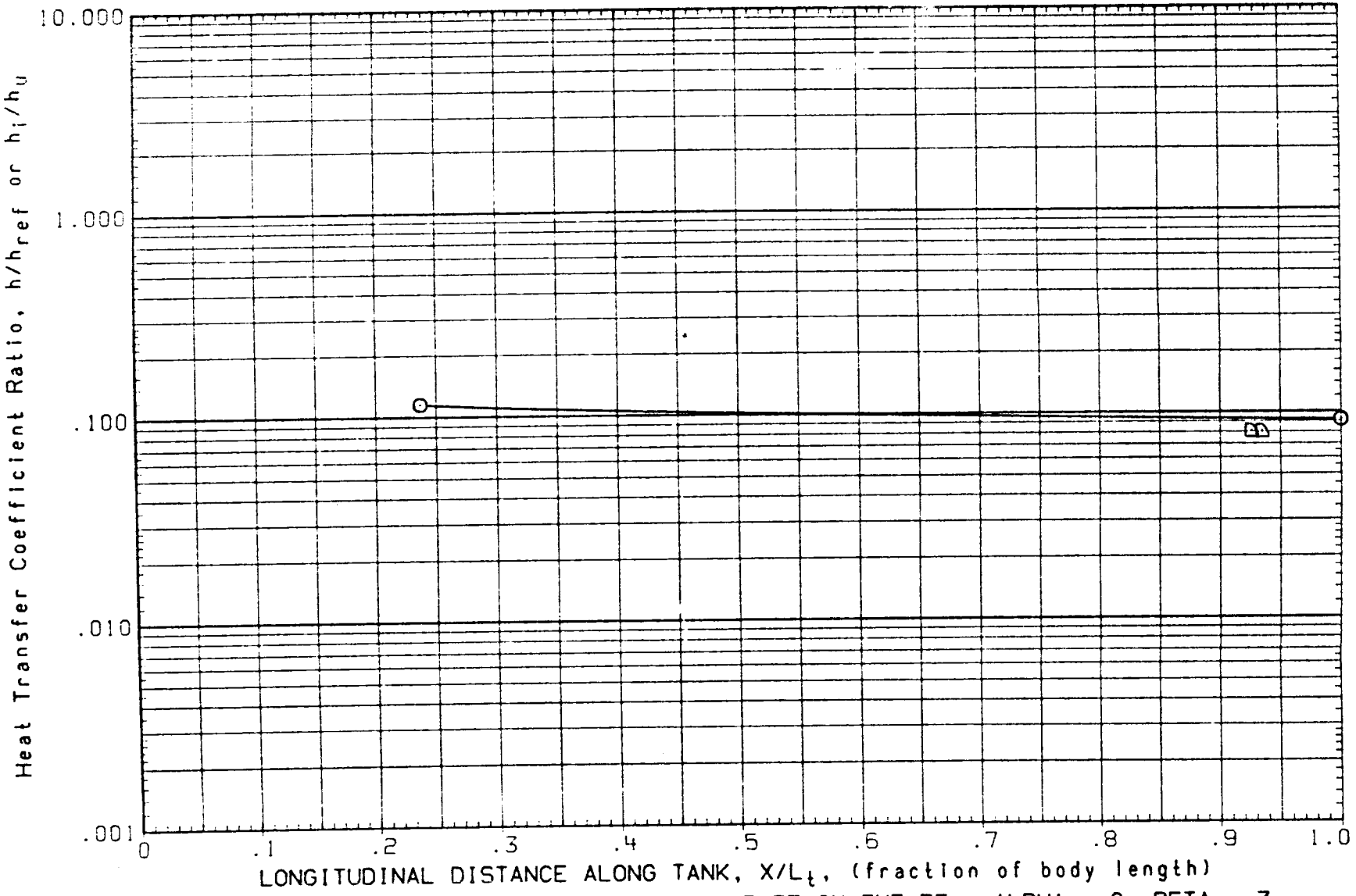

FIG. 4-3 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 334.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT04)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	3.000
(X4LT04)	◇	IH85 (W.L. TEST) OTS/ET = V4LT04/C9NT07= HI/HU		3.010	.000	3.000
(Y4LT04)	△	IH85 (W.L. THEORY) OTS/ET = V4LT04/A9NT07= HI/HU		3.010	.000	3.000

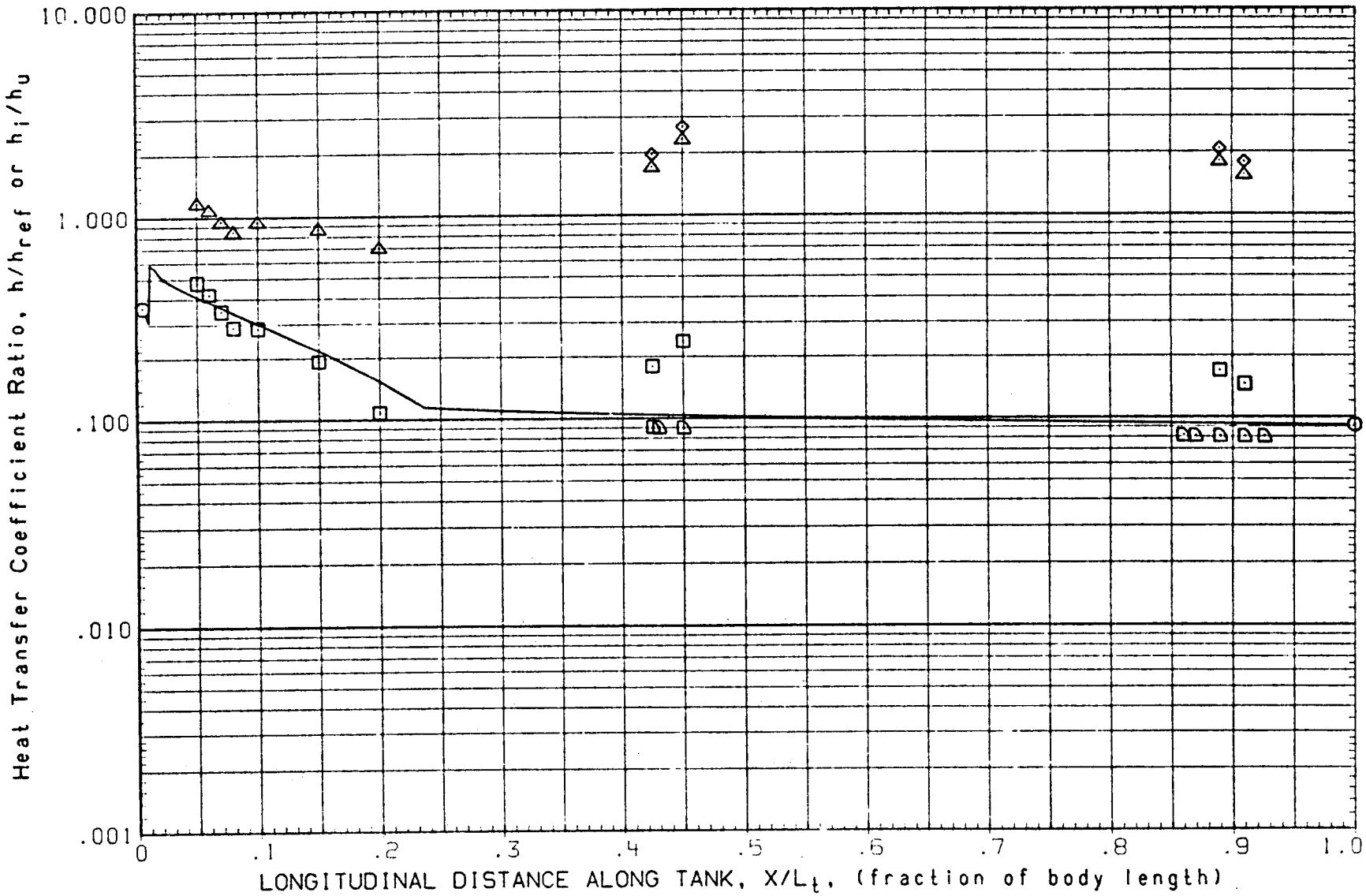

FIG. 4-3 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 337.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(C9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(Y4LT04)	□	DATA NOT AVAILABLE		3.010	.000	3.000
(Y4LT04)	◇	DATA NOT AVAILABLE		3.010	.000	3.000
(Y4LT04)	△	DATA NOT AVAILABLE		3.010	.000	3.000

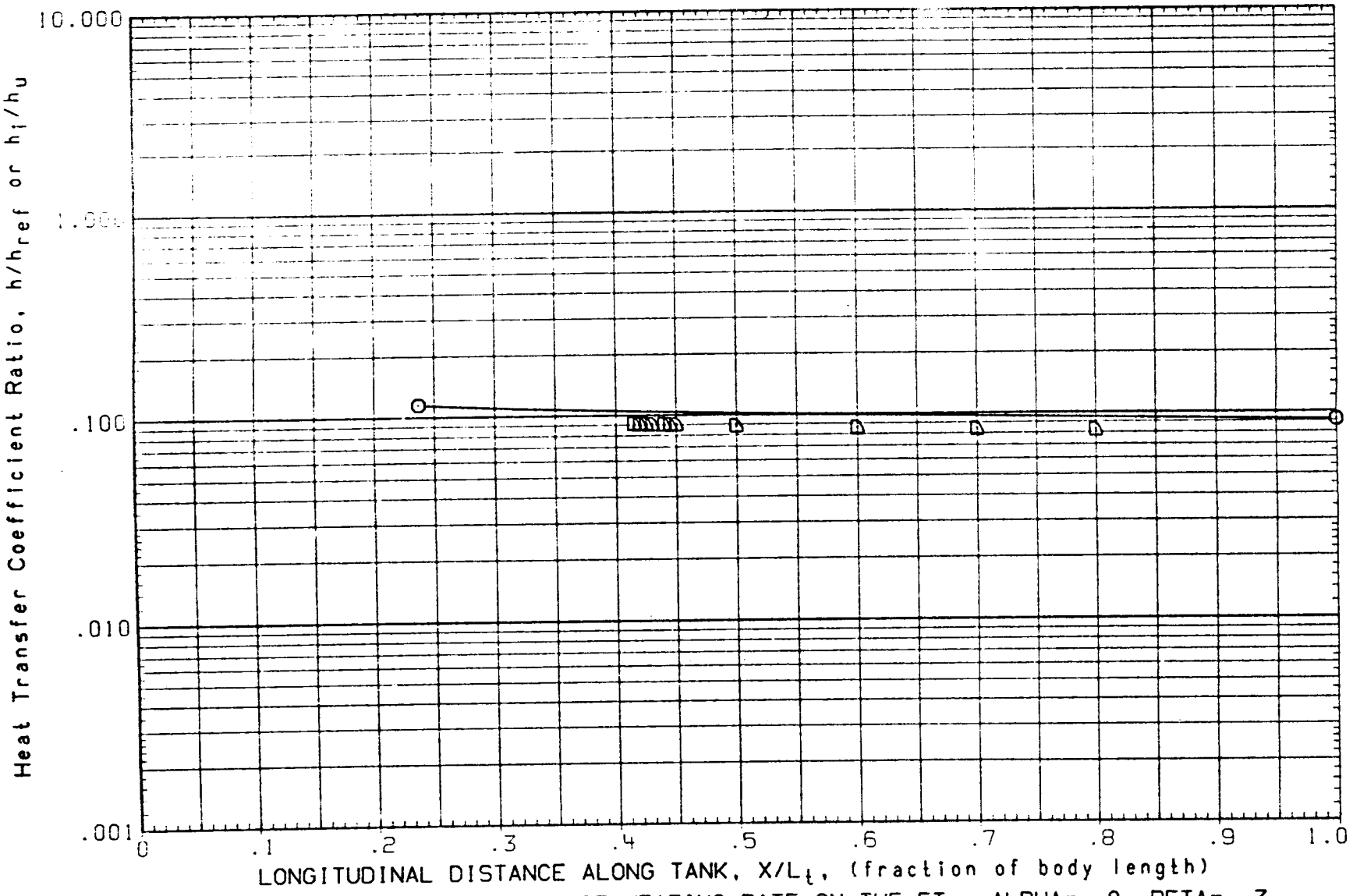

FIG. 4-3 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 343.120

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT04)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	3.000
(X4LT04)	◇	IH85 (W.L. TEST) OTS/ET = V4LT04/C9NT07=	HI/HU	3.010	.000	3.000
(Y4LT04)	△	IH85 (W.L. THEORY) OTS/ET = V4LT04/A9NT07=	HI/HU	3.010	.000	3.000

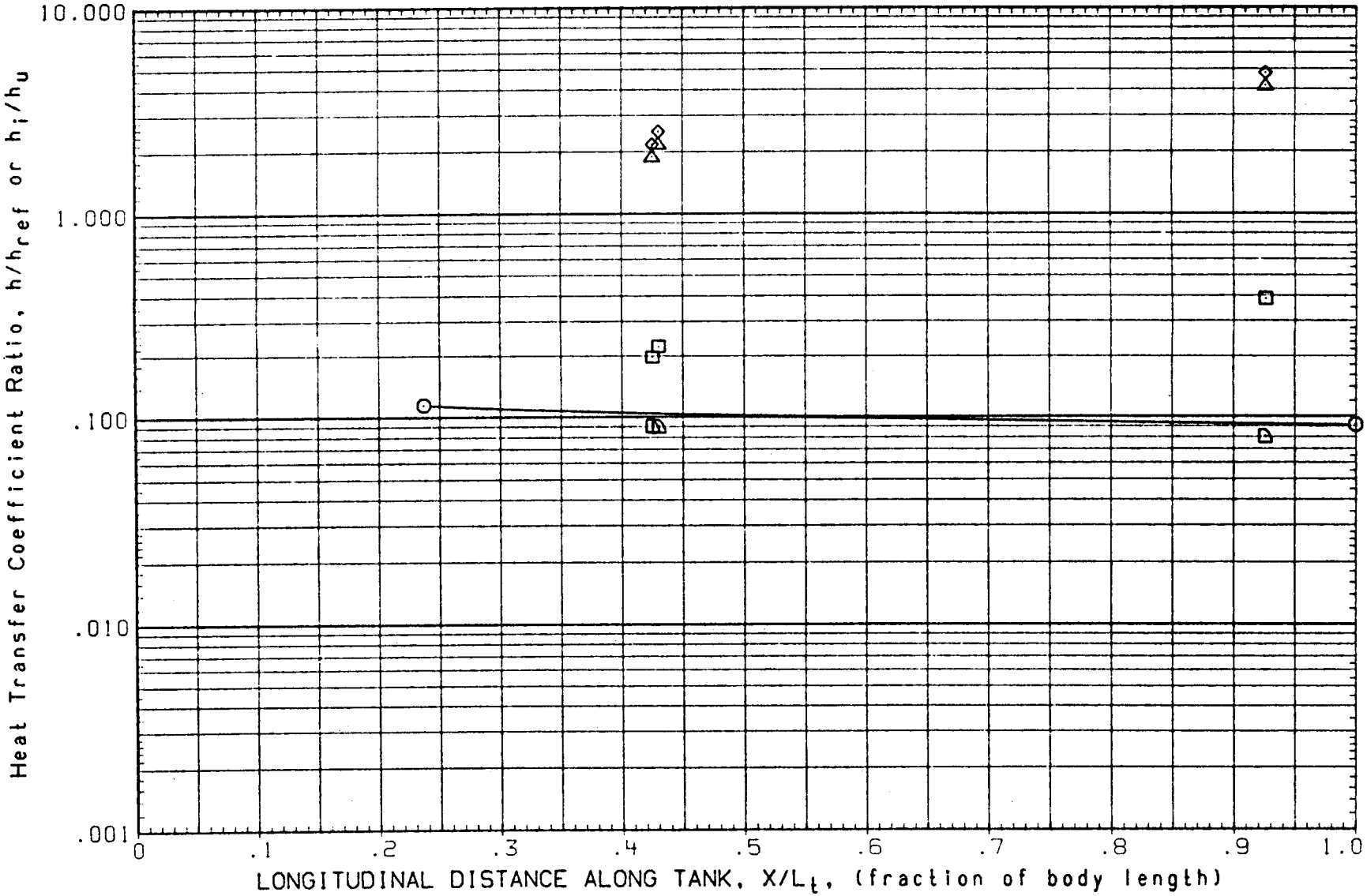

FIG. 4-3 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 345.560

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	□	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT04)	⊡	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	3.000
(X4LT04)	◇	IH85 (W.L. TEST) OTS/ET = V4LT04/C9NT07=	HI/HU	3.010	.000	3.000
(Y4LT04)	△	IH85 (W.L. THEORY) OTS/ET = V4LT04/A9NT07=	HI/HU	3.010	.000	3.000

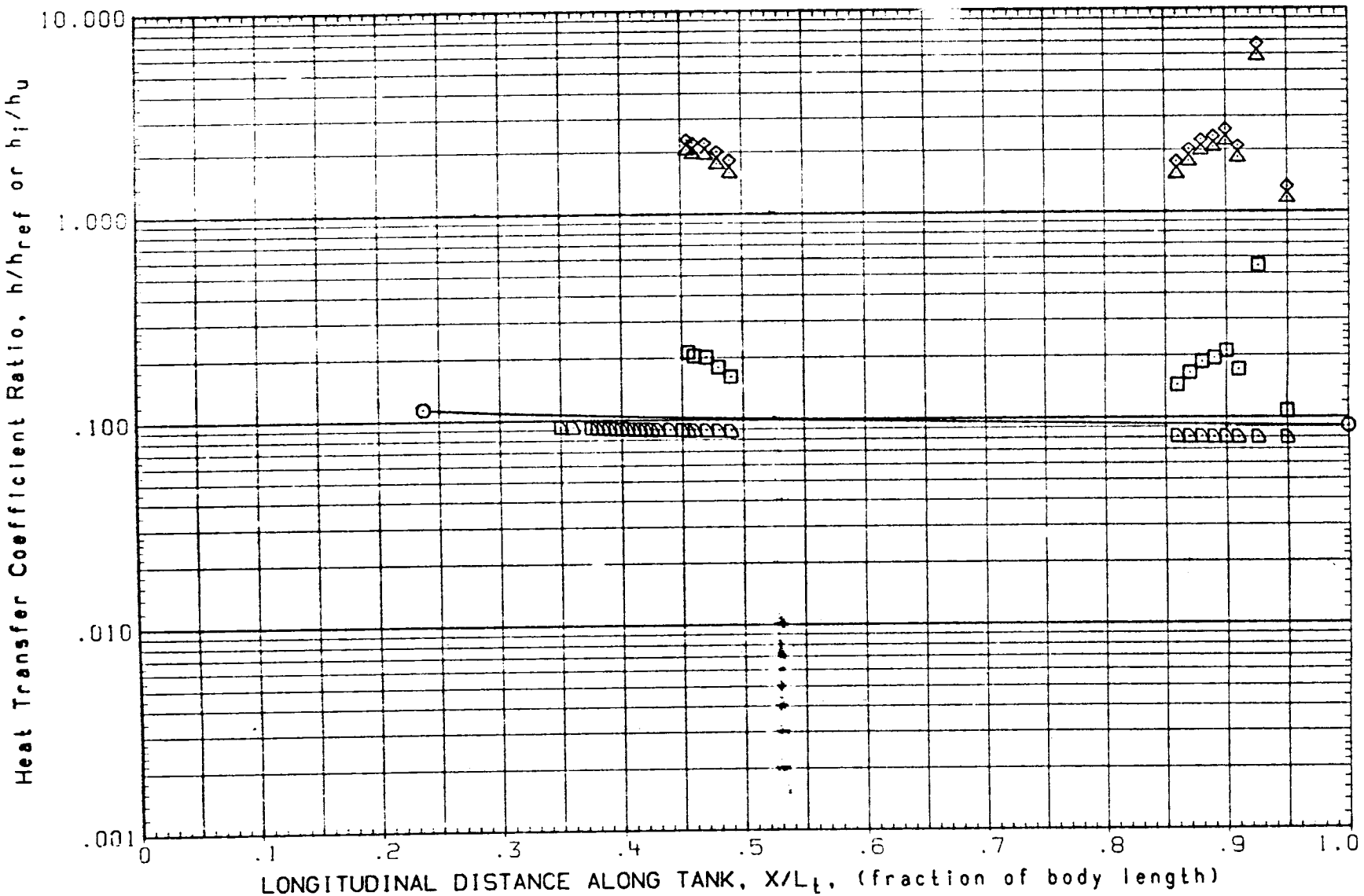

FIG. 4-3 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 348.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT04)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	3.000
(X4LT04)	◇	IH85 (W.L. TEST) OTS/ET = V4LT04/C9NT07=	HI/HU	3.010	.000	3.000
(Y4LT04)	△	IH85 (W.L. THEORY) OTS/ET = V4LT04/A9NT07=	HI/HU	3.010	.000	3.000

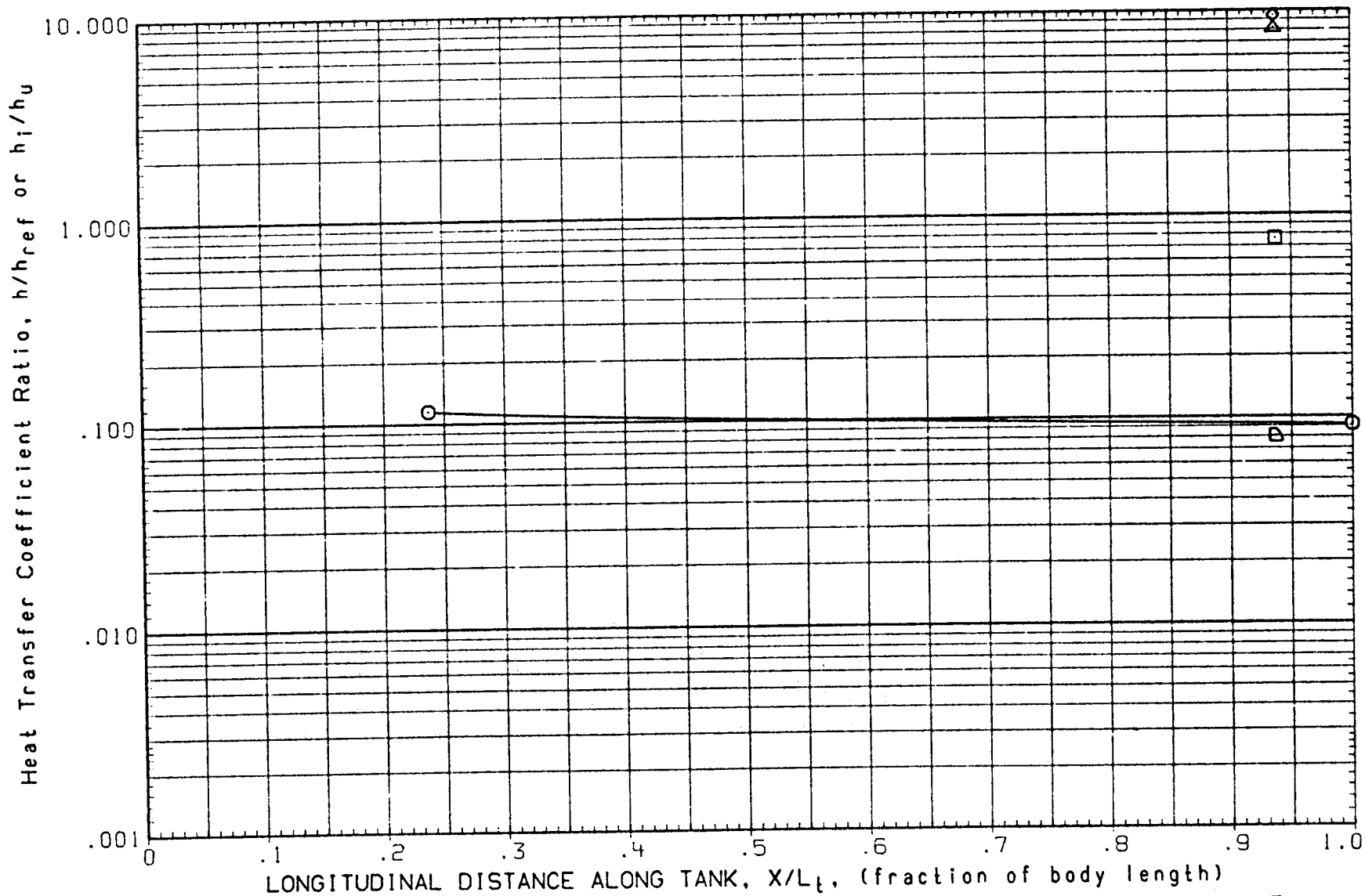

FIG. 4-3 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 352.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	◁	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT04)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		3.010	.000	3.000
(X4LT04)	◇	IH85 (W.L. TEST) OTS/ET = V4LT04/C9NT07= HI/HU		3.010	.000	3.000
(Y4LT04)	△	IH85 (W.L. THEORY) OTS/ET = V4LT04/A9NT07= HI/HU		3.010	.000	3.000

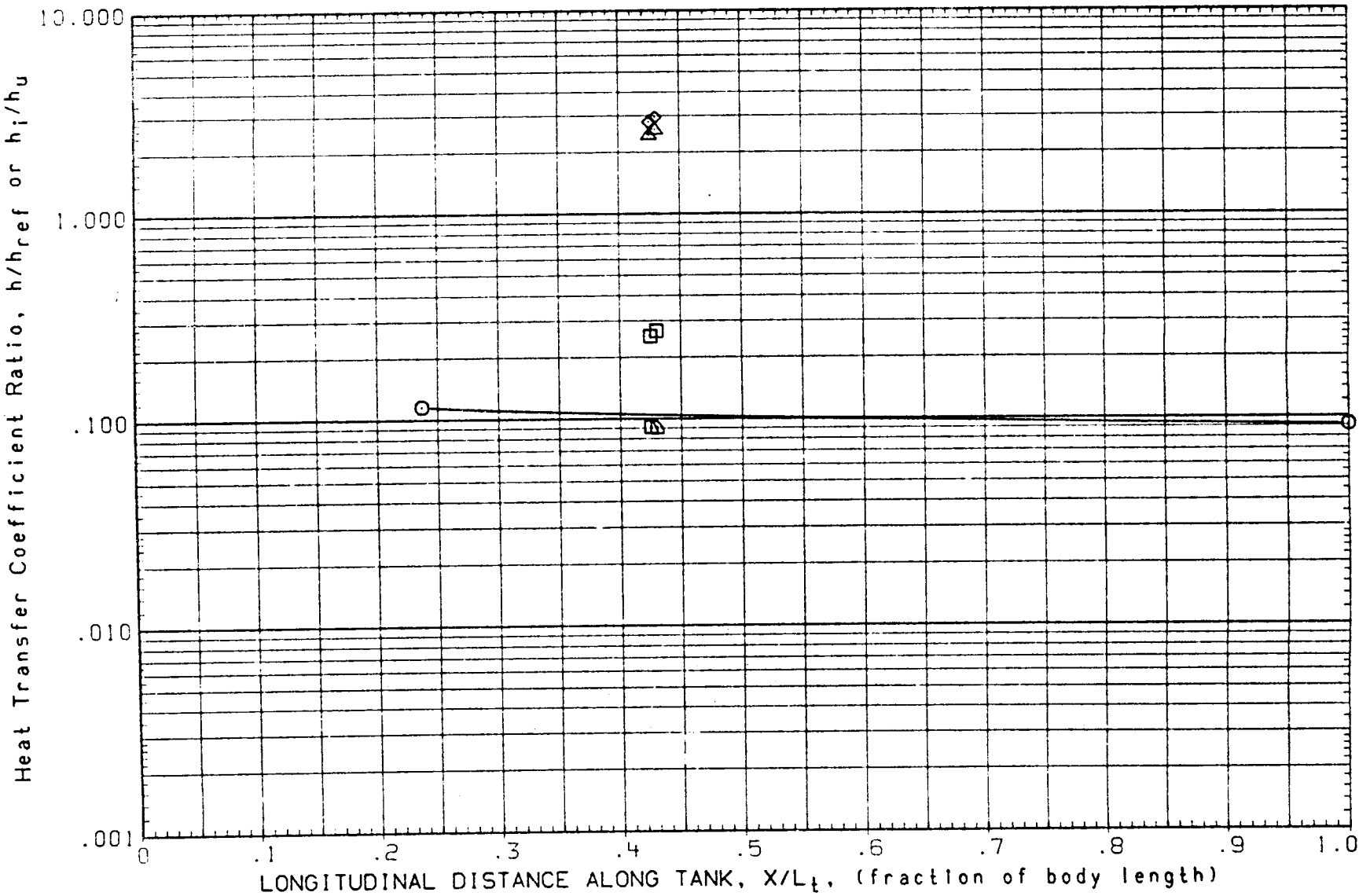

FIG. 4-3 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 354.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⬠	DATA NOT AVAILABLE		3.010	.000	3.000
(V4LT04)	□	DATA NOT AVAILABLE		3.010	.000	3.000
(X4LT04)	◇	DATA NOT AVAILABLE		3.010	.000	3.000
(Y4LT04)	△	DATA NOT AVAILABLE		3.010	.000	3.000

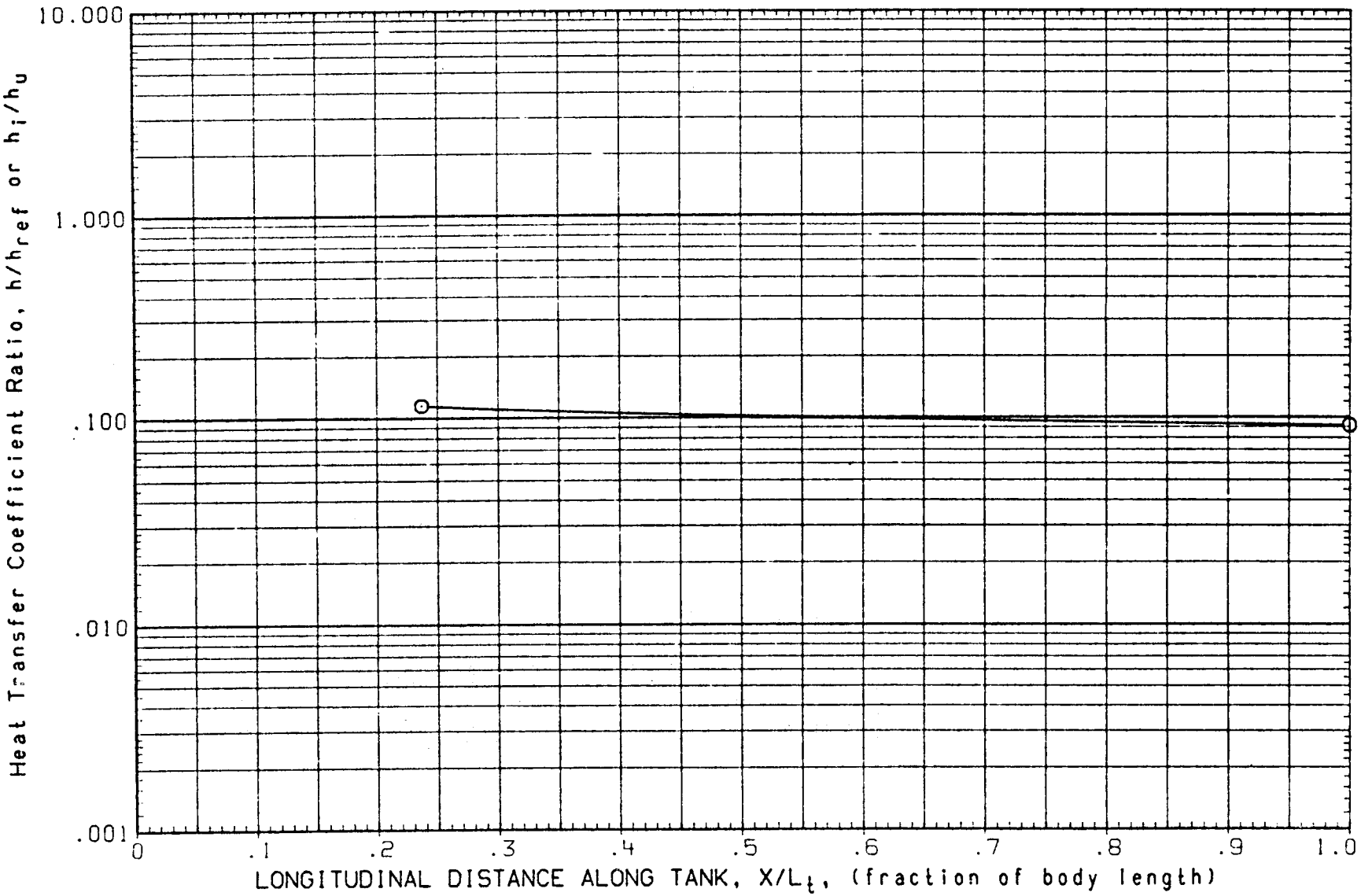

FIG. 4-3 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 355.160

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(09NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⬠	DATA NOT AVAILABLE		3.010	.000	3.000
(Y4LT04)	□	DATA NOT AVAILABLE		3.010	.000	3.000
(X4LT04)	◇	DATA NOT AVAILABLE		3.010	.000	3.000
(Y4LT04)	△	DATA NOT AVAILABLE		3.010	.000	3.000

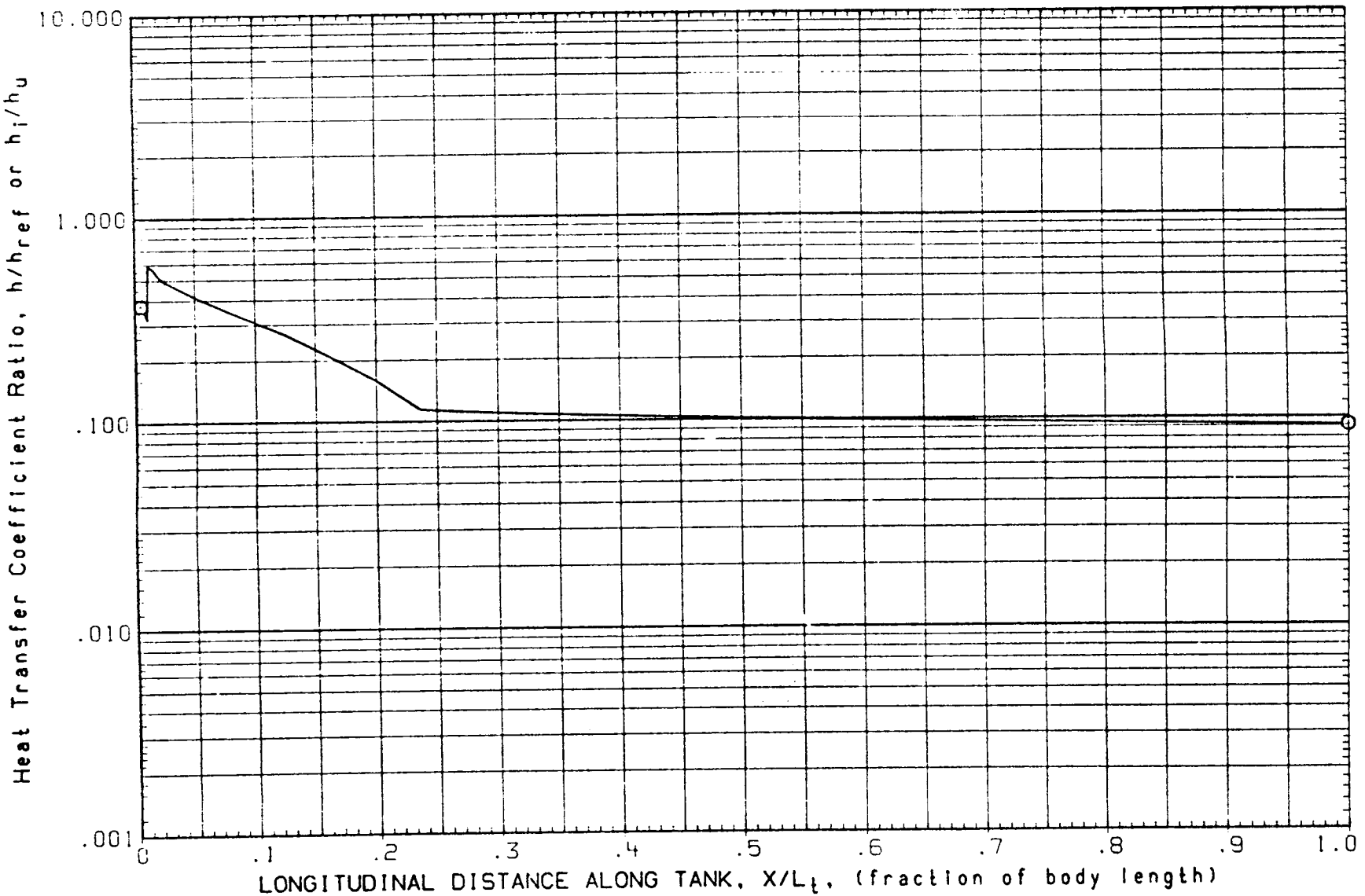

FIG. 4-3 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 360.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT34)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-7.500
(C9NT34)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-7.500
(V4LT28)	□	IH85, AEDC V4TA-W5, CONFIGURATION 0 (T) S		4.020	.000	-7.500
(X4LT28)	◇	IH85 (W.L. TEST) OTS/ET = V4LT28/C9NT34=	HI/HU	4.020	.000	-7.500
(Y4LT28)	△	IH85 (W.L. THEORY) OTS/ET = V4LT28/A9NT34=	HI/HU	4.020	.000	-7.500

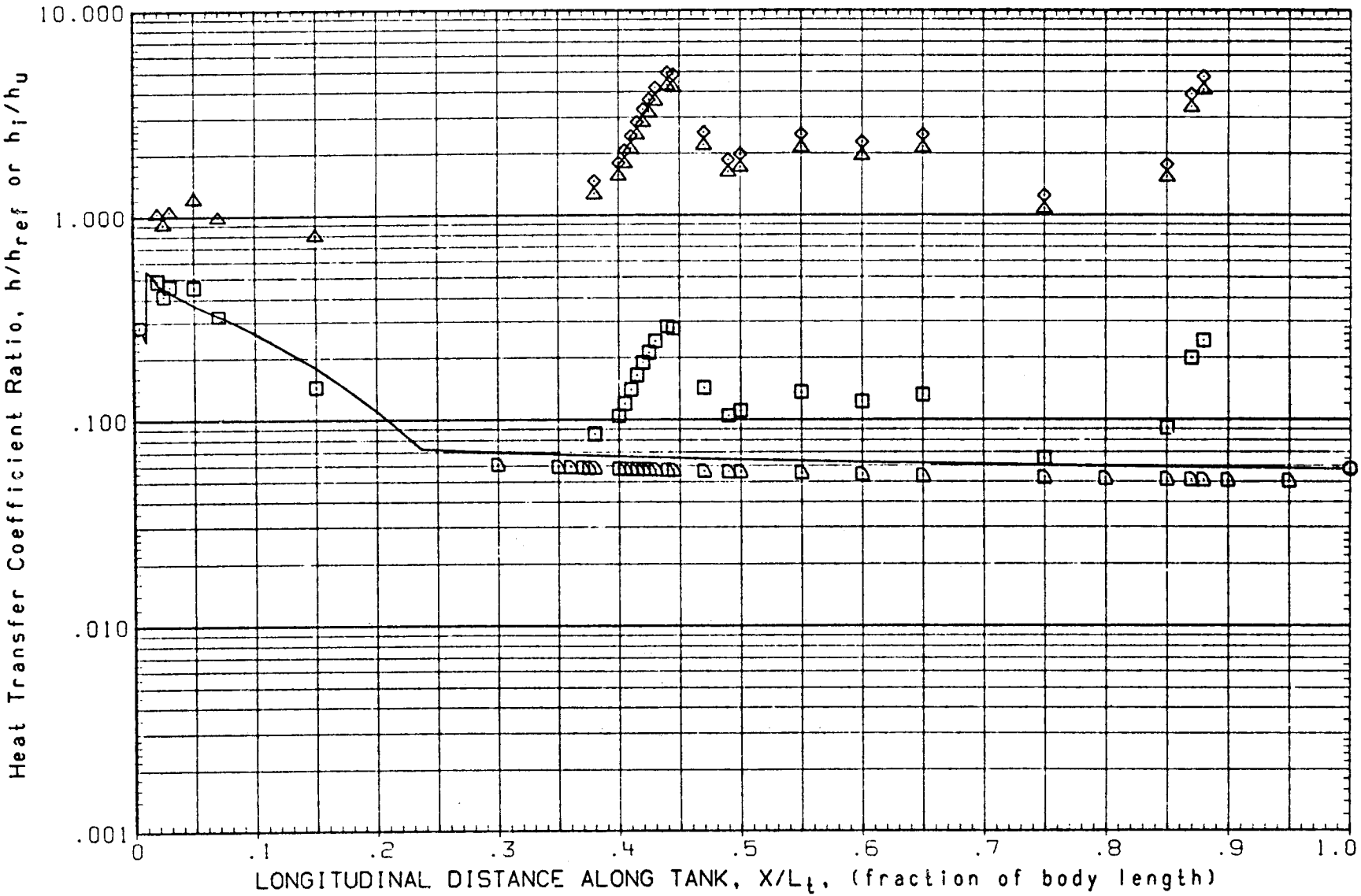

FIG. 4-4 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = .000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT34)	○	DATA NOT AVAILABLE	4.020	.000	-7.500
(C9NT34)	⬡	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	4.020	.000	-7.500
(V4LT28)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	.000	-7.500
(X4LT28)	◇	IH85 (W.L. TEST) OTS/ET = V4LT28/C9NT34= HI/HU	4.020	.000	-7.500
(Y4LT28)	△	IH85 (W.L. THEORY) OTS/ET = V4LT28/A9NT34= HI/HU	4.020	.000	-7.500

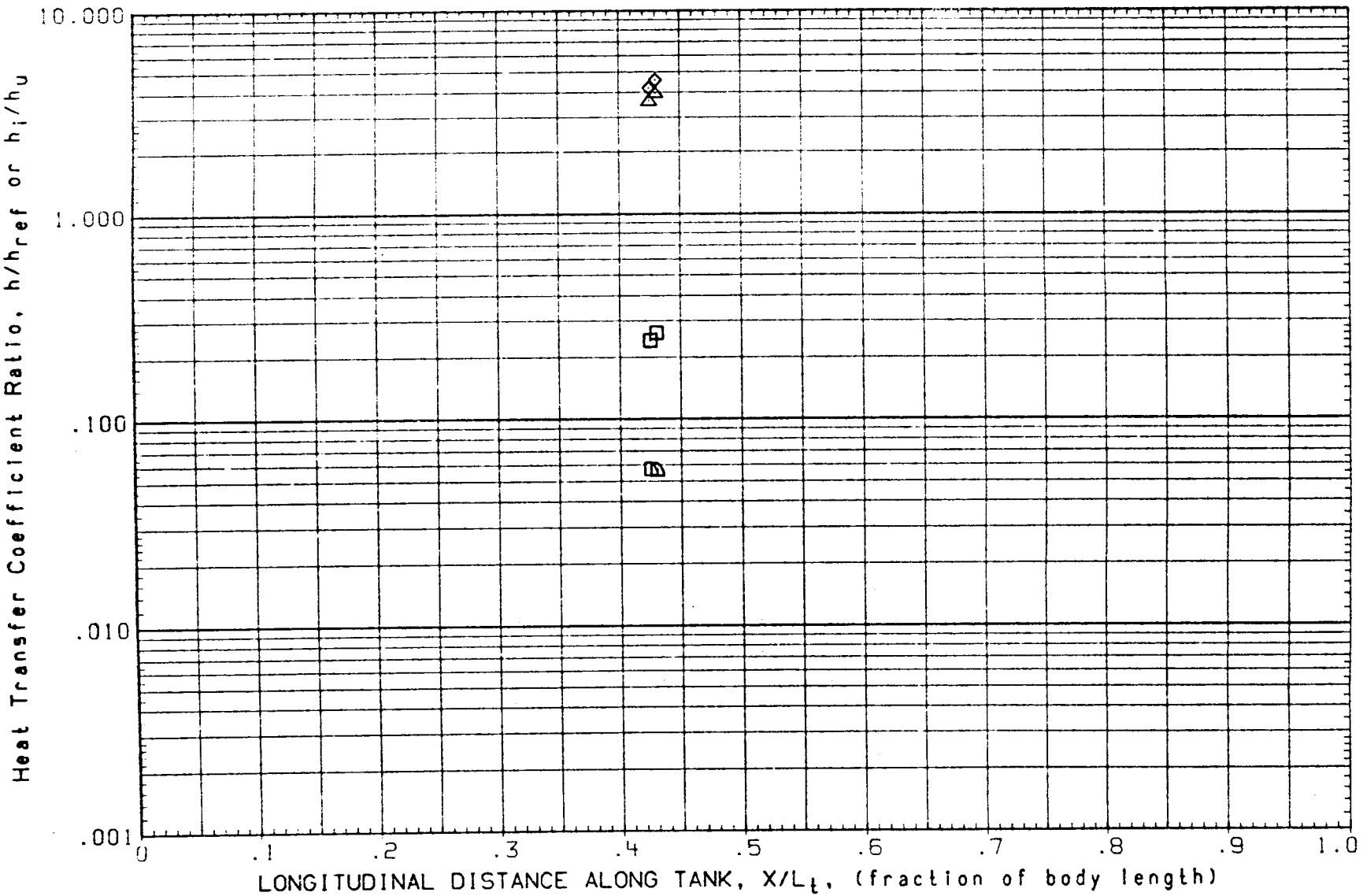

FIG. 4-4 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 5.625

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT34)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-7.500
(C9NT34)	⬡	DATA NOT AVAILABLE		4.020	.000	-7.500
(Y4LT28)	□	DATA NOT AVAILABLE		4.020	.000	-7.500
(X4LT28)	◇	DATA NOT AVAILABLE		4.020	.000	-7.500
(Y4LT28)	△	DATA NOT AVAILABLE		4.020	.000	-7.500

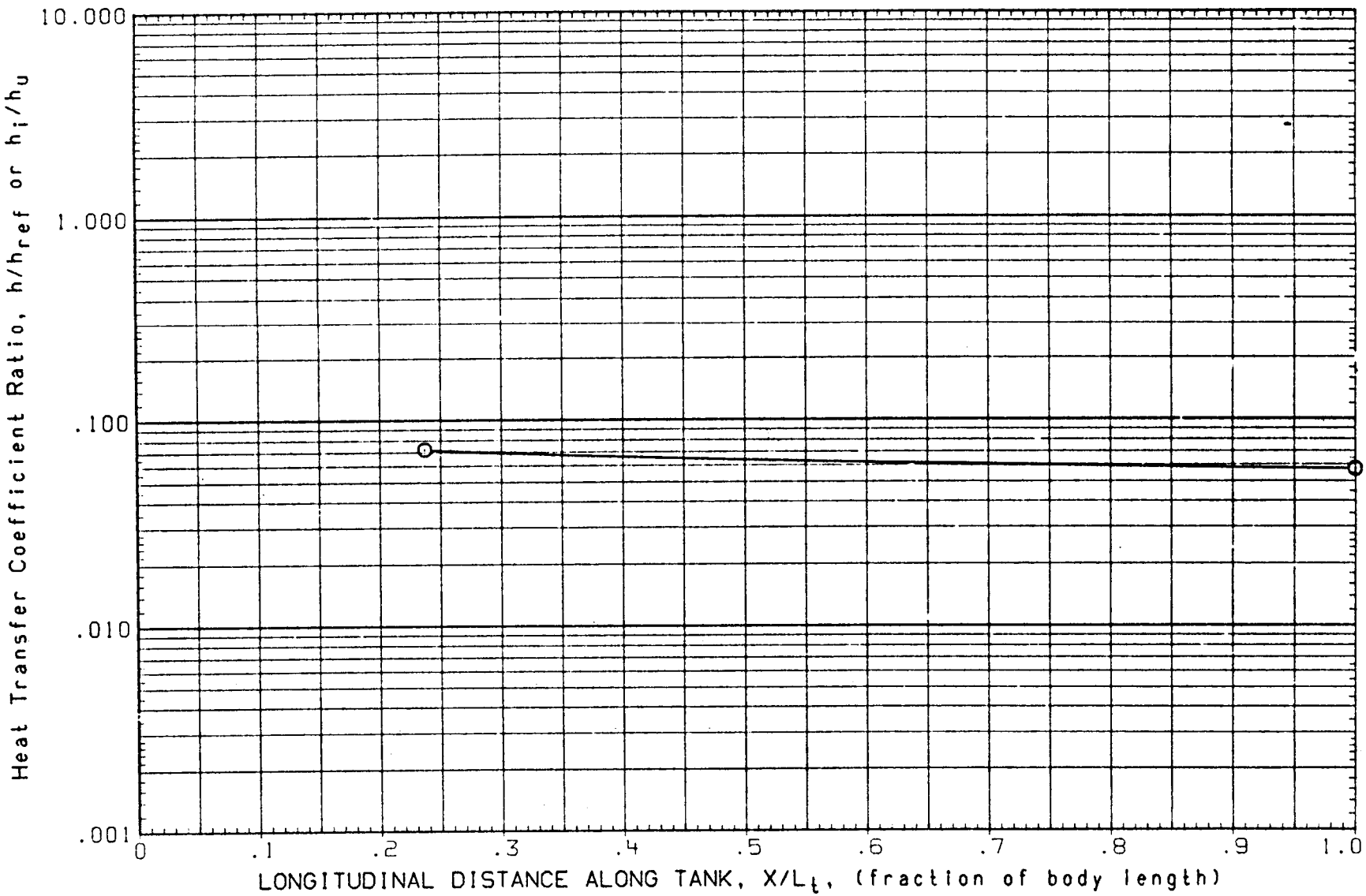

FIG. 4-4 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 5.630

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT34)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-7.500
(C9NT34)	○	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-7.500
(V4LT28)	□	IH85, AEDC V41A-W3, CONFIGURATION 0 (T) S		4.020	.000	-7.500
(X4LT28)	◇	IH85 (W.L. TEST) OTS/ET = V4LT28/C9NT34= HI/HU		4.020	.000	-7.500
(Y4LT28)	△	IH85 (W.L. THEORY) OTS/ET = V4LT28/A9NT34= HI/HU		4.020	.000	-7.500

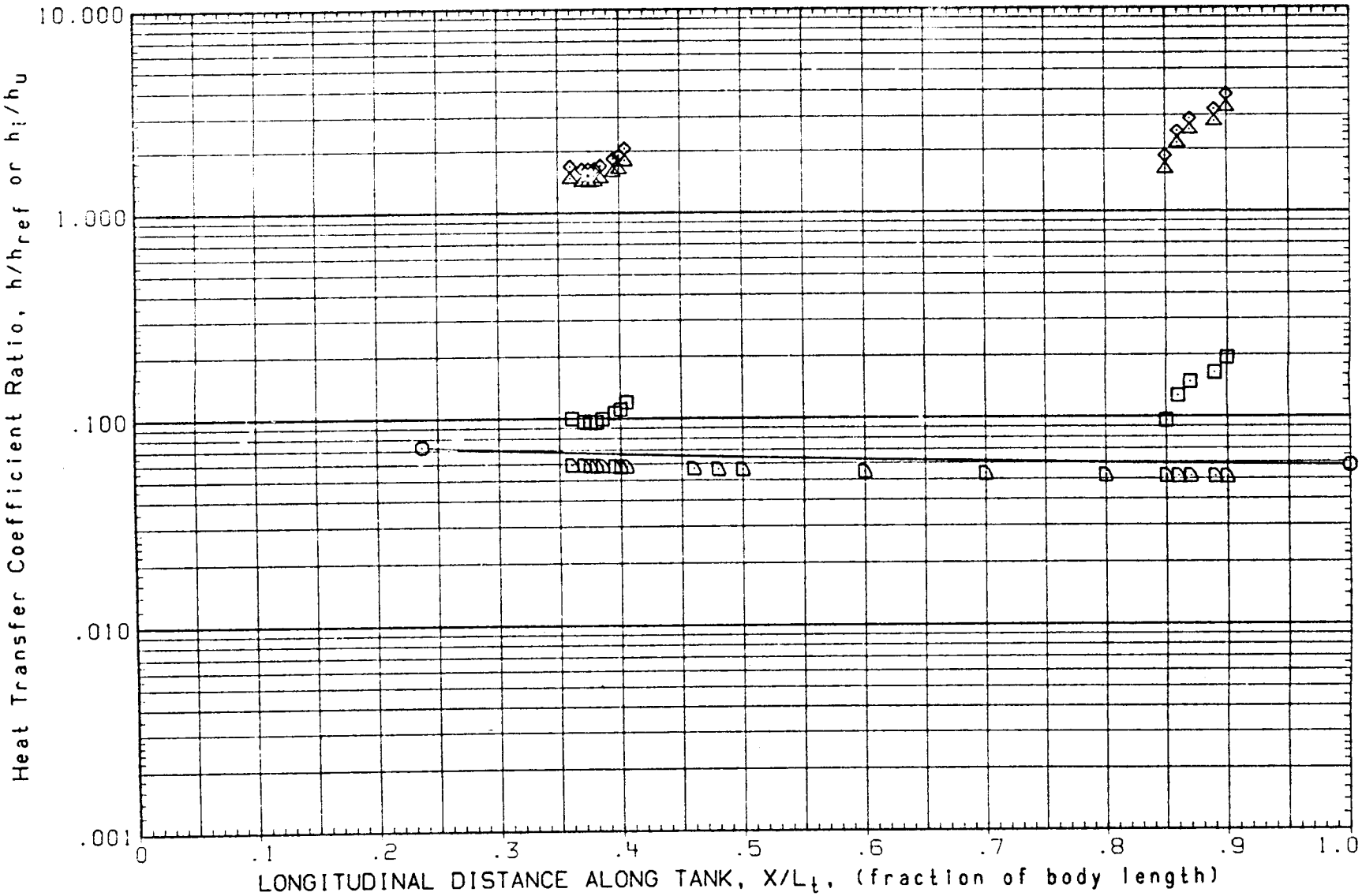

FIG. 4-4 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 11.250

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT34)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-7.500
(C9NT34)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-7.500
(V4LT28)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-7.500
(X4LT28)	◇	IH85 (W.L. TEST) OTS/ET = V4LT28/C9NT34=	HI/HU	4.020	.000	-7.500
(Y4LT28)	△	IH85 (W.L. THEORY) OTS/ET = V4LT28/A9NT34=	HI/HU	4.020	.000	-7.500

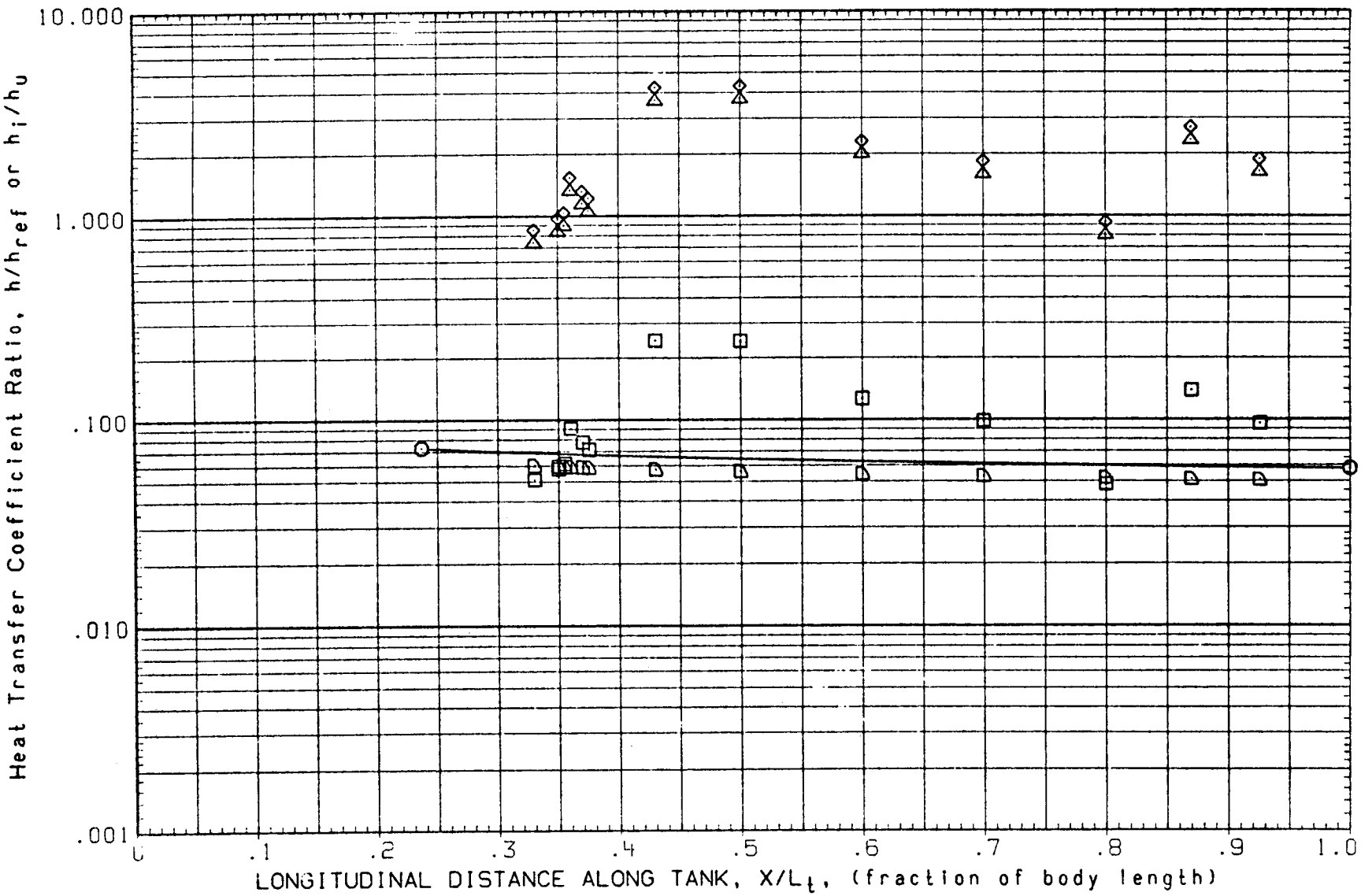

FIG. 4-4 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 17.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT34)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-7.500
(C8NT34)	⬭	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-7.500
(V4LT28)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-7.500
(X4LT28)	◇	IH85 (W.L. TEST) OTS/ET = V4LT28/C9NT34=	HI/HU	4.020	.000	-7.500
(Y4LT28)	△	IH85 (W.L. THEORY) OTS/ET = V4LT28/A9NT34=	HI/HU	4.020	.000	-7.500

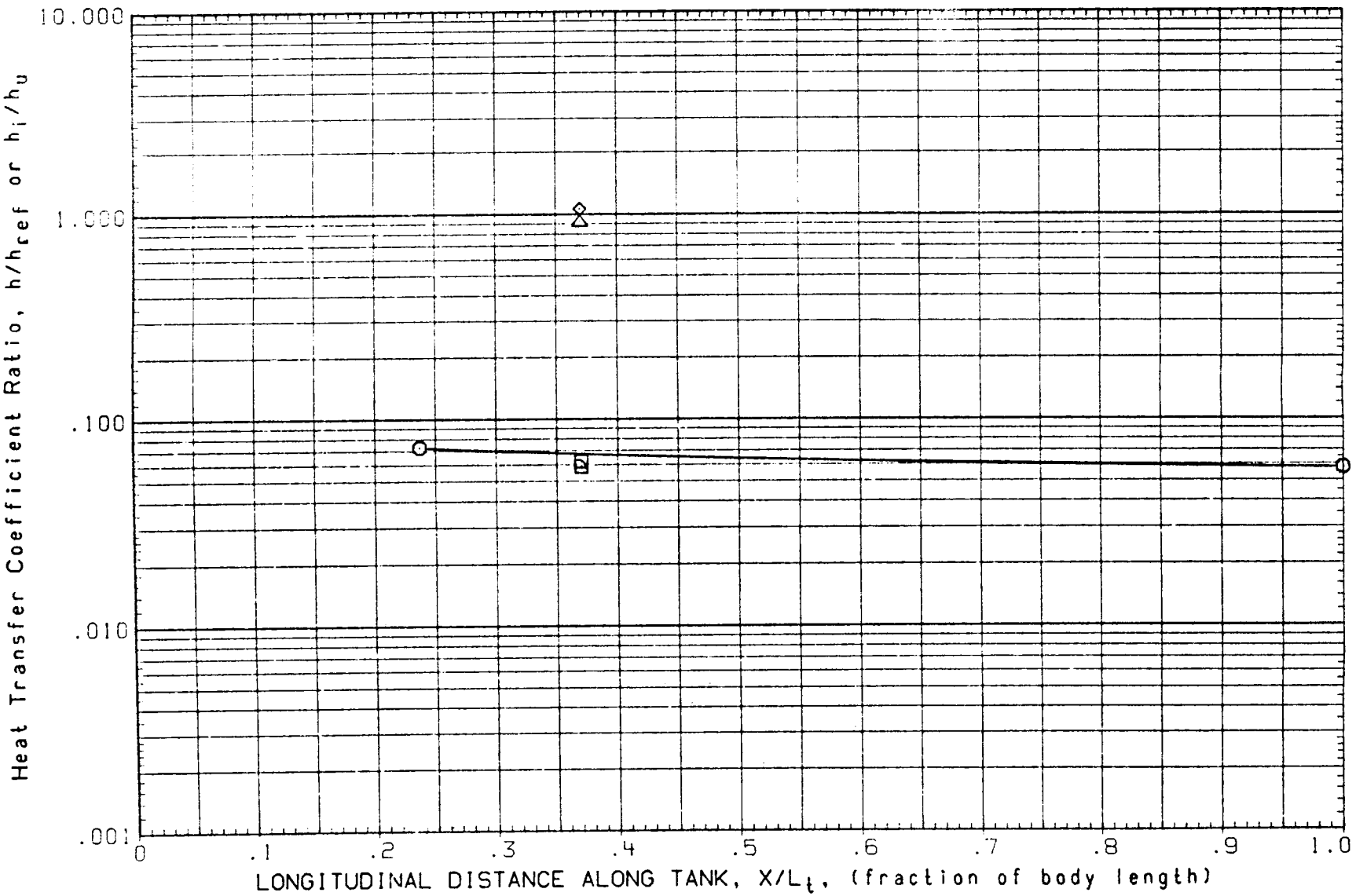

FIG. 4-4 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 20.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT34)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-7.500
(C9NT34)	⊏	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-7.500
(V4LT28)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-7.500
(X4LT28)	◇	IH85 (W.L. TEST) OTS/ET = V4LT28/C9NT34=	HI/HU	4.020	.000	-7.500
(Y4LT28)	△	IH85 (W.L. THEORY) OTS/ET = V4LT28/A9NT34=	HI/HU	4.020	.000	-7.500

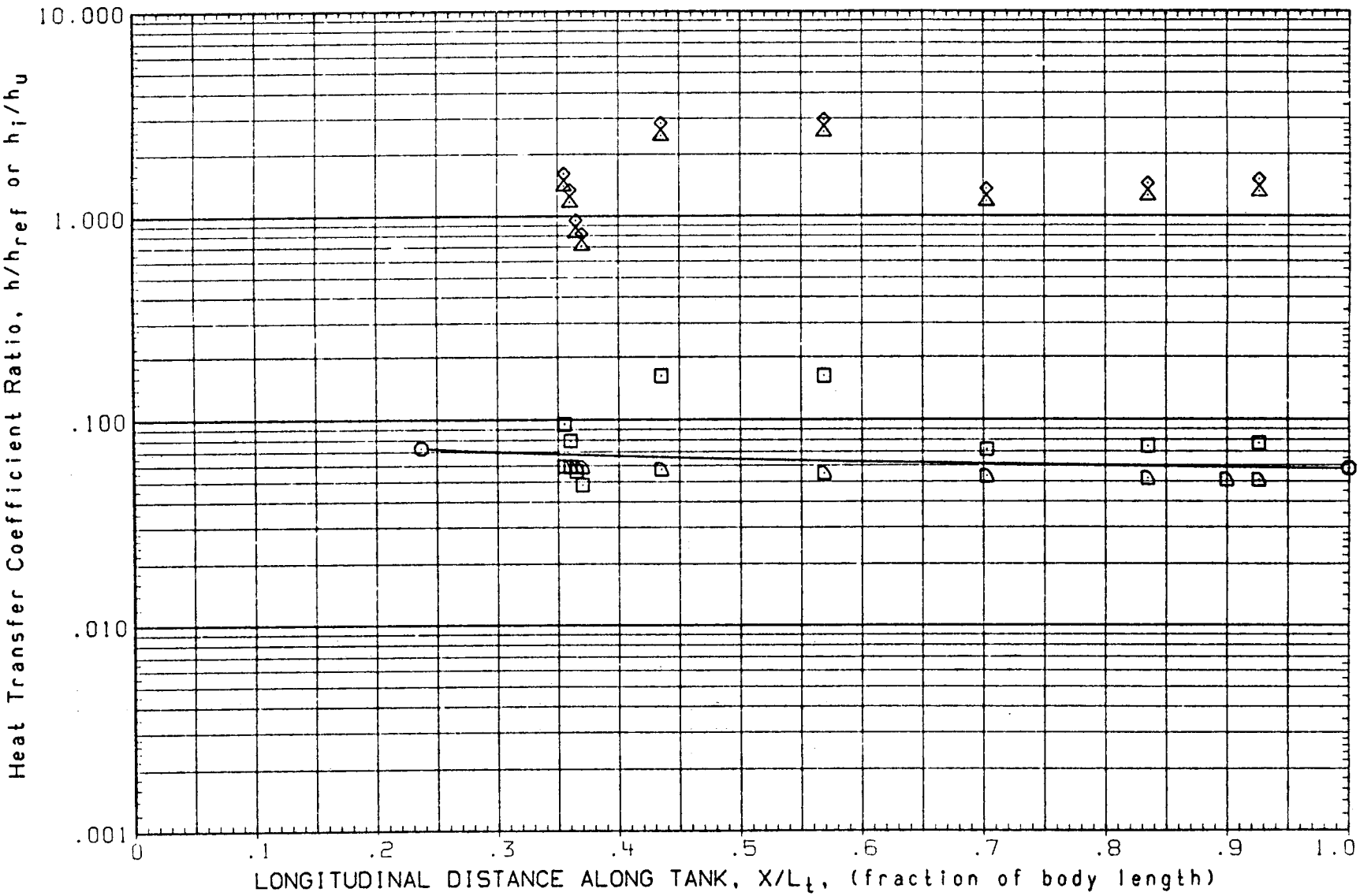

FIG. 4-4 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 23.070

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT34)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-7.500
(C9NT34)	◐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-7.500
(V4LT28)	◨	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-7.500
(X4LT28)	◇	IH85 (W.L. TEST) OTS/ET = V4LT28/C9NT34=	HI/HU	4.020	.000	-7.500
(Y4LT28)	△	IH85 (W.L. THEORY) OTS/ET = V4LT28/A9NT34=	HI/HU	4.020	.000	-7.500

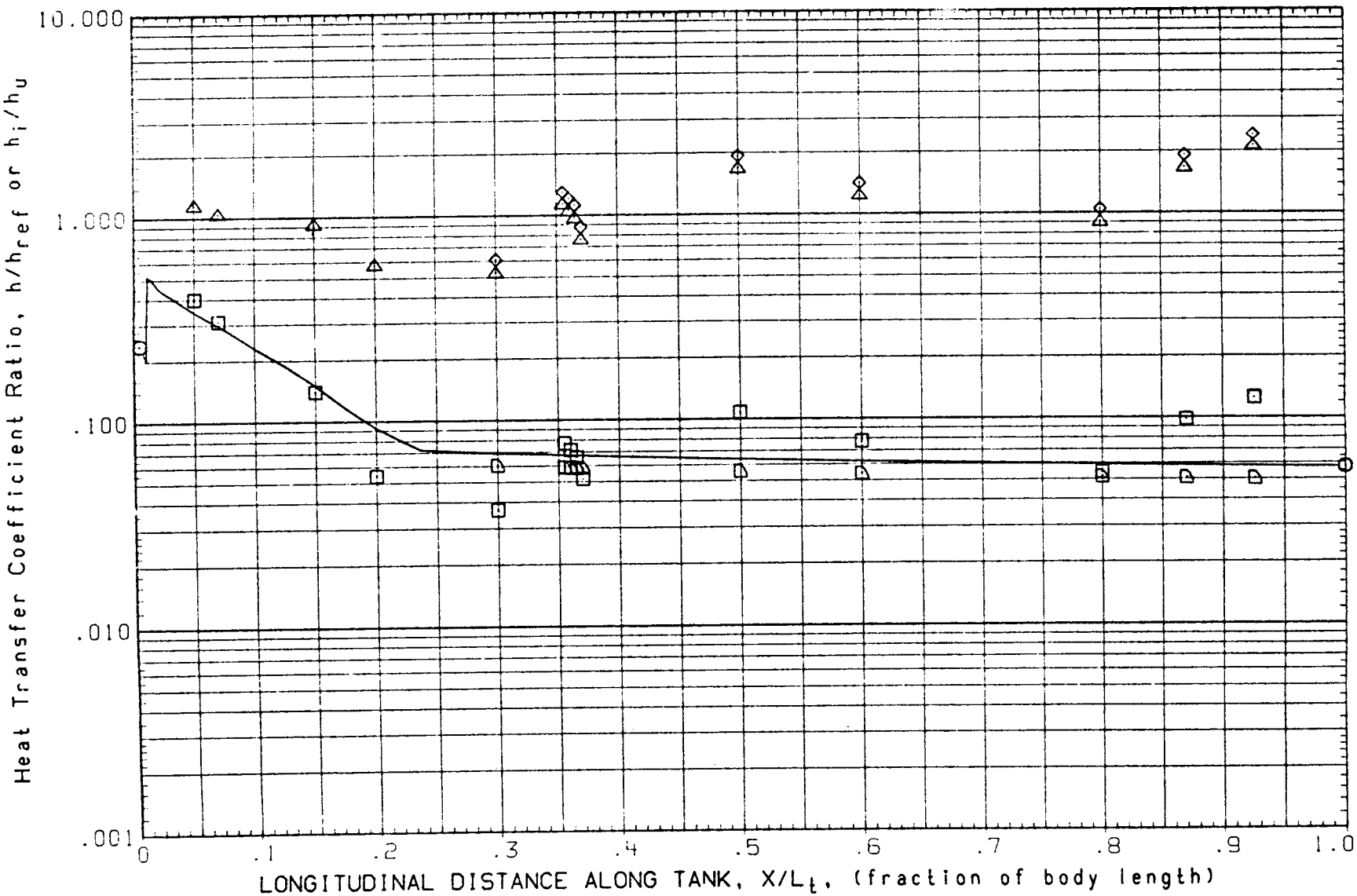

FIG. 4-4 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 29.800

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT34)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-7.500
(C9NT34)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-7.500
(V4LT28)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-7.500
(X4LT28)	◇	IH85 (W.L. TEST) OTS/ET = V4LT28/C9NT34=	HI/HU	4.020	.000	-7.500
(Y4LT28)	△	IH85 (W.L. THEORY) OTS/ET = V4LT28/A9NT34=	HI/HU	4.020	.000	-7.500

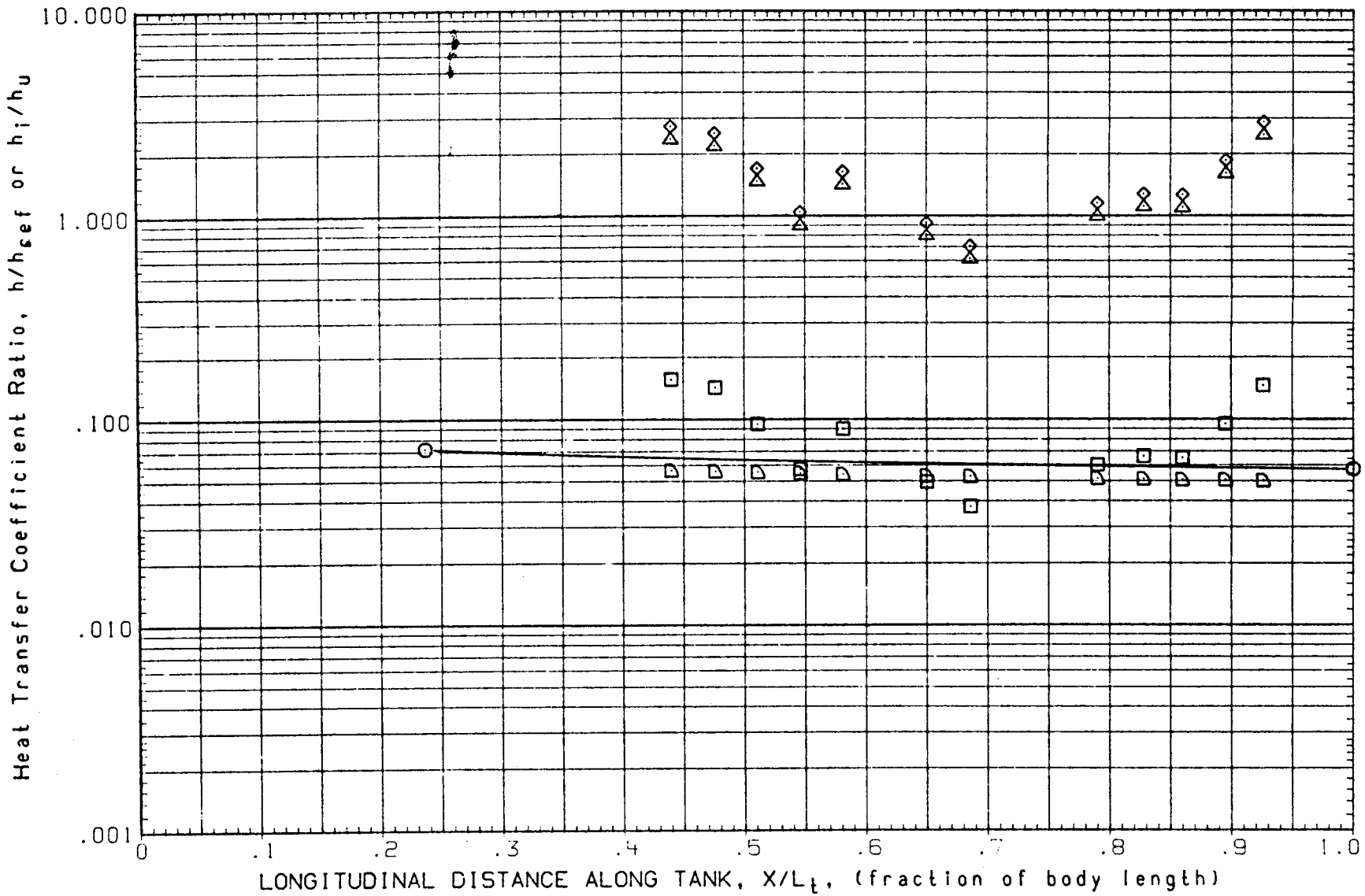

FIG. 4-4 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 31.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(C9NT34)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-7.500
(C9NT34)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-7.500
(V4LT28)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-7.500
(X4LT28)	◇	IH85 (W.T. TEST) OTS/ET = V4LT28/C9NT34=	HI/HU	4.020	.000	-7.500
(Y4LT28)	△	IH85 (W.T. THEORY) OTS/ET = V4LT28/A9NT34=	HI/HU	4.020	.000	-7.500

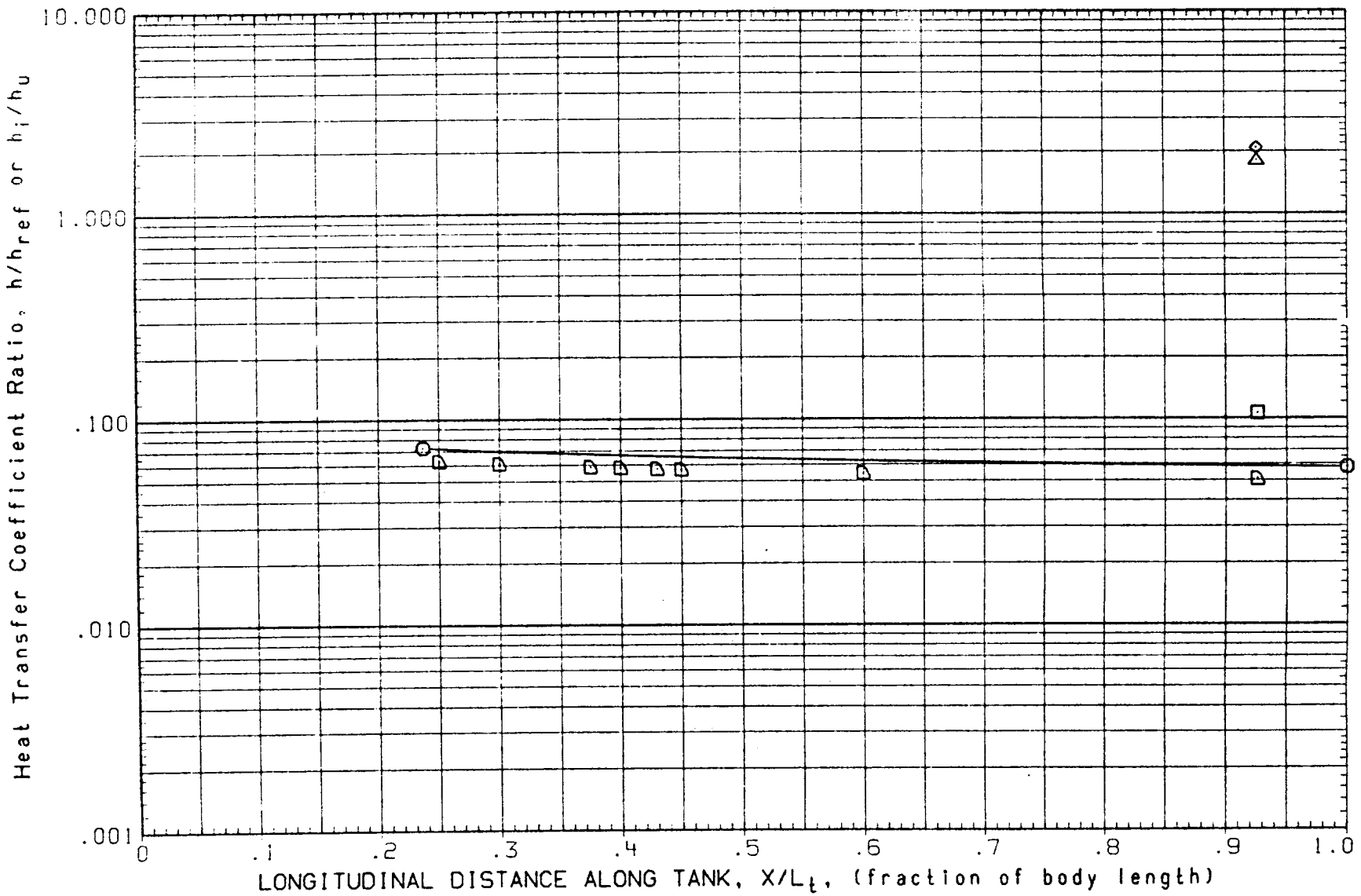

FIG. 4-4 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 33.750

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT34)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-7.500
(C9NT34)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-7.500
(V4LT28)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-7.500
(X4LT28)	◇	IH85 (W.L. TEST) OTS/ET = V4LT28/C9NT34=	HI/HU	4.020	.000	-7.500
(Y4LT28)	△	IH85 (W.L. THEORY) OTS/ET = V4LT28/A9NT34=	HI/HU	4.020	.000	-7.500

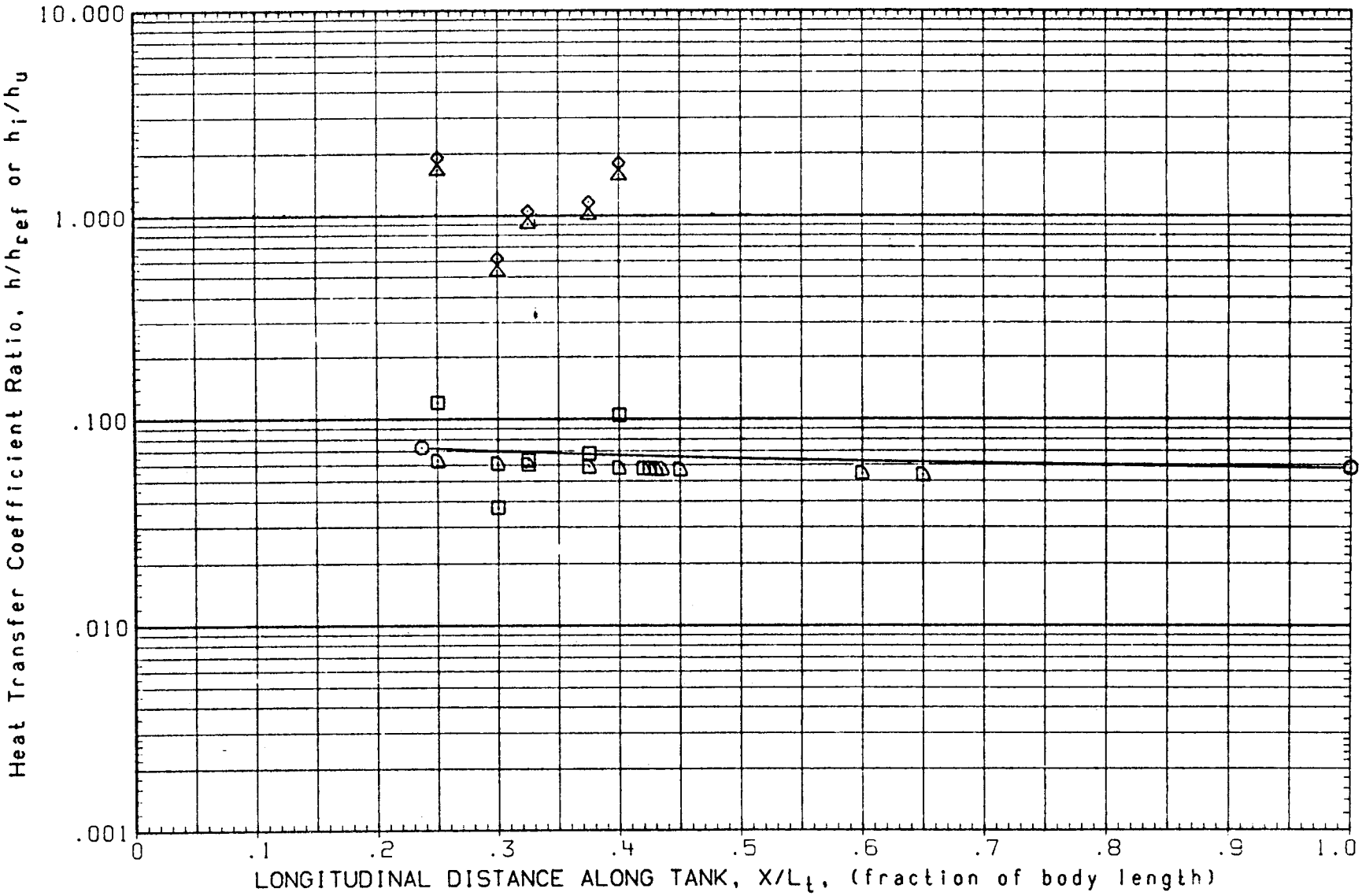

FIG. 4-4 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 36.320

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT34)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-7.500
(C9NT34)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-7.500
(V4LT28)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-7.500
(X4LT28)	◇	IH85 (W.L. TEST) OTS/ET = V4LT28/C9NT34=	HI/HU	4.020	.000	-7.500
(Y4LT28)	△	IH85 (W.L. THEORY) OTS/ET = V4LT28/A9NT34=	HI/HU	4.020	.000	-7.500

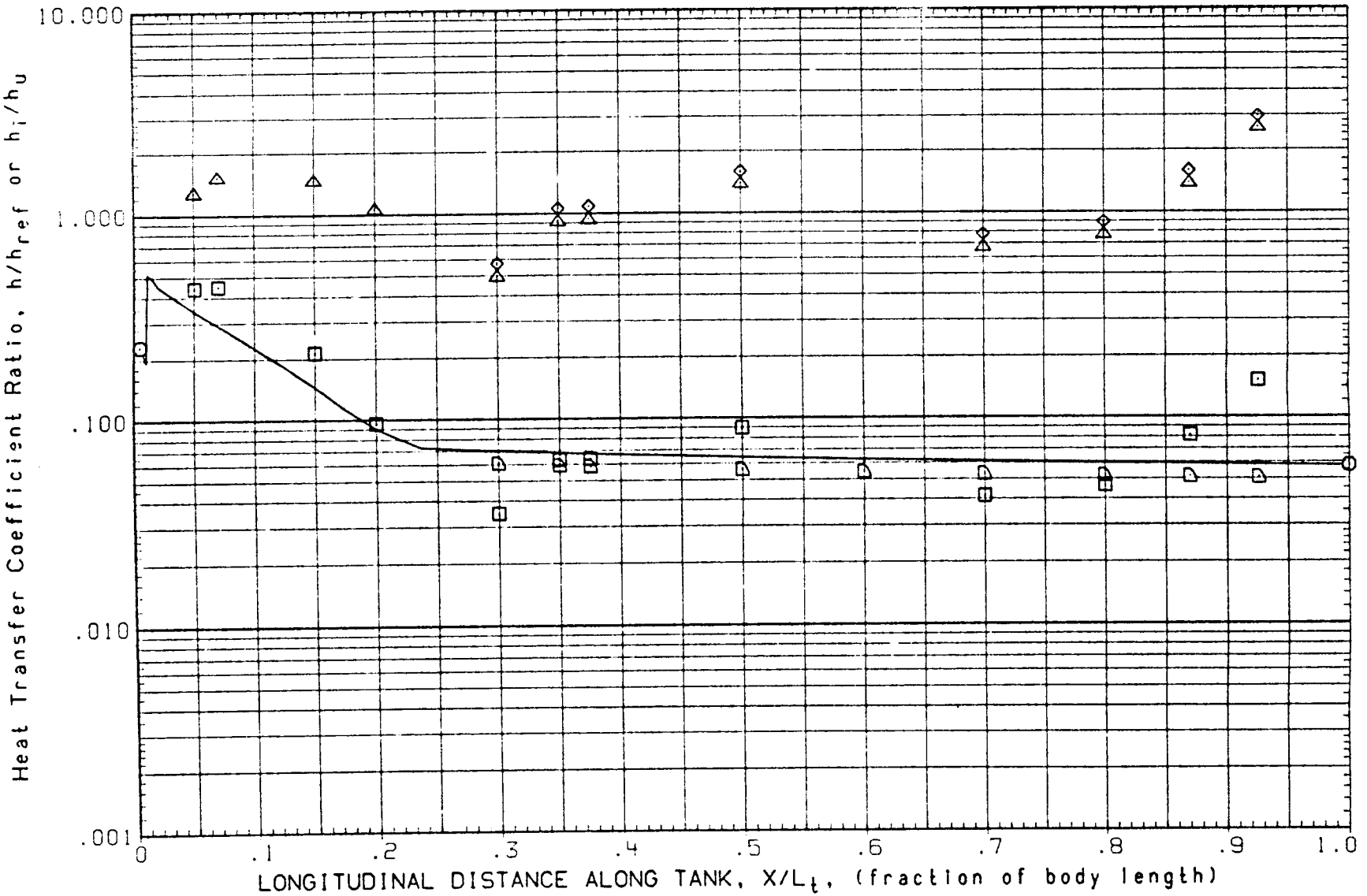

FIG. 4-4 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 37.700

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT34)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-7.500
(C9NT34)	◗	DATA NOT AVAILABLE		4.020	.000	-7.500
(Y4LT28)	□	DATA NOT AVAILABLE		4.020	.000	-7.500
(X4LT28)	◇	DATA NOT AVAILABLE		4.020	.000	-7.500
(Y4LT28)	△	DATA NOT AVAILABLE		4.020	.000	-7.500

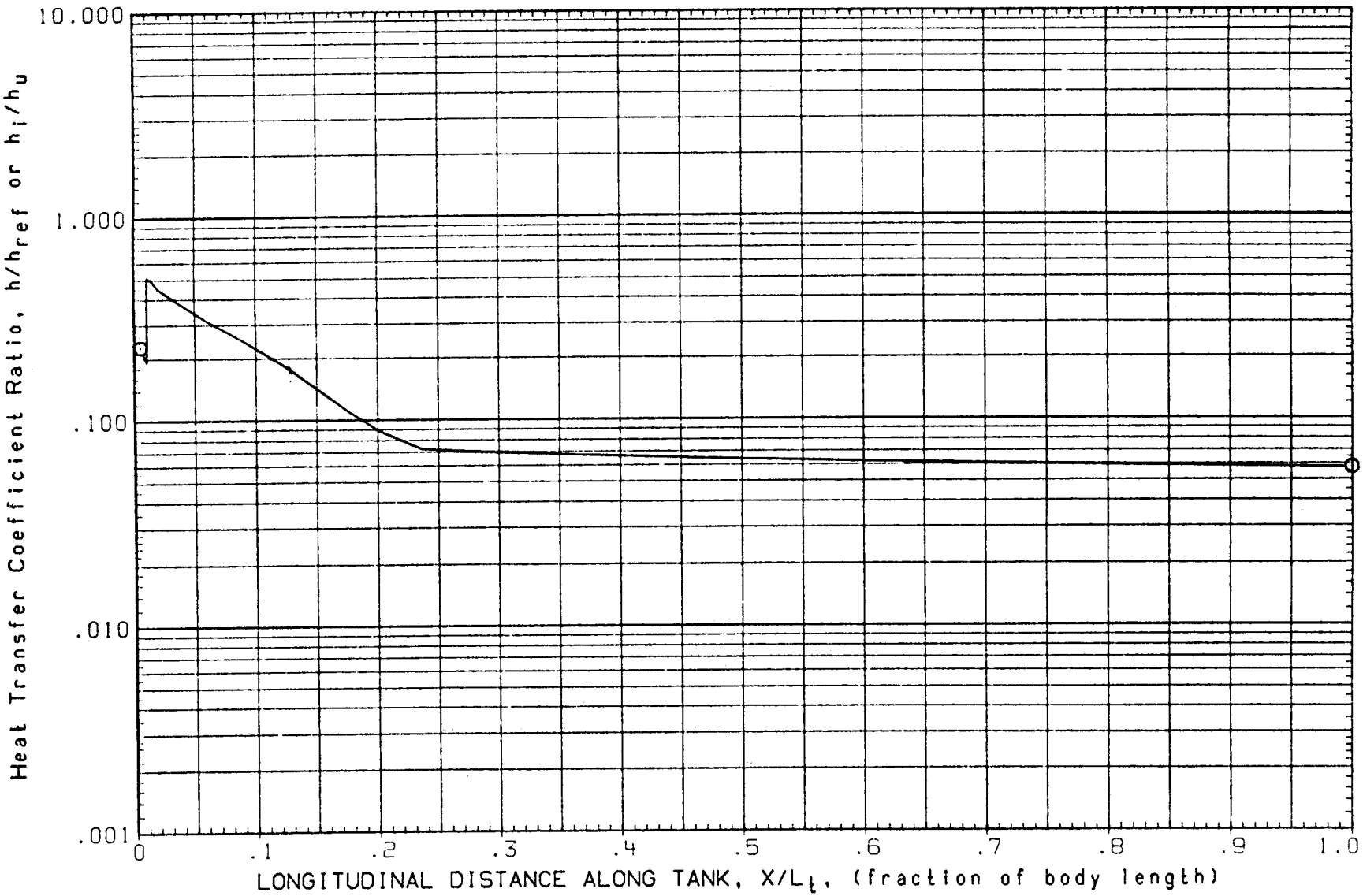

FIG. 4-4 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 39.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT34)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-7.500
(C9NT34)	◇	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-7.500
(V4LT28)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-7.500
(X4LT29)	◇	IH85 (W.L. TEST) OTS/ET = V4LT28/C9NT34=	HI/HU	4.020	.000	-7.500
(Y4LT28)	△	IH85 (W.L. THEORY) OTS/ET = V4LT28/A9NT34=	HI/HU	4.020	.000	-7.500

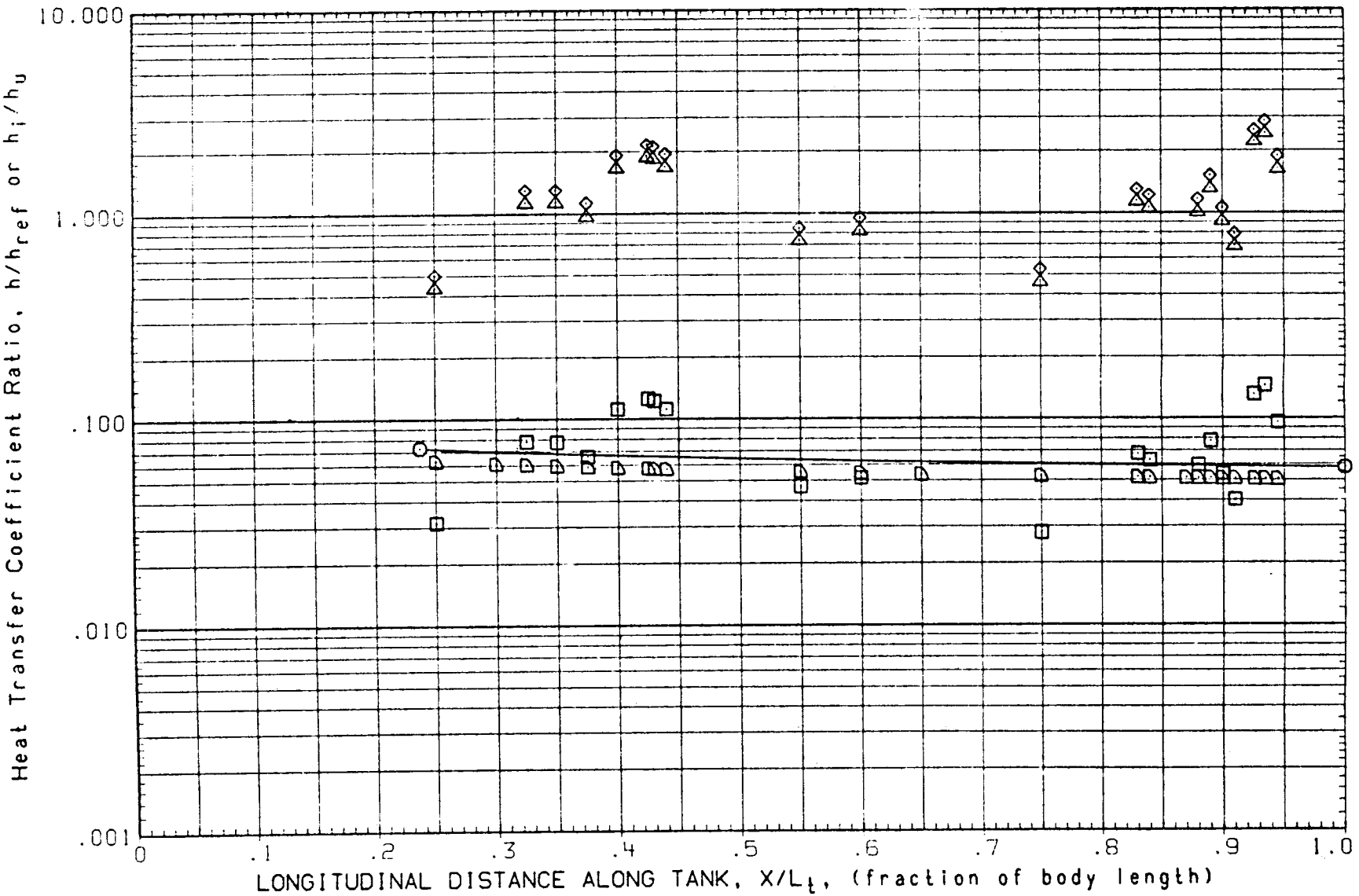

FIG. 4-4 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 45.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT34)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	4.020	.000	-7.500
(C9NT34)	⬡	DATA NOT AVAILABLE	4.020	.000	-7.500
(V4LT28)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	.000	-7.500
(X4LT28)	◇	DATA NOT AVAILABLE	4.020	.000	-7.500
(Y4LT28)	△	IH85 (W.L. THEORY) OTS/ET = V4LT28/A9NT34= HI/HU	4.020	.000	-7.500

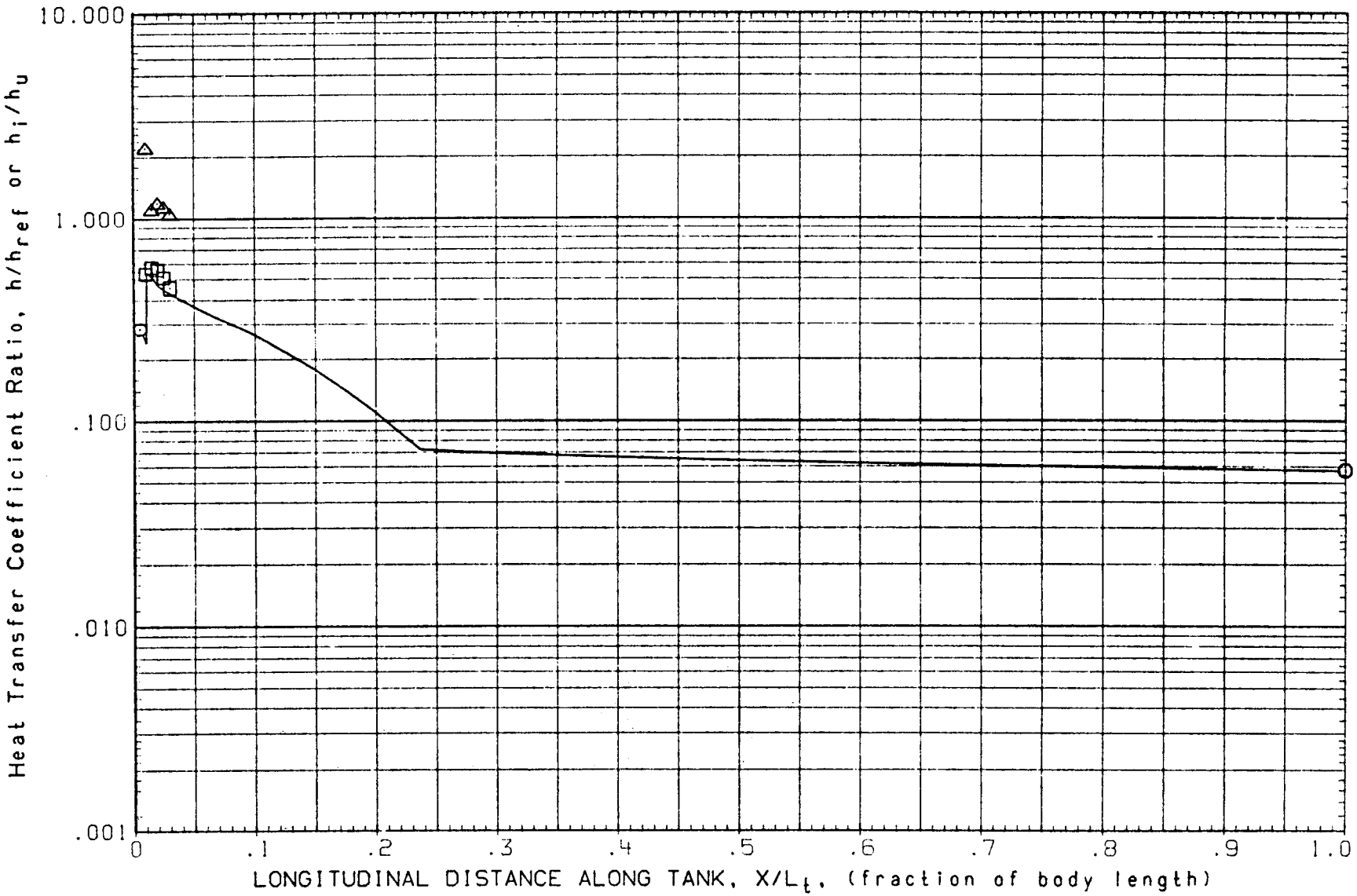

FIG. 4-4 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 180.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT34)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-7.500
(C9NT34)	◗	DATA NOT AVAILABLE		4.020	.000	-7.500
(V4LT28)	□	DATA NOT AVAILABLE		4.020	.000	-7.500
(X4LT28)	◇	DATA NOT AVAILABLE		4.020	.000	-7.500
(Y4LT28)	△	DATA NOT AVAILABLE		4.020	.000	-7.500

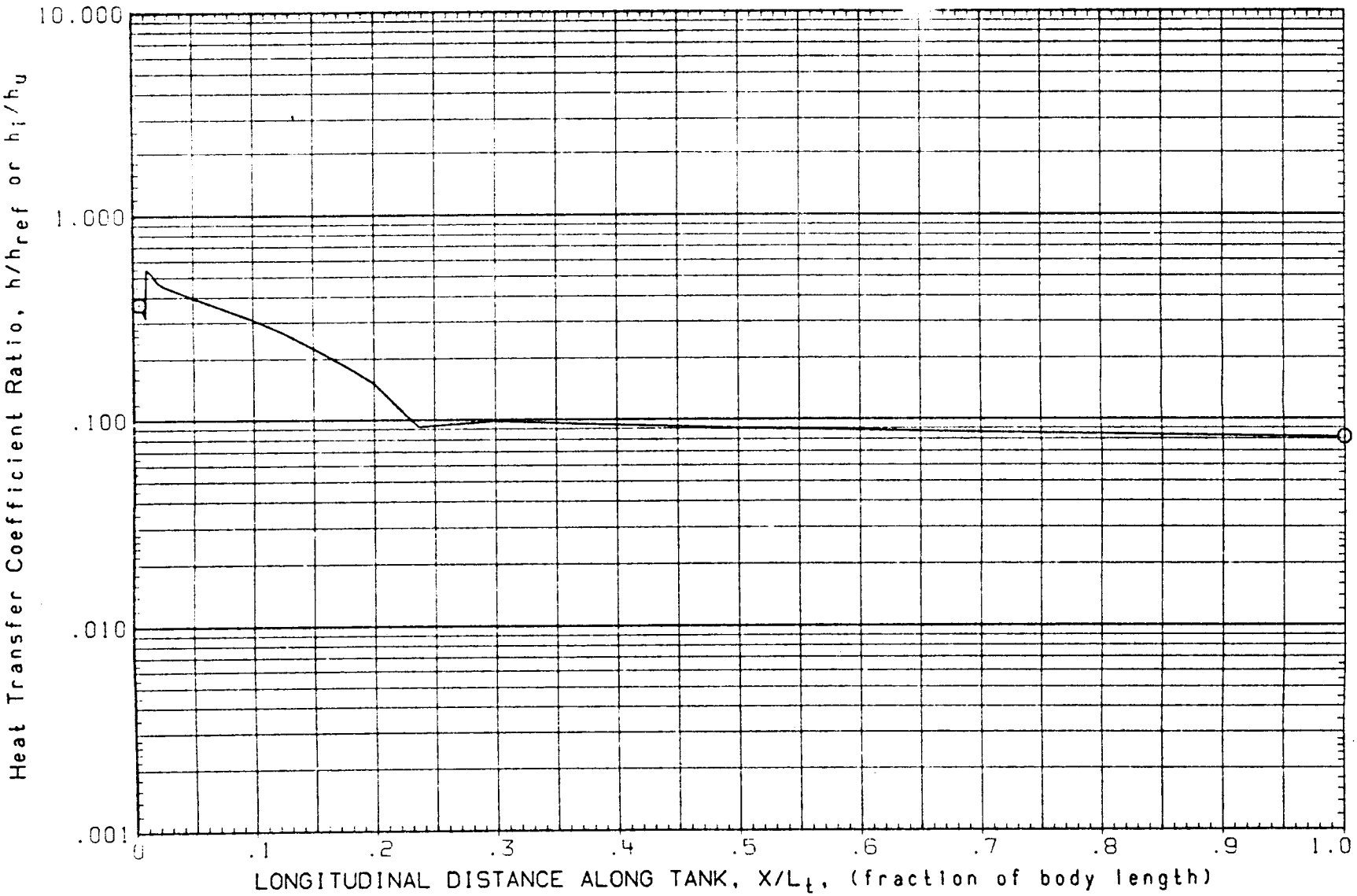

FIG. 4-4 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 235.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT34)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-7.500
(C9NT34)	⊿	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-7.500
(V4LT28)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-7.500
(X4LT28)	◇	IH85 (W.L. TEST) OTS/ET = V4LT28/C9NT34=	HI/HU	4.020	.000	-7.500
(Y4LT28)	△	IH85 (W.L. THEORY) OTS/ET = V4LT28/A9NT34=	HI/HU	4.020	.000	-7.500

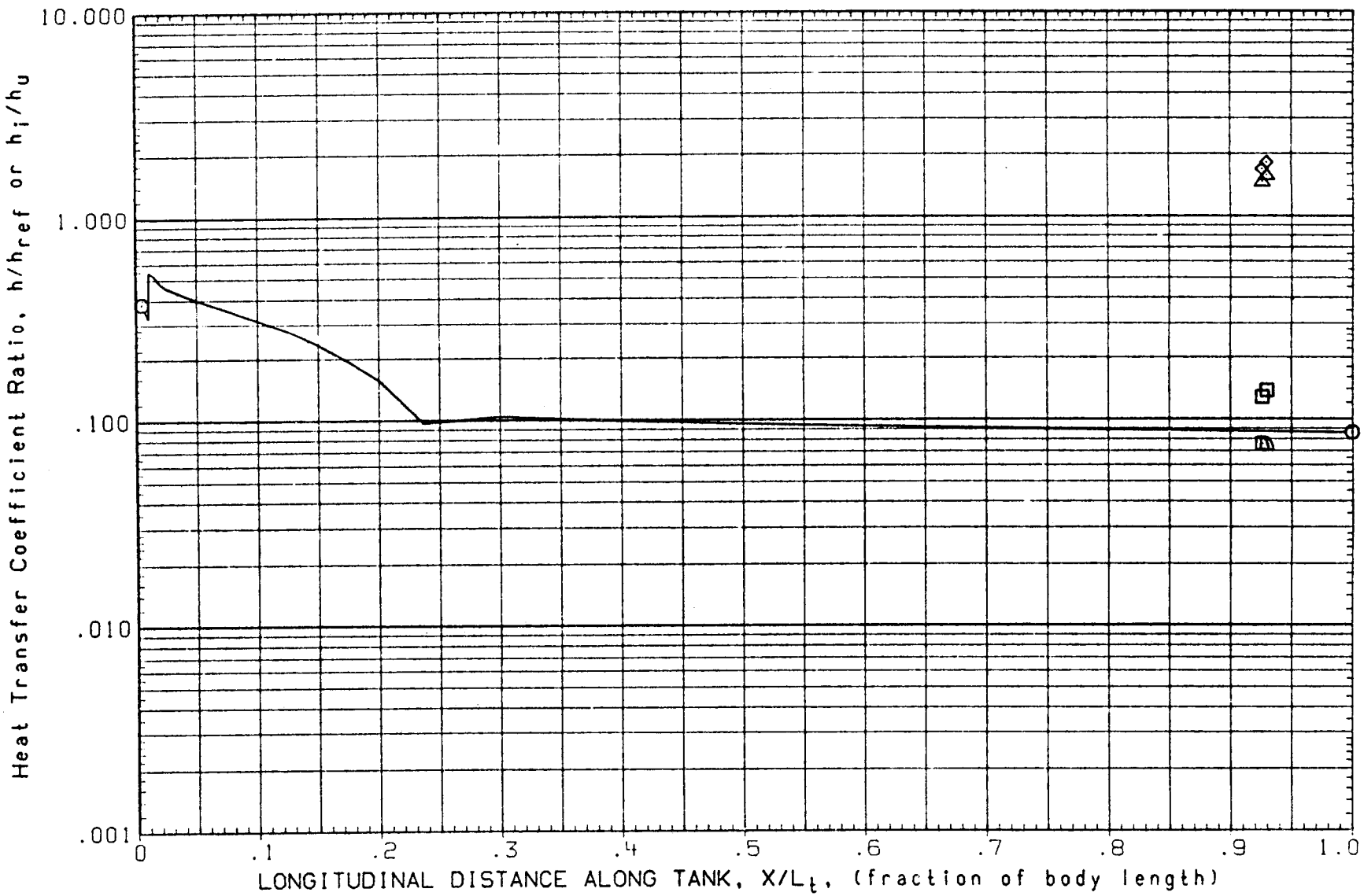

FIG. 4-4 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 247.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT34)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-7.500
(C9NT34)	⬠	DATA NOT AVAILABLE		4.020	.000	-7.500
(Y4LT28)	□	DATA NOT AVAILABLE		4.020	.000	-7.500
(X4LT28)	◇	DATA NOT AVAILABLE		4.020	.000	-7.500
(Y4LT28)	△	DATA NOT AVAILABLE		4.020	.000	-7.500

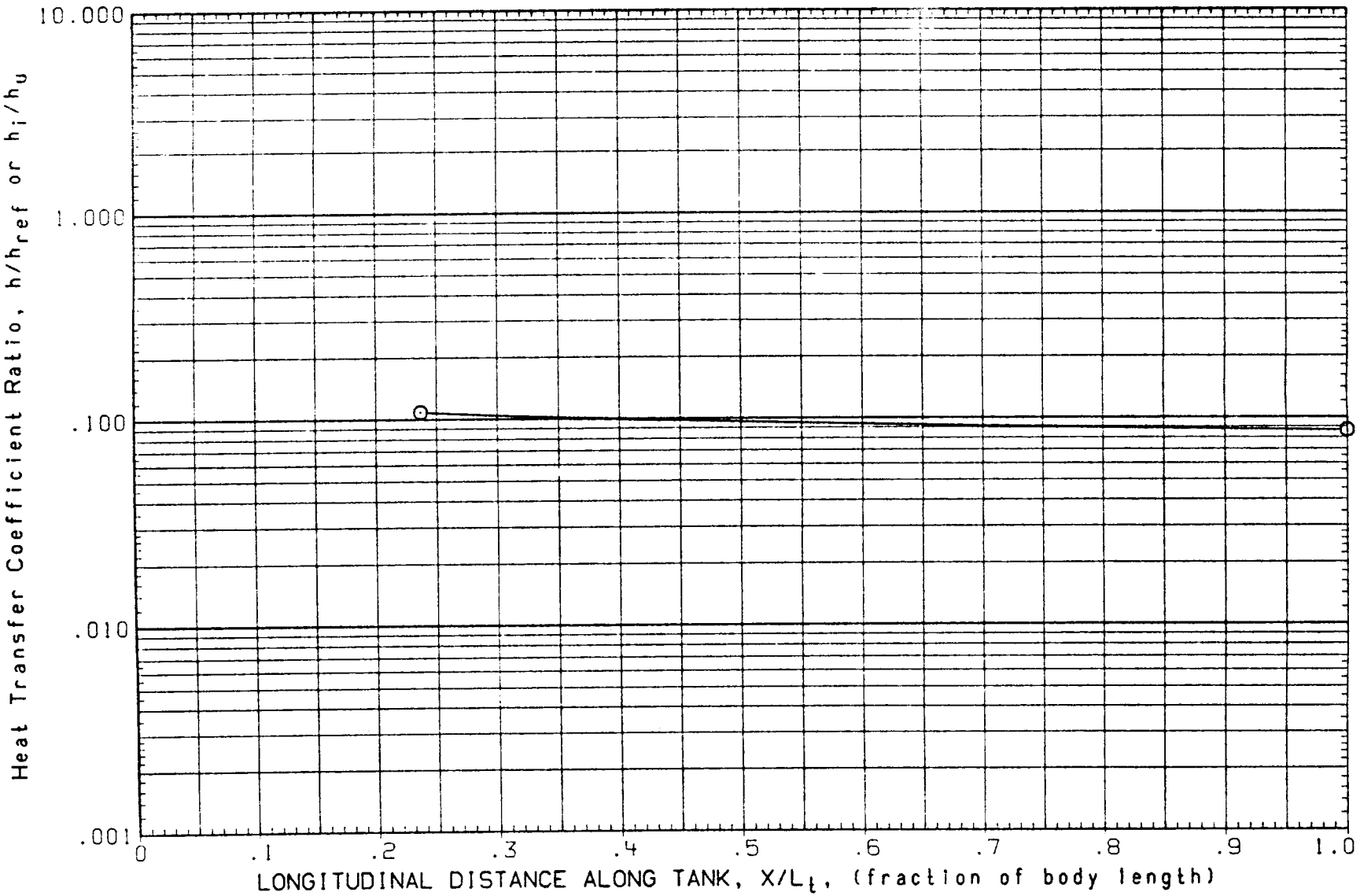

FIG. 4-4 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 247.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT34)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-7.500
(C9NT34)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-7.500
(V4LT28)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-7.500
(X4LT28)	◇	IH85 (W.L, TEST) OTS/ET = V4LT28/C9NT34=	HI/HU	4.020	.000	-7.500
(Y4LT28)	△	IH85 (W.L, THEORY) OTS/ET = V4LT28/A9NT34=	HI/HU	4.020	.000	-7.500

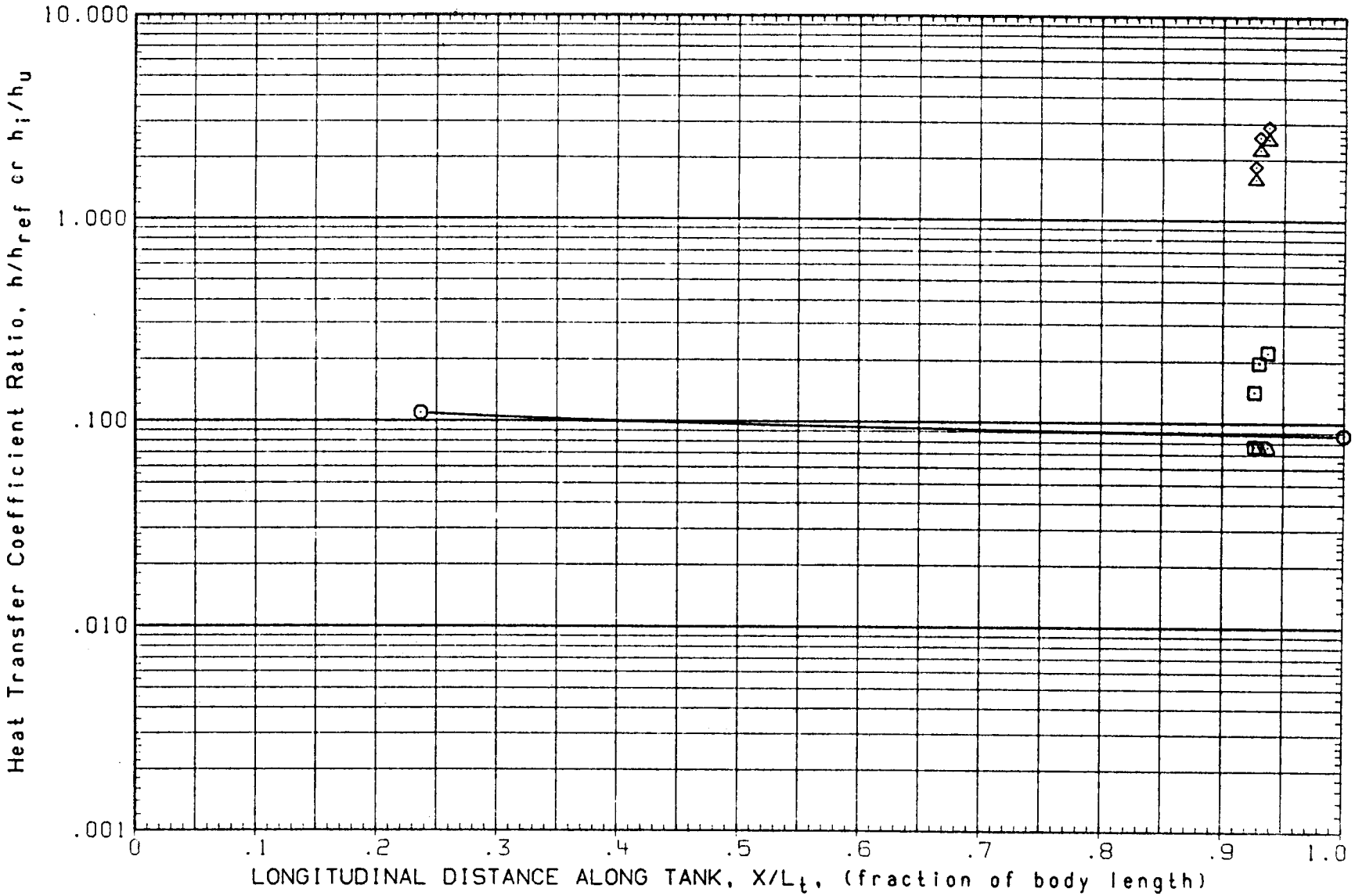

FIG. 4-4 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 250.570

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(C9NT34)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-7.500
(C9NT34)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-7.500
(V4LT28)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-7.500
(X4LT28)	◇	IH85 (W.L. TEST) OTS/ET = V4LT28/C9NT34=	HI/HU	4.020	.000	-7.500
(Y4LT28)	△	IH85 (W.L. THEORY) OTS/ET = V4LT28/A9NT34=	HI/HU	4.020	.000	-7.500

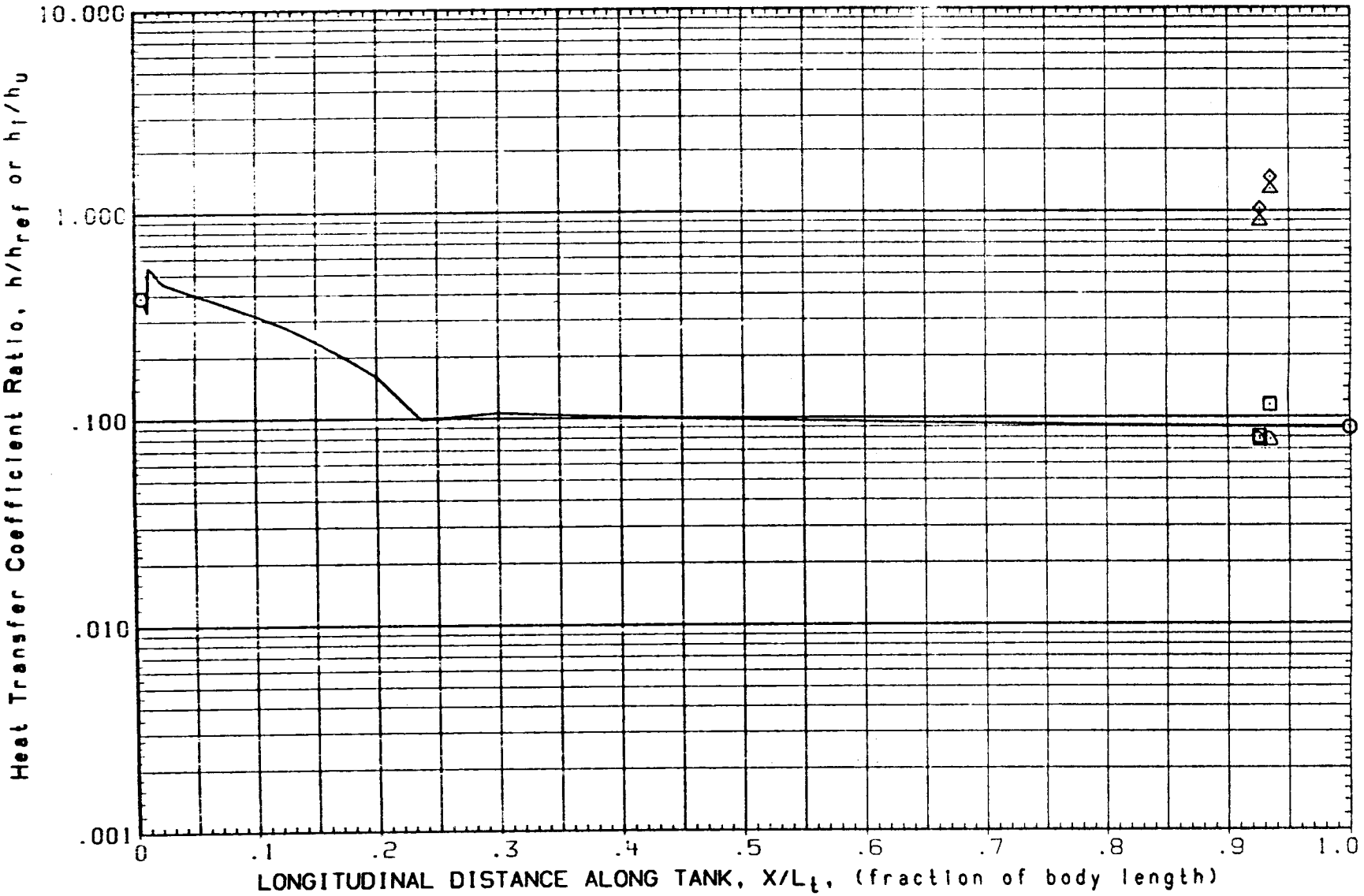

FIG. 4-4 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 258.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT34)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-7.500
(C9NT34)	⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-7.500
(V4LT28)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-7.500
(X4LT28)	◇	IH85 (W.L. TEST) OTS/ET = V4LT28/C9NT34= HI/HU		4.020	.000	-7.500
(Y4LT28)	△	IH85 (W.L. THEORY) OTS/ET = V4LT28/A9NT34= HI/HU		4.020	.000	-7.500

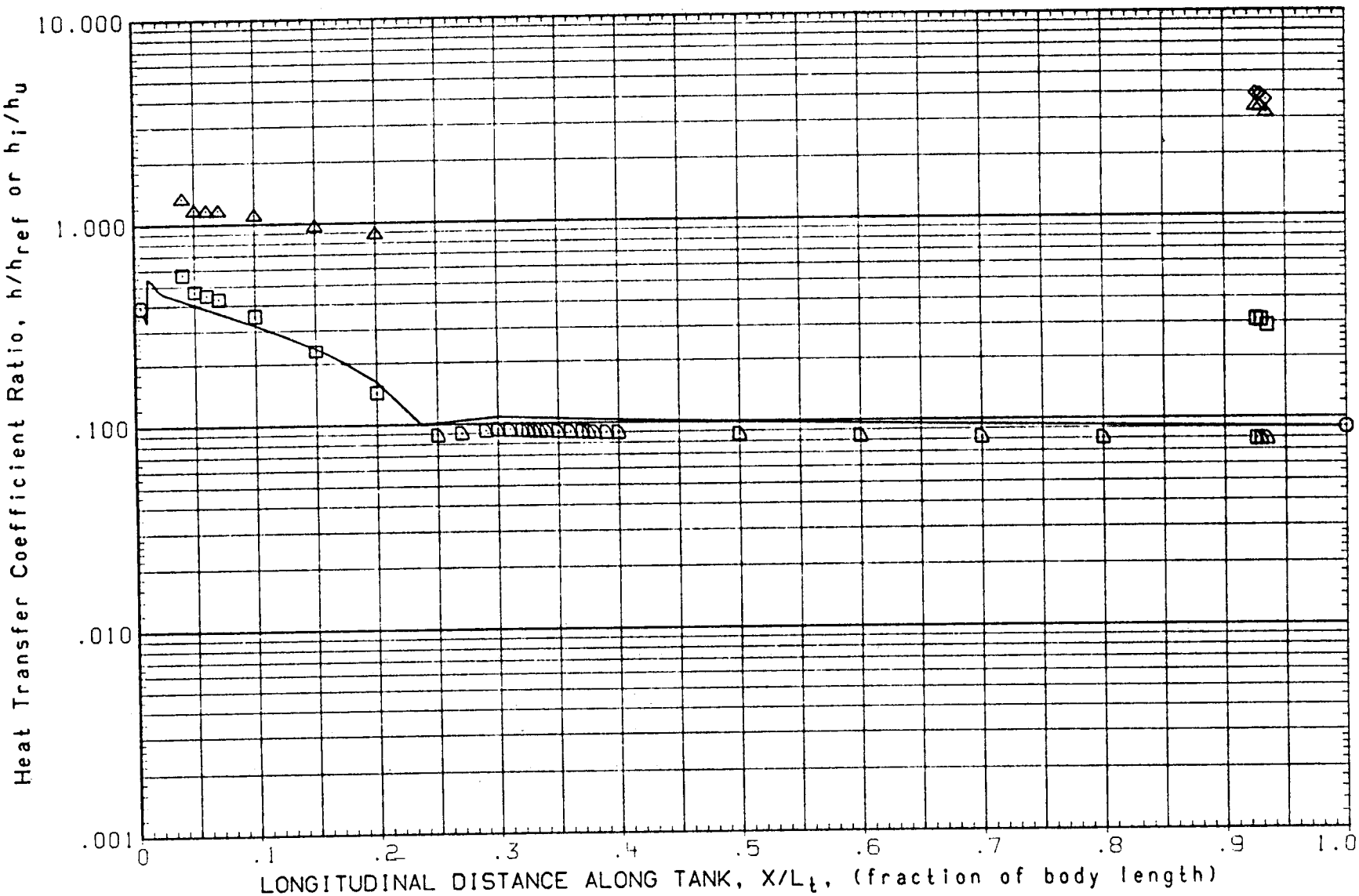

FIG. 4-4 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 270.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT34)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-7.500
(C9NT34)	□	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-7.500
(V4LT28)	◇	(H85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-7.500
(X4LT28)	⧖	(H85 (W.L. TEST) OTS/ET = V4LT28/C9NT34=	HI/HU	4.020	.000	-7.500
(Y4LT28)	△	(H85 (W.L. THEORY) OTS/ET = V4LT28/A9NT34=	HI/HU	4.020	.000	-7.500

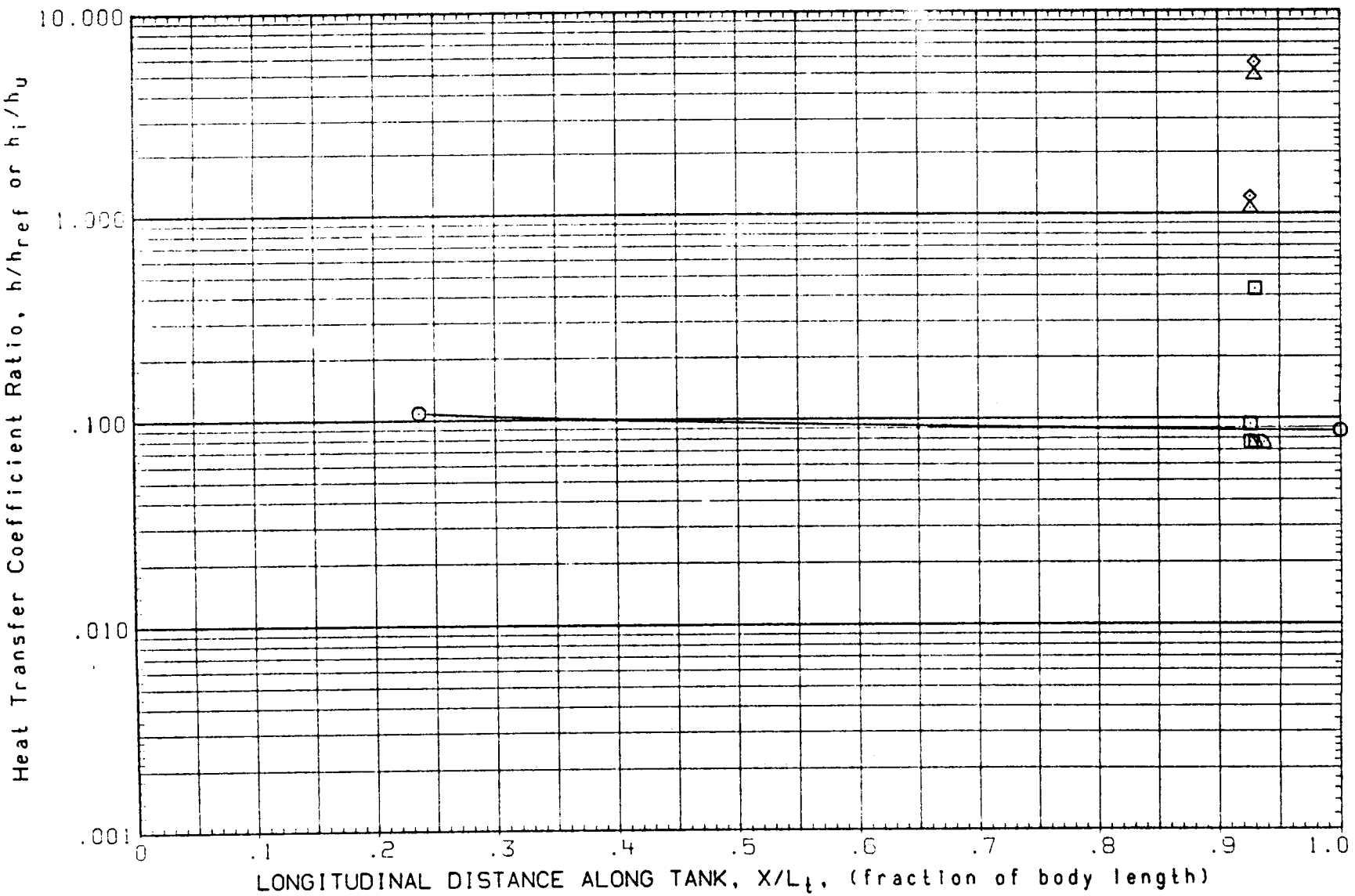

FIG. 4-4 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 289.430

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT34)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-7.500
(C9NT34)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-7.500
(V4LT28)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-7.500
(X4LT28)	◇	IH85 (W.L. TEST) OTS/ET = V4LT28/C9NT34= HI/HU		4.020	.000	-7.500
(Y4LT28)	△	IH85 (W.L. THEORY) OTS/ET = V4LT28/A9NT34= HI/HU		4.020	.000	-7.500

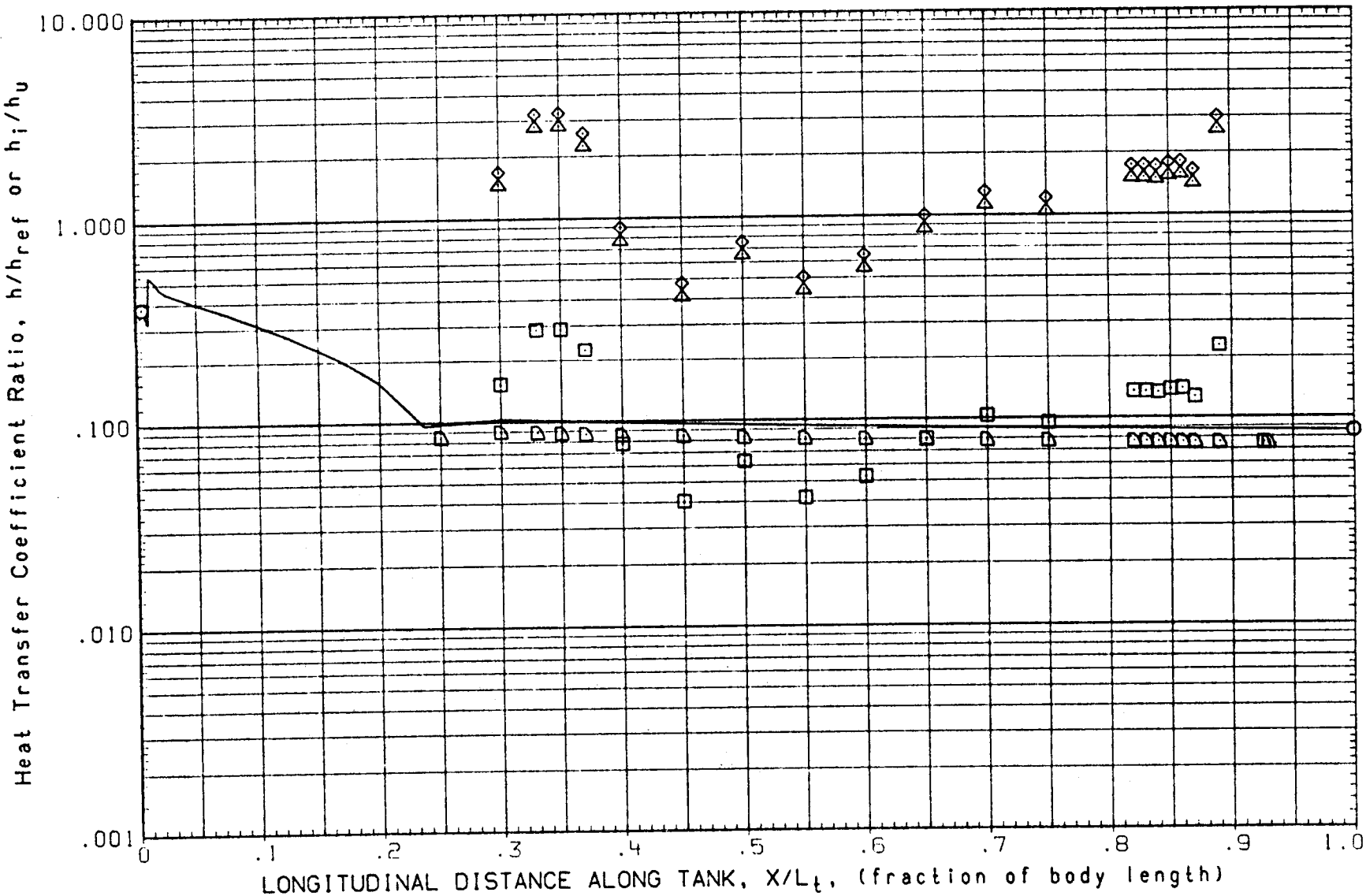

FIG. 4-4 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 292.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT34)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-7.500
(C9NT34)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-7.500
(V4LT28)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-7.500
(X4LT28)	◇	IH85 (W.L. TEST) OTS/ET = V4LT28/C9NT34=	HI/HU	4.020	.000	-7.500
(Y4LT28)	△	IH85 (W.L. THEORY) OTS/ET = V4LT28/A9NT34=	HI/HU	4.020	.000	-7.500

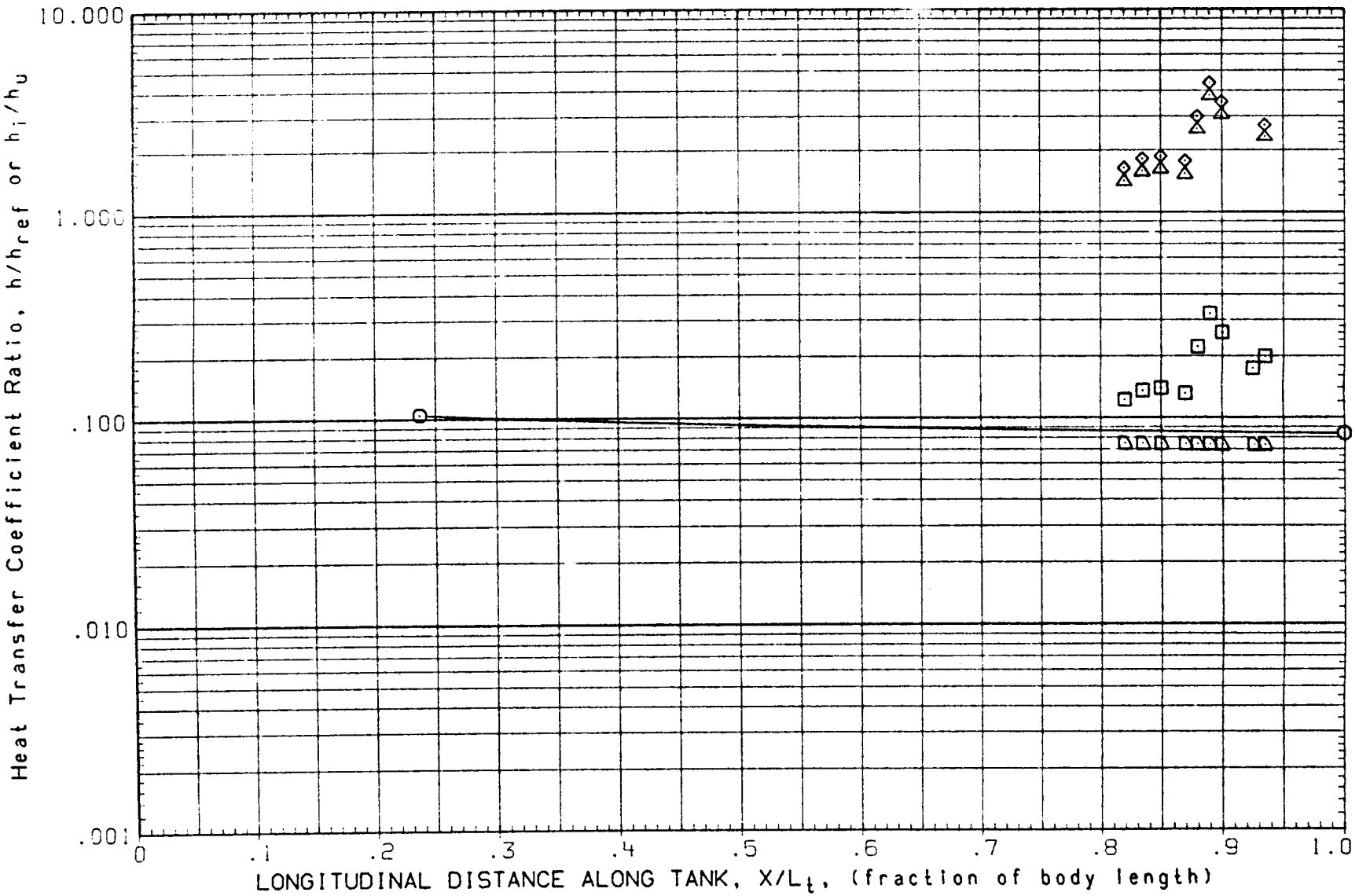

FIG. 4-4 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 301.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT34)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-7.500
(C9NT34)	◻	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-7.500
(V4LT28)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-7.500
(X4LT28)	◇	IH85 (W.L. TEST) OTS/ET = V4LT28/C9NT34=	HI/HU	4.020	.000	-7.500
(Y4LT28)	△	IH85 (W.L. THEORY) OTS/ET = V4LT28/A9NT34=	HI/HU	4.020	.000	-7.500

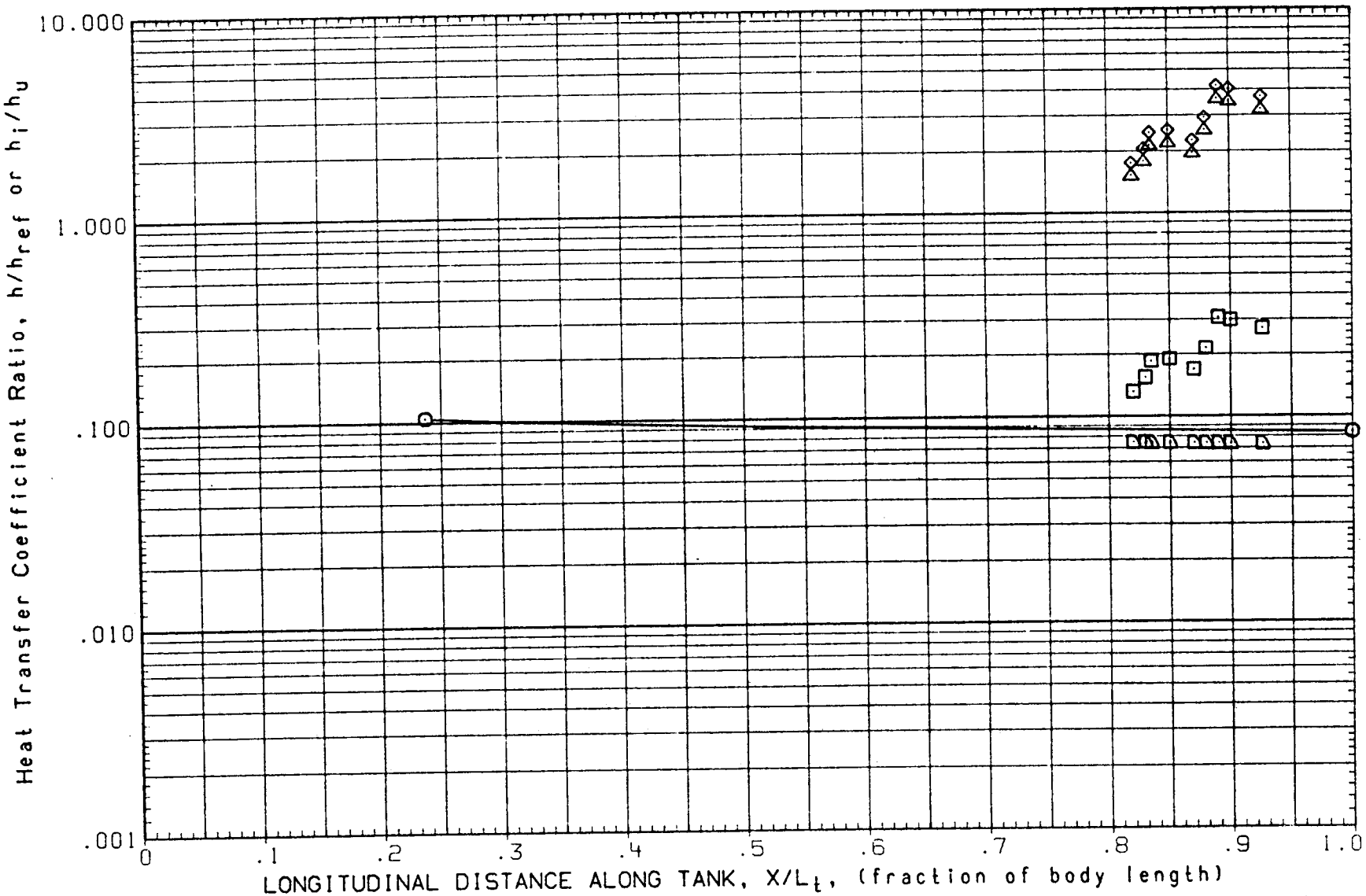

FIG. 4-4 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 305.400

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT34)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-7.500
(C9NT34)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-7.500
(V4LT28)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-7.500
(X4LT28)	◇	IH85 (W,L, TEST) OTS/ET = V4LT28/C9NT34=	HI/HU	4.020	.000	-7.500
(Y4LT28)	△	IH85 (W,L, THEORY) OTS/ET = V4LT28/A9NT34=	HI/HU	4.020	.000	-7.500

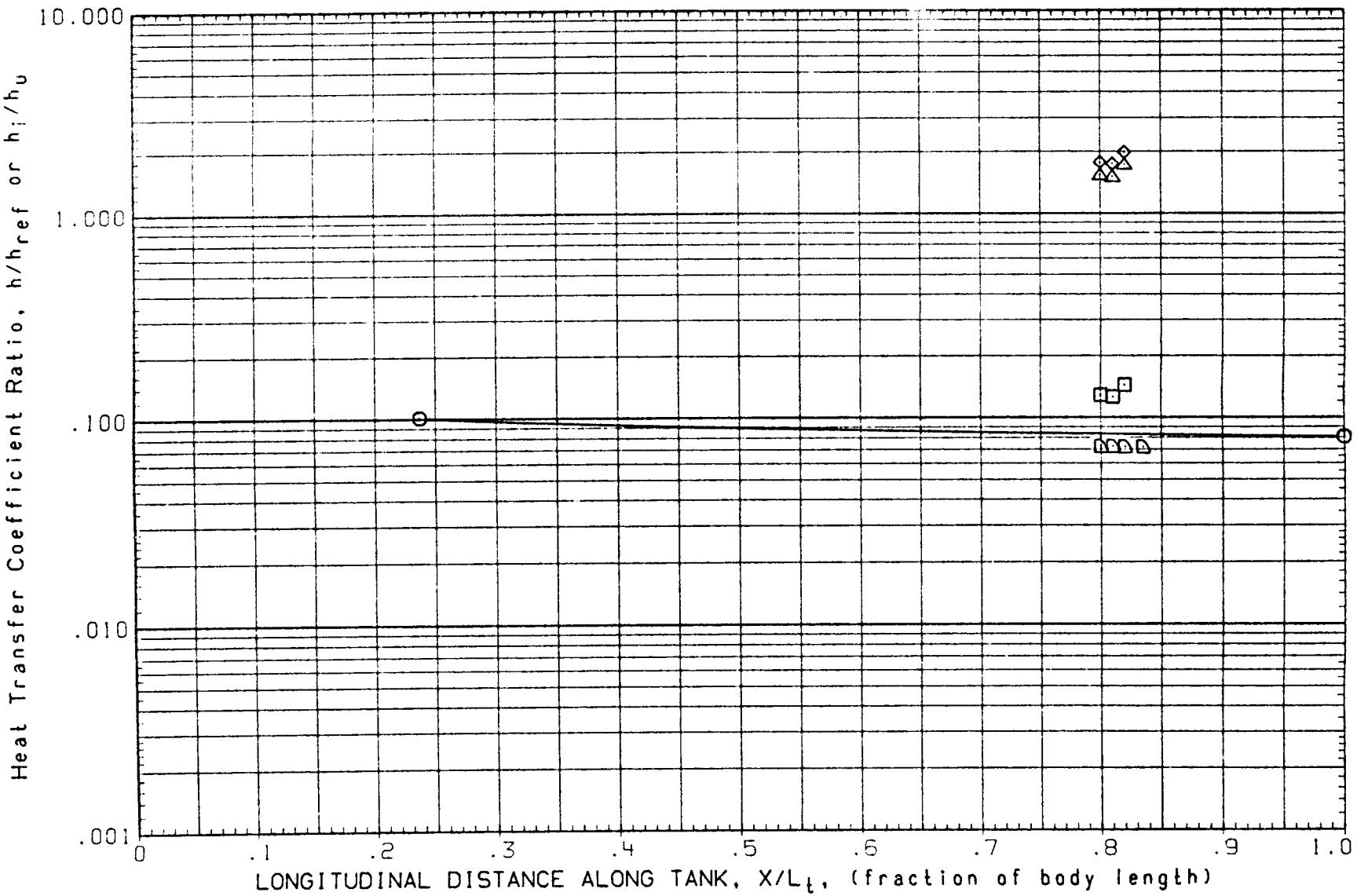

FIG. 4-4 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 309.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT34)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-7.500
(C9NT34)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-7.500
(V4LT28)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-7.500
(X4LT28)	◇	IH85 (W.L. TEST) OTS/ET = V4LT28/C9NT34=	HI/HU	4.020	.000	-7.500
(Y4LT28)	△	IH85 (W.L. THEORY) OTS/ET = V4LT28/A9NT34=	HI/HU	4.020	.000	-7.500

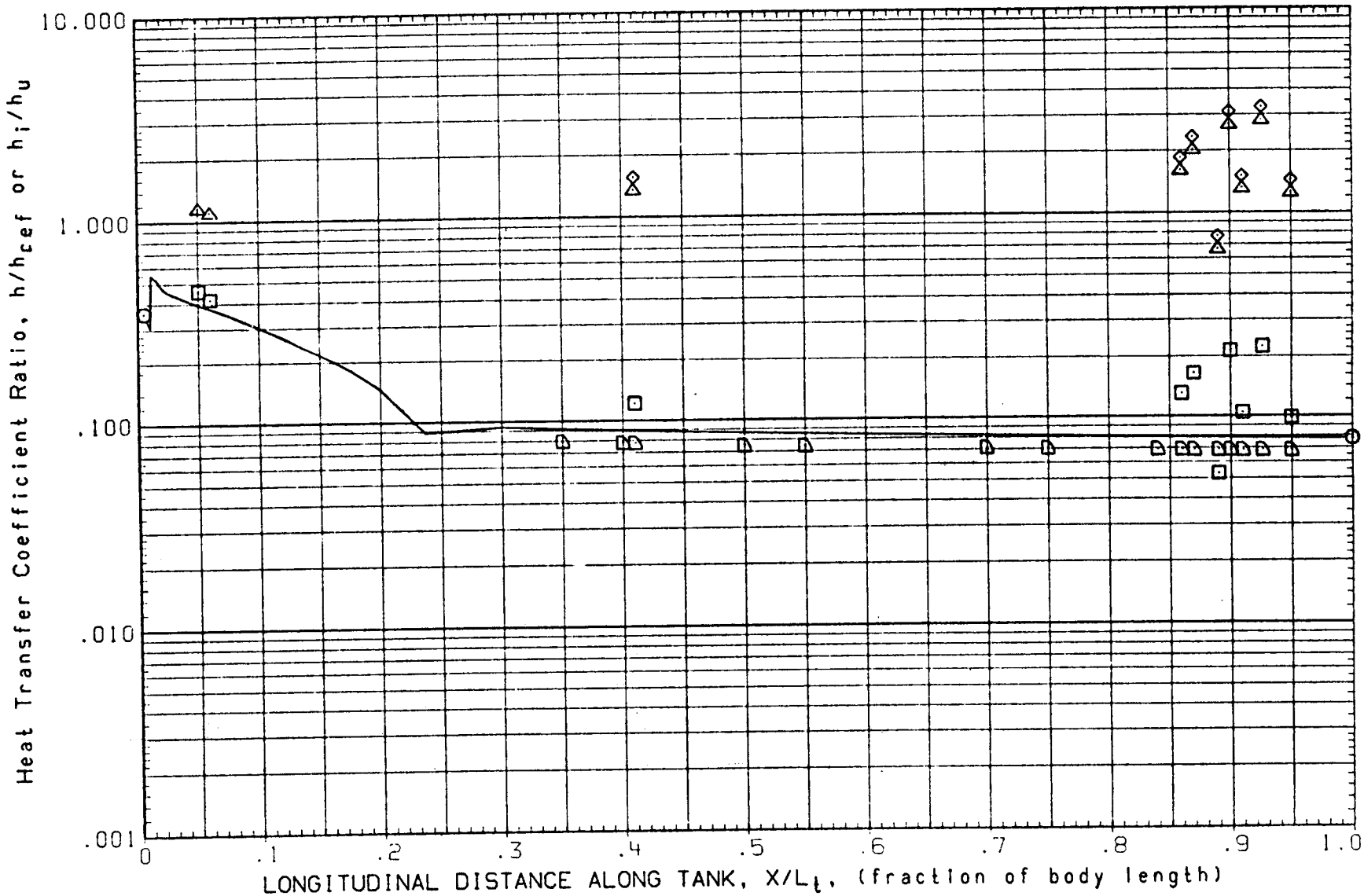

FIG. 4-4 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 315.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT34)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-7.500
(C9NT34)	⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-7.500
(V4LT28)	□	IH85, AEDC V41A-W5, CONFIGURATION C (T) S		4.020	.000	-7.500
(X4LT28)	◇	IH85 (W.L. TEST) OTS/ET = V4LT28/C9NT34=	HI/HU	4.020	.000	-7.500
(Y4LT28)	△	IH85 (W.L. THEORY) OTS/ET = V4LT28/A9NT34=	HI/HU	4.020	.000	-7.500

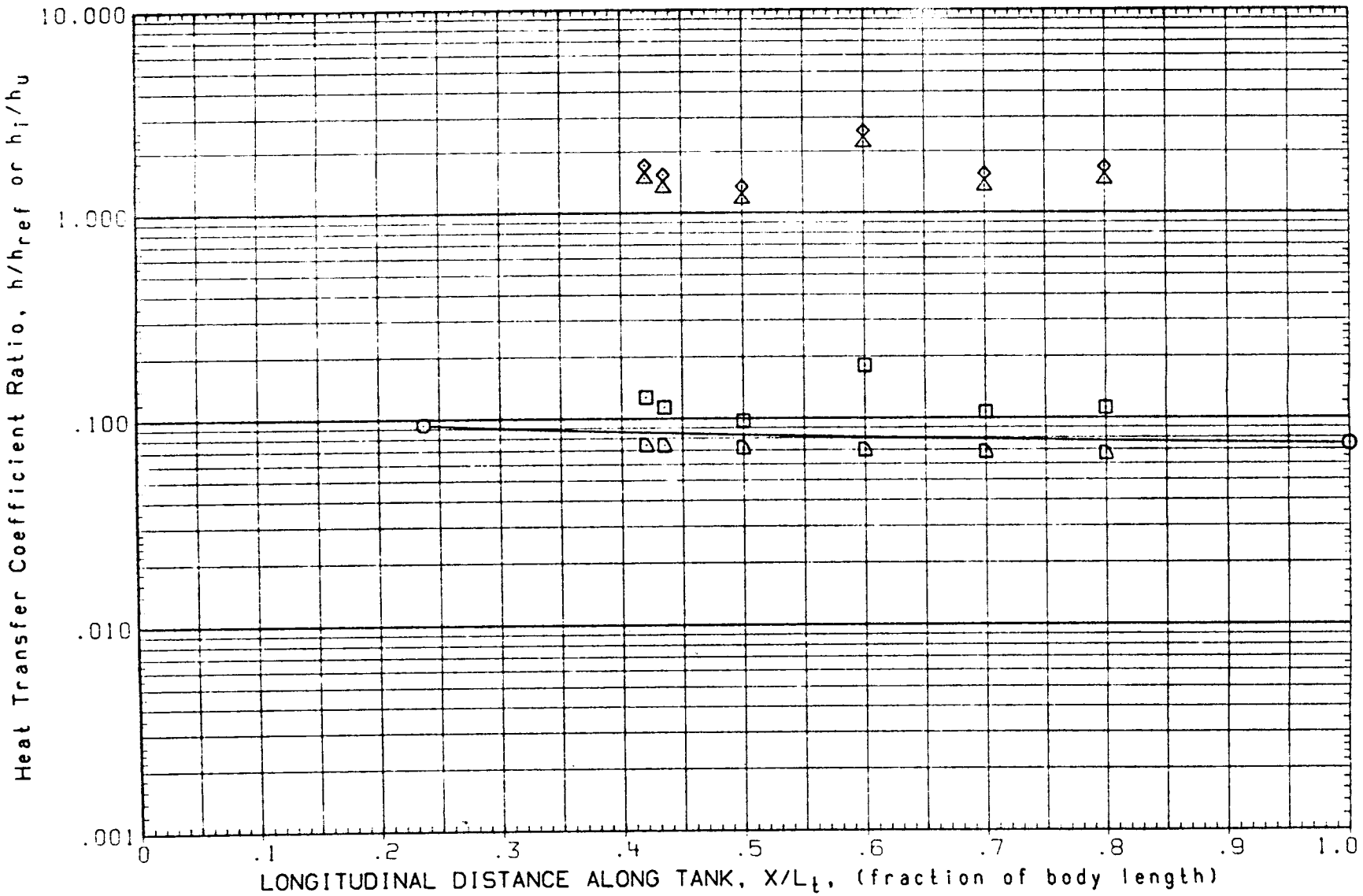

FIG. 4-4 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 322.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT34)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-7.500
(C9NT34)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-7.500
(V4LT28)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-7.500
(X4LT28)	◇	IH85 (W.L. TEST) OTS/ET = V4LT28/C9NT34=	HI/HU	4.020	.000	-7.500
(Y4LT28)	△	IH85 (W.L. THEORY) OTS/ET = V4LT28/A9NT34=	HI/HU	4.020	.000	-7.500

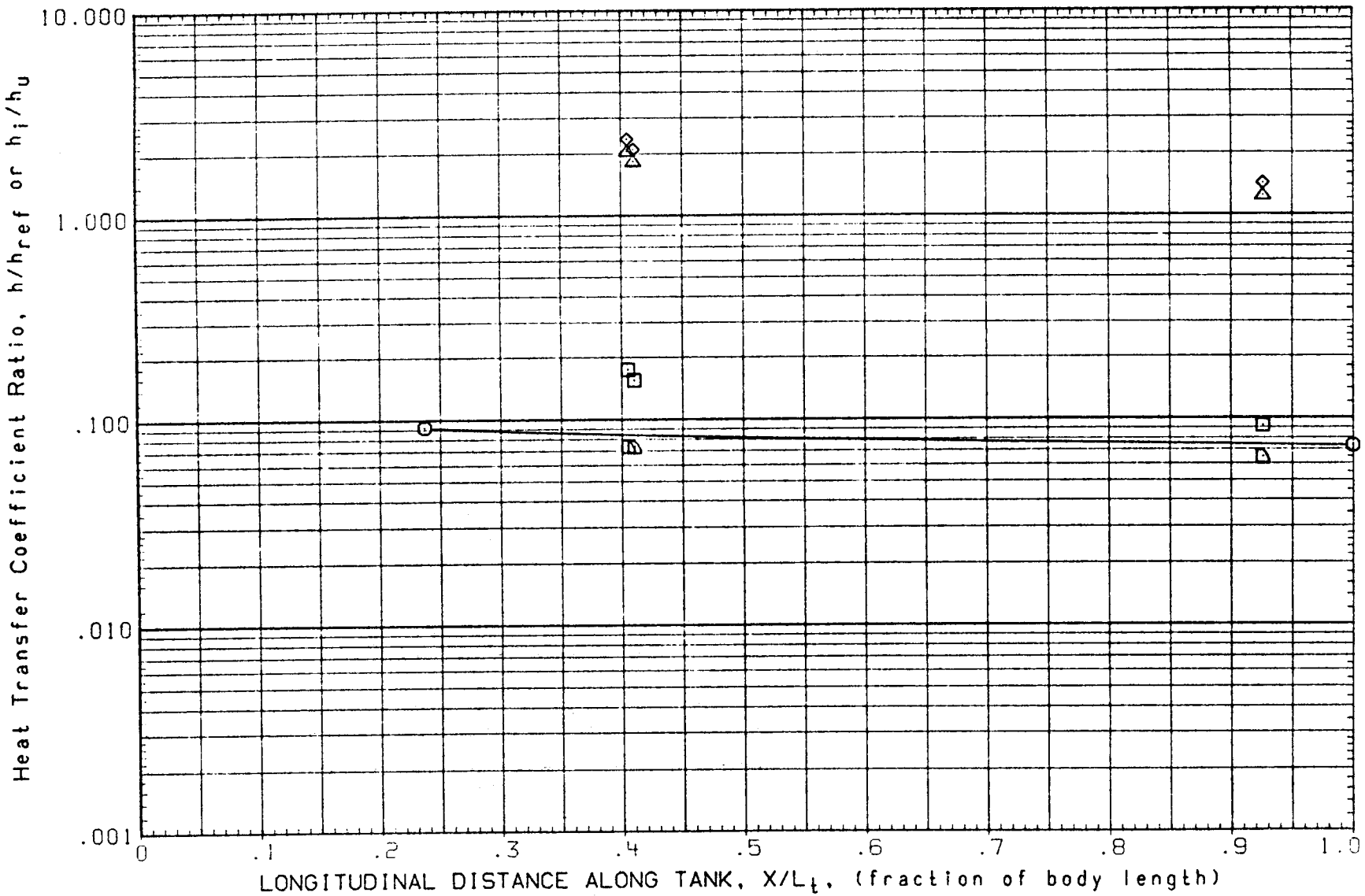

FIG. 4-4 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 324.450

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT34)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-7.500
(C9NT34)	□	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-7.500
(V4LT28)	⊡	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-7.500
(X4LT28)	◇	IH85 (W.L. TEST) OTS/ET = V4LT28/C9NT34=	HI/HU	4.020	.000	-7.500
(Y4LT28)	△	IH85 (W.L. THEORY) OTS/ET = V4LT28/A9NT34=	HI/HU	4.020	.000	-7.500

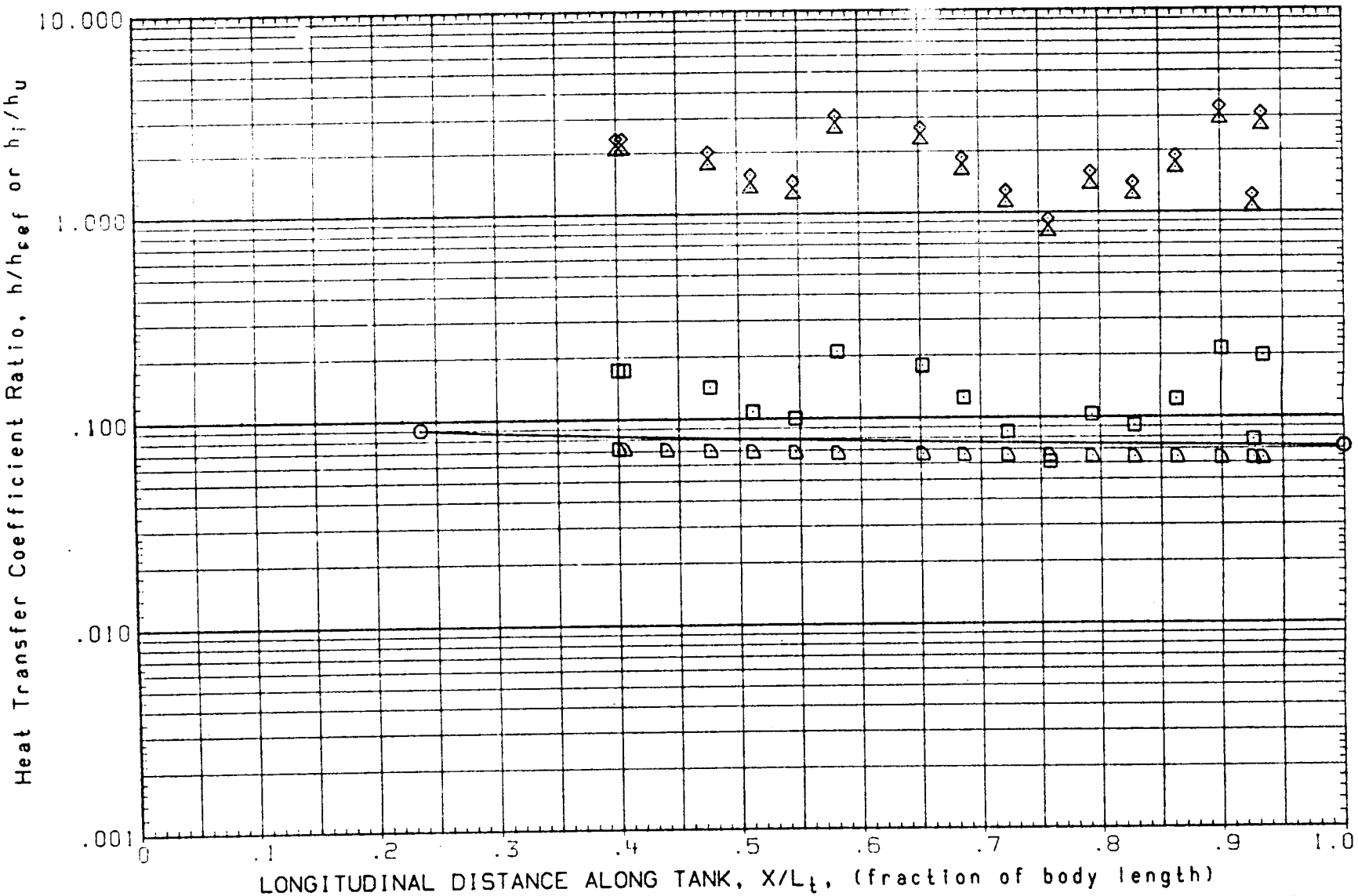

FIG. 4-4 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 326.850

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT34)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-7.500
(C9NT34)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-7.500
(V4LT28)	□	IH85, AEDC V4IA-W5, CONFIGURATION 0 (T) S		4.020	.000	-7.500
(X4LT28)	◇	IH85 (W.L. TEST) OTS/ET = V4LT28/C9NT34=	HI/HU	4.020	.000	-7.500
(Y4LT28)	△	IH85 (W.L. THEORY) OTS/ET = V4LT28/A9NT34=	HI/HU	4.020	.000	-7.500

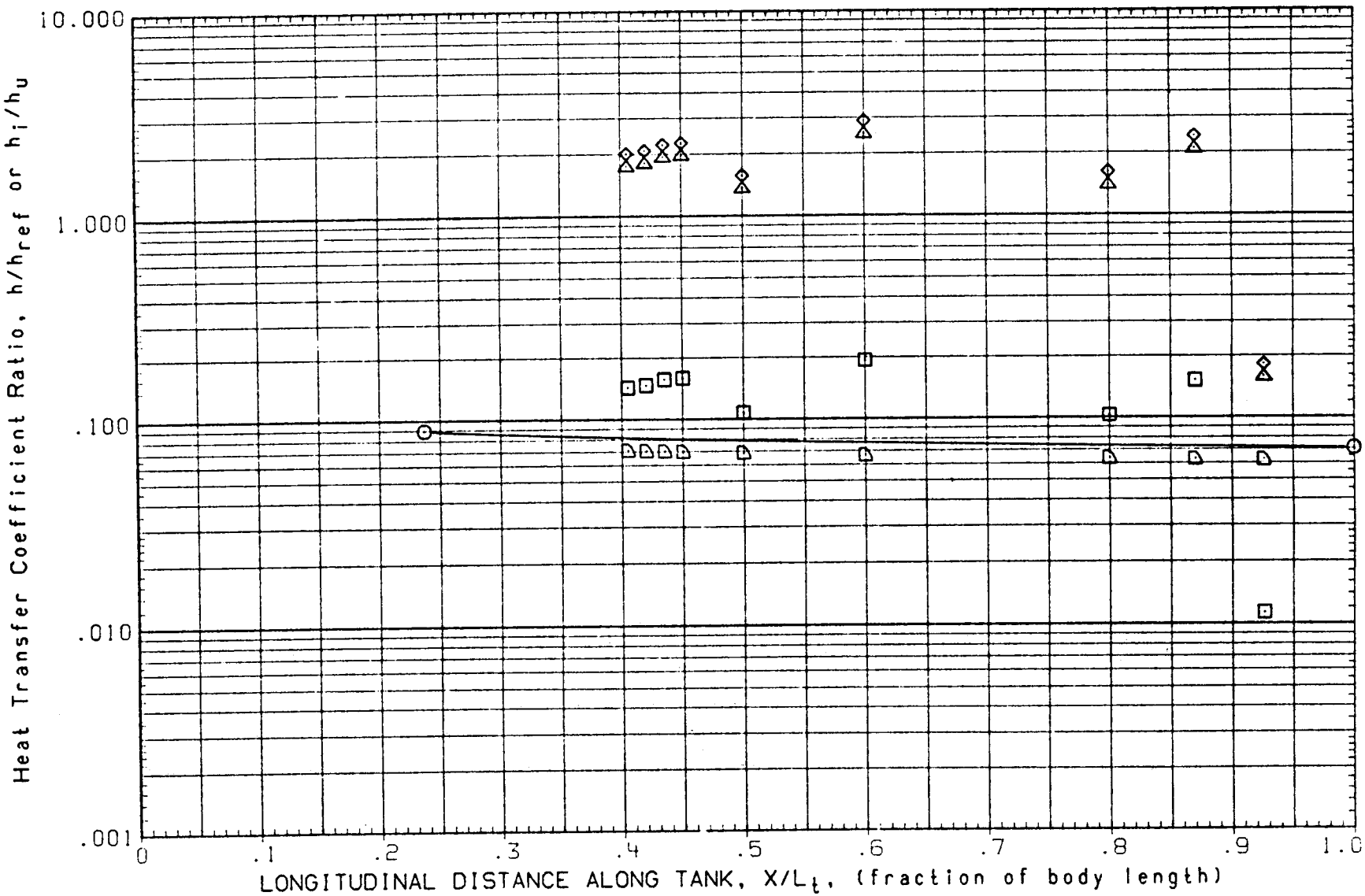

FIG. 4-4 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 330.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT34)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-7.500
(C9NT34)	◐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-7.500
(V4LT28)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-7.500
(X4LT28)	◇	IH85 (W.L. TEST) OTS/ET = V4LT28/C9NT34=	HI/HU	4.020	.000	-7.500
(Y4LT28)	△	IH85 (W.L. THEORY) OTS/ET = V4LT28/A9NT34=	HI/HU	4.020	.000	-7.500

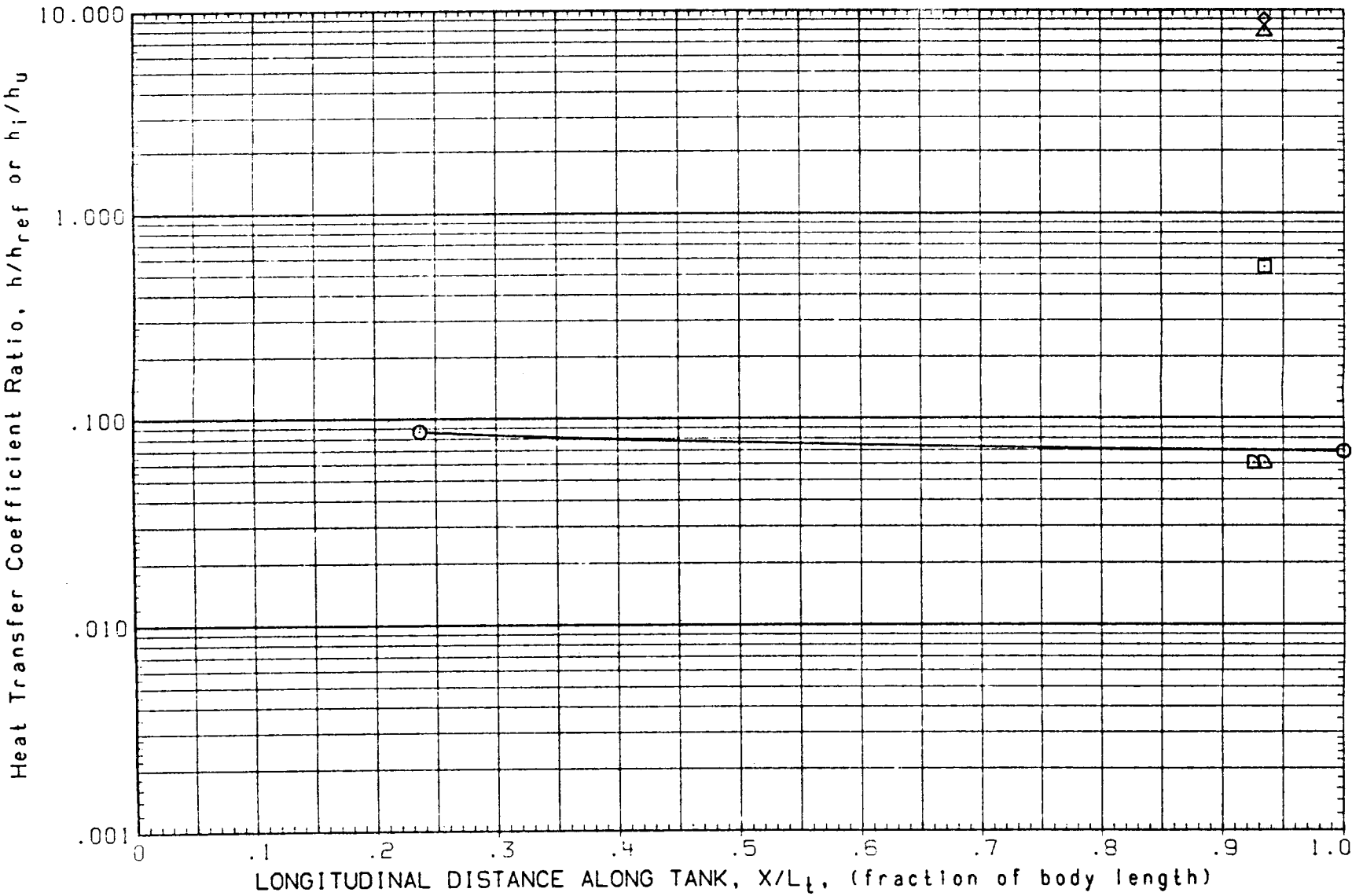

FIG. 4-4 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 334.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT34)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-7.500
(C9NT34)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-7.500
(V4LT28)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-7.500
(X4LT28)	◇	IH85 (W.L. TEST) OTS/ET = V4LT28/C9NT34=	HI/HU	4.020	.000	-7.500
(Y4LT28)	△	IH85 (W.L. THEORY) OTS/ET = V4LT28/A9NT34=	HI/HU	4.020	.000	-7.500

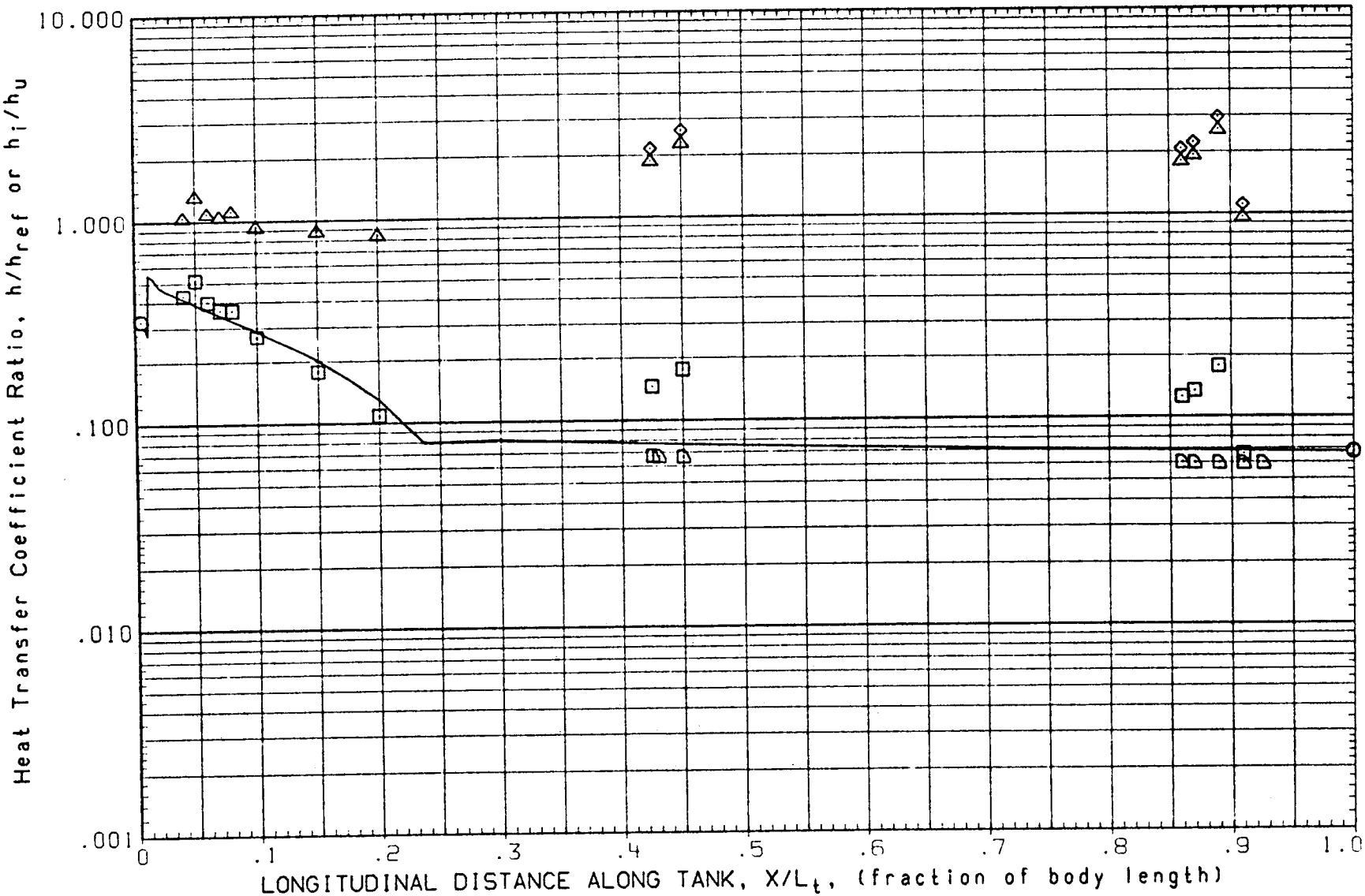

FIG. 4-4 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 337.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT34)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-7.500
(C9NT34)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-7.500
(Y4LT28)	□	DATA NOT AVAILABLE		4.020	.000	-7.500
(X4LT28)	◇	DATA NOT AVAILABLE		4.020	.000	-7.500
(Y4LT28)	△	DATA NOT AVAILABLE		4.020	.000	-7.500

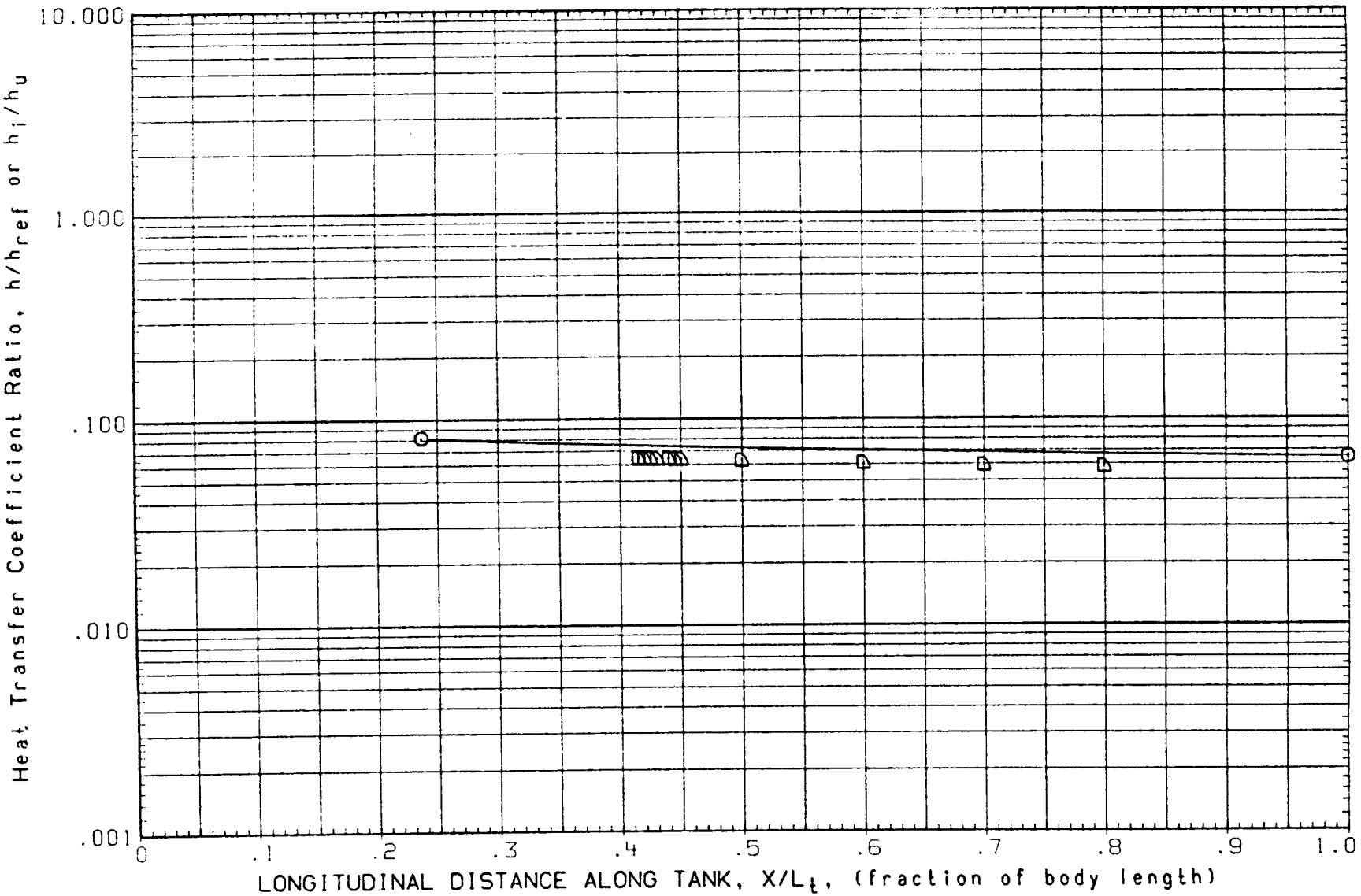

FIG. 4-4 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 343.120

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(C9NT34)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-7.500
(C9NT34)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-7.500
(V4LT28)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-7.500
(X4LT28)	◇	IH85 (W.L. TEST) OTS/ET = V4LT28/C9NT34=	HI/HU	4.020	.000	-7.500
(Y4LT28)	△	IH85 (W.L. THEORY) OTS/ET = V4LT28/A9NT34=	HI/HU	4.020	.000	-7.500

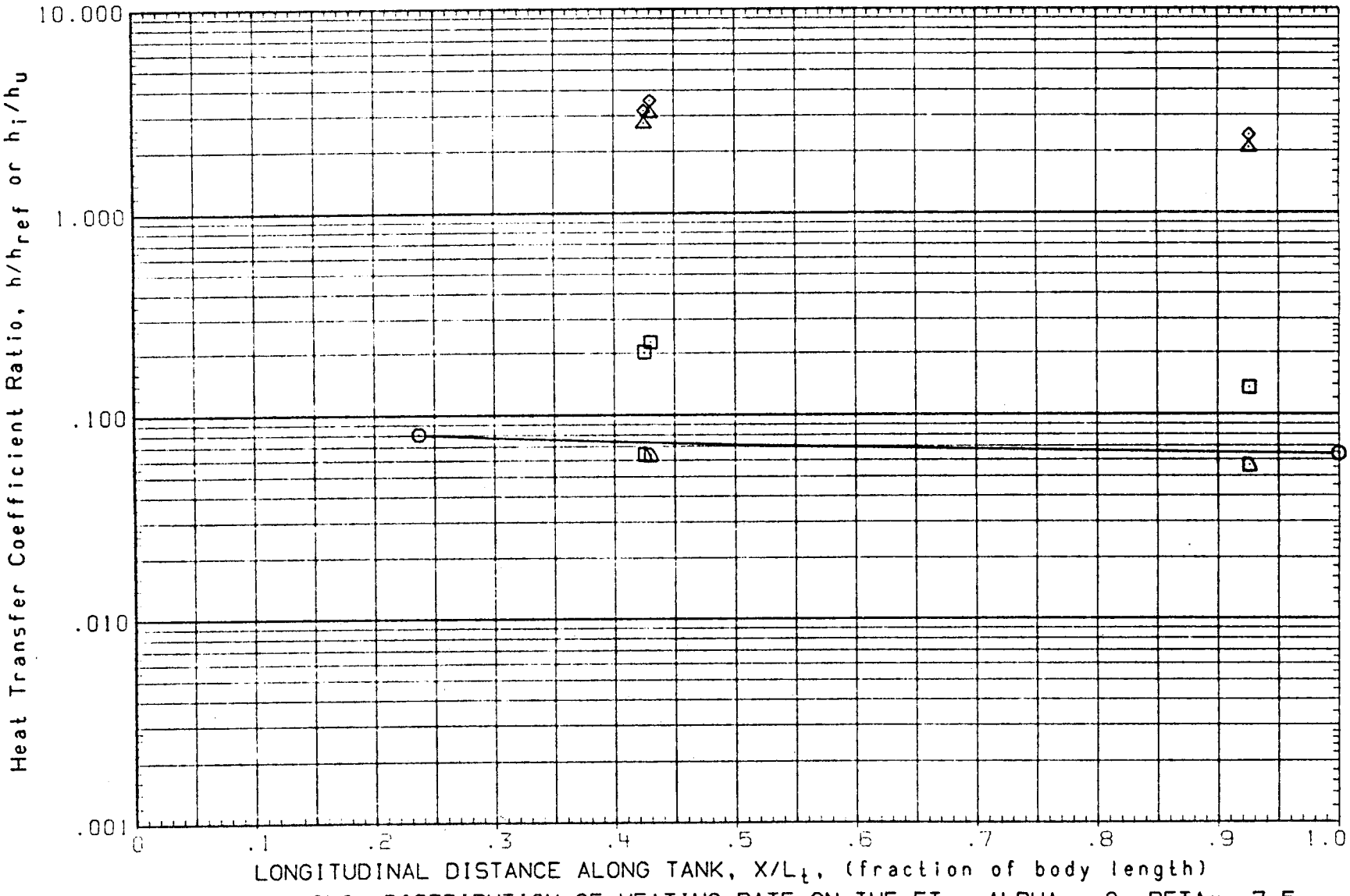

FIG. 4-4 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 345.560

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(C9NT34)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-7.500
(C9NT34)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-7.500
(V4LT28)	□	IH85, AEDC V41A-W5, CONFIGURATION: 0 (T) S		4.020	.000	-7.500
(X4LT28)	◇	IH85 (W.L. TEST) OTS/ET = V4LT28/C9NT34= HI/HU		4.020	.000	-7.500
(Y4LT28)	△	IH85 (W.L. THEORY) OTS/ET = V4LT28/A9NT34- HI/HU		4.020	.000	-7.500

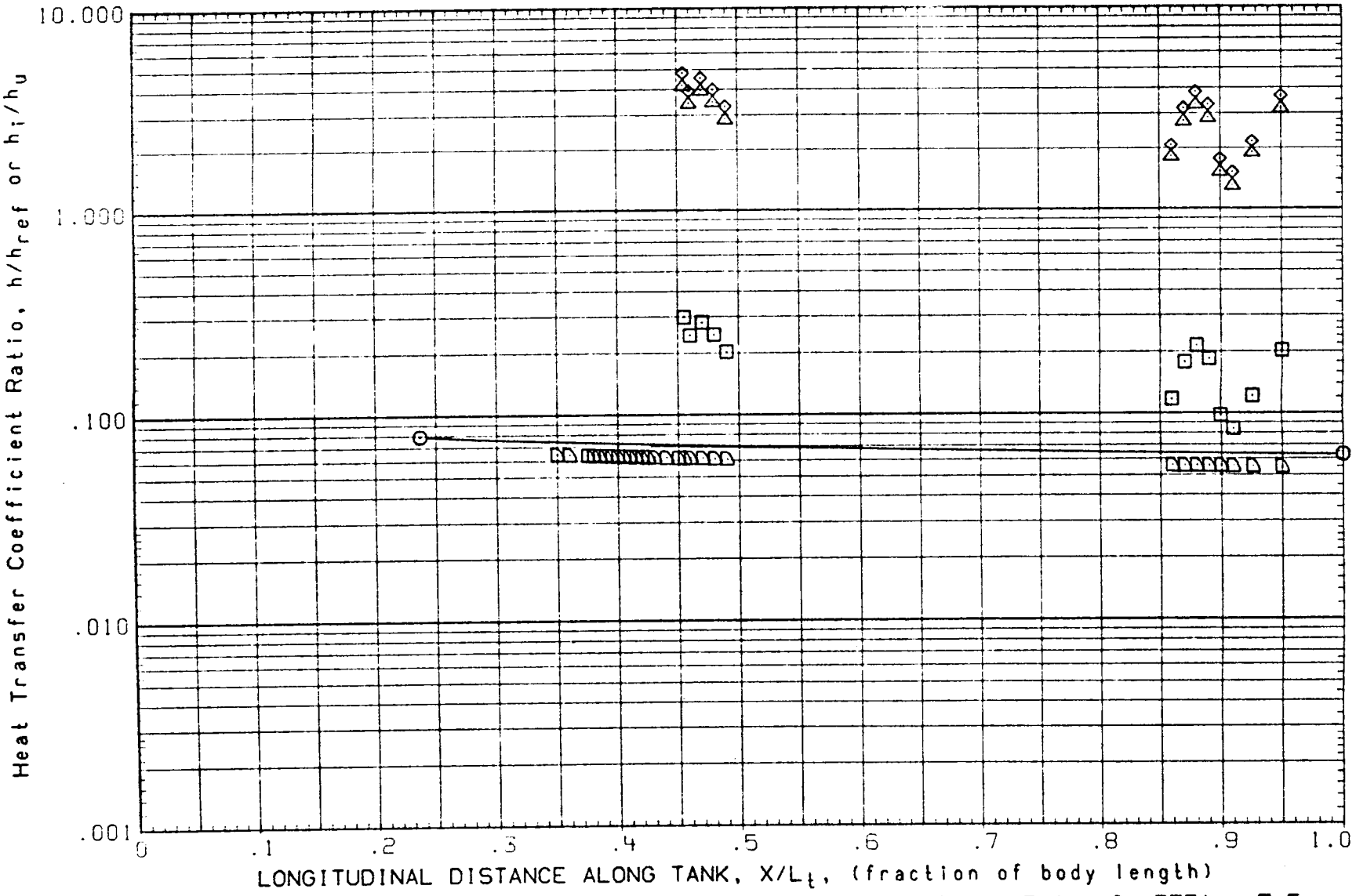

FIG. 4-4 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 348.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT34)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-7.500
(C9NT34)	⊃	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-7.500
(V4LT28)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-7.500
(X4LT28)	◇	IH85 (W.L. TEST) OTS/ET = V4LT28/C9NT34=	HI/HU	4.020	.000	-7.500
(Y4LT28)	△	IH85 (W.L. THEORY) OTS/ET = V4LT28/A9NT34=	HI/HU	4.020	.000	-7.500

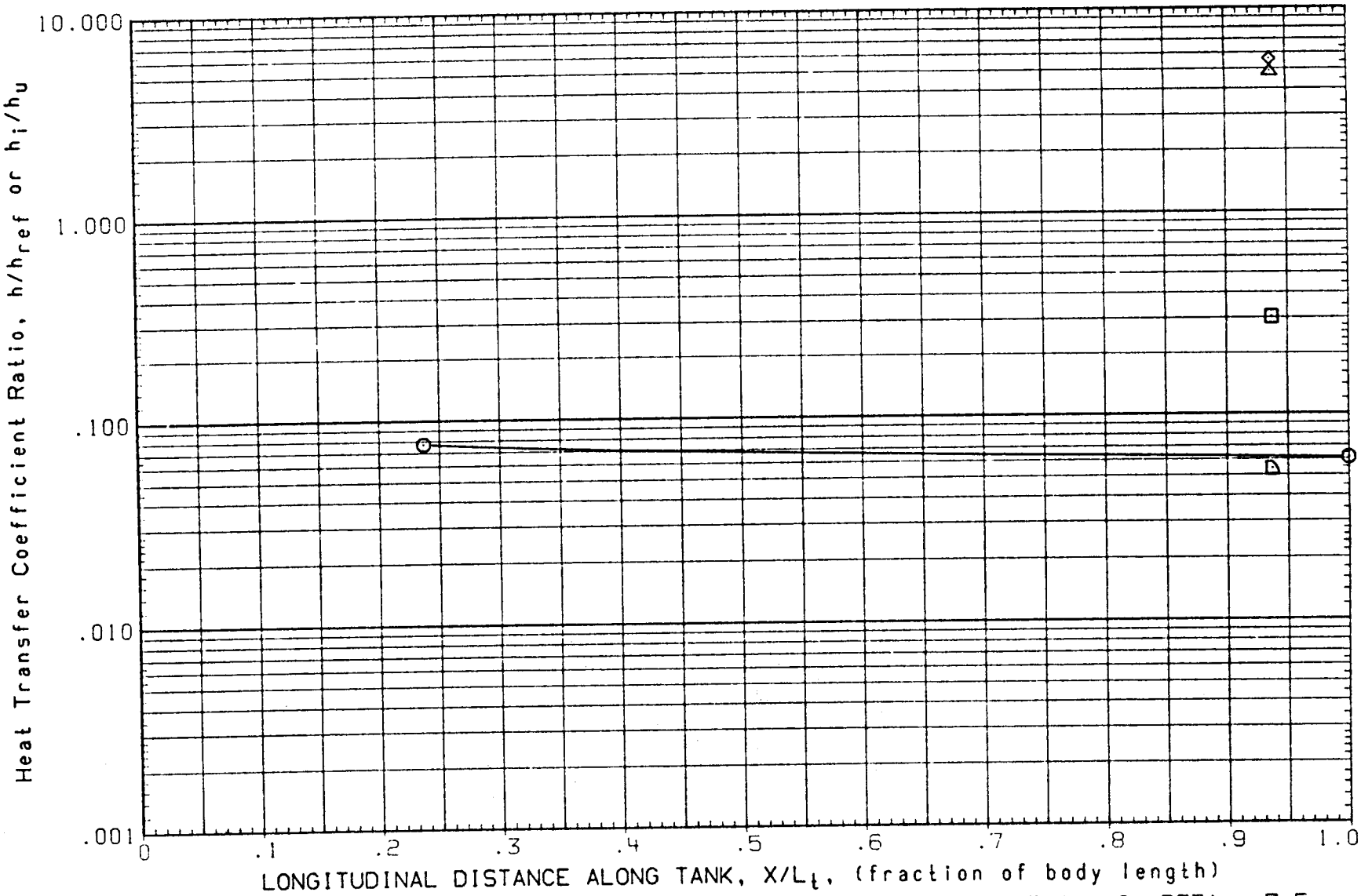

FIG. 4-4 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 352.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT34)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-7.500
(C9NT34)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-7.500
(V4LT28)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-7.500
(X4LT28)	◇	IH85 (W.L. TEST) OTS/ET = V4LT28/C9NT34=	HI/HU	4.020	.000	-7.500
(Y4LT28)	△	IH85 (W.L. THEORY) OTS/ET = V4LT28/A9NT34=	HI/HU	4.020	.000	-7.500

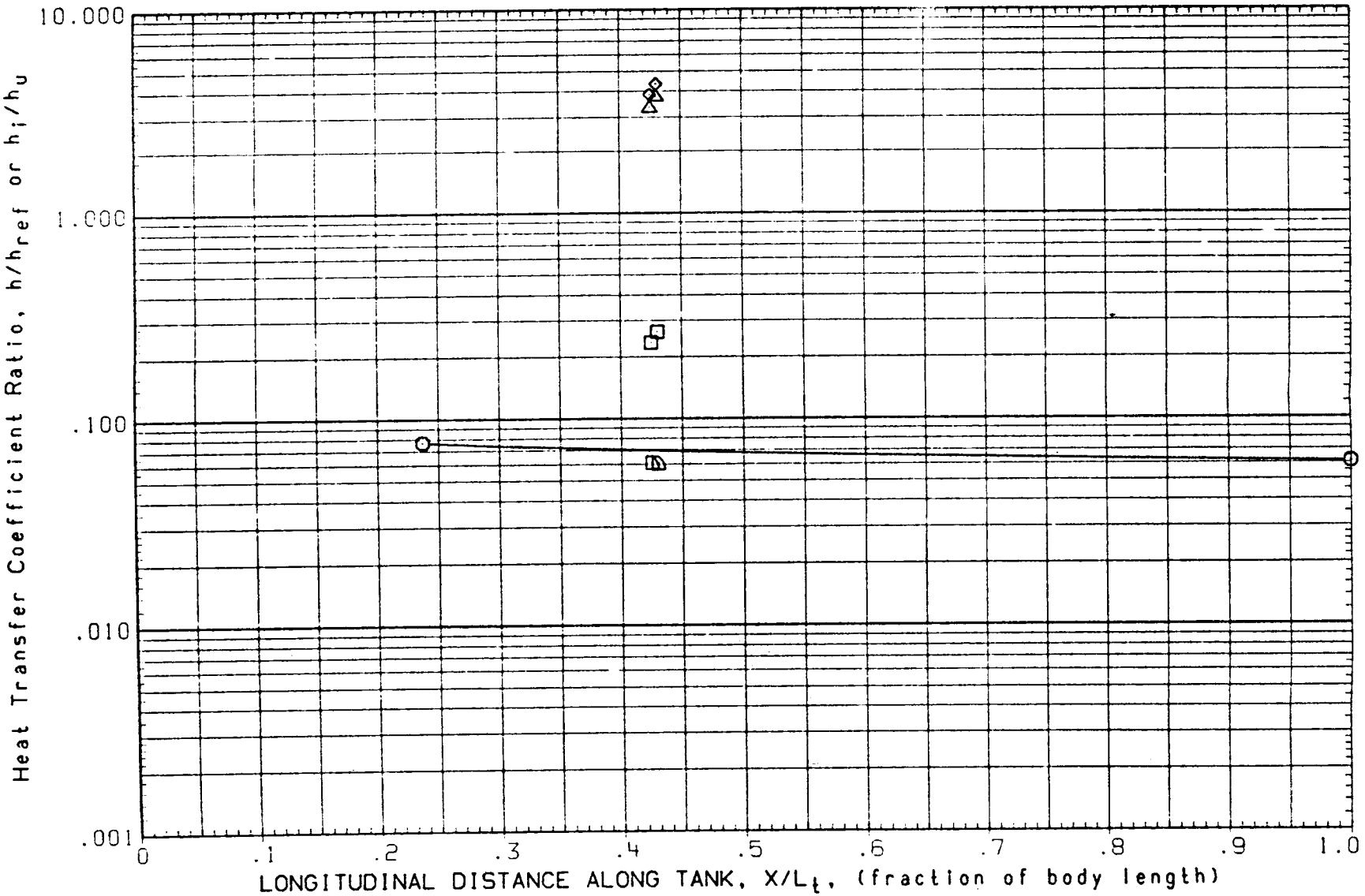

FIG. 4-4 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 354.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT34)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-7.500
(C9NT34)	⬠	DATA NOT AVAILABLE		4.020	.000	-7.500
(V4LT28)	□	DATA NOT AVAILABLE		4.020	.000	-7.500
(X4LT28)	◇	DATA NOT AVAILABLE		4.020	.000	-7.500
(Y4LT28)	△	DATA NOT AVAILABLE		4.020	.000	-7.500

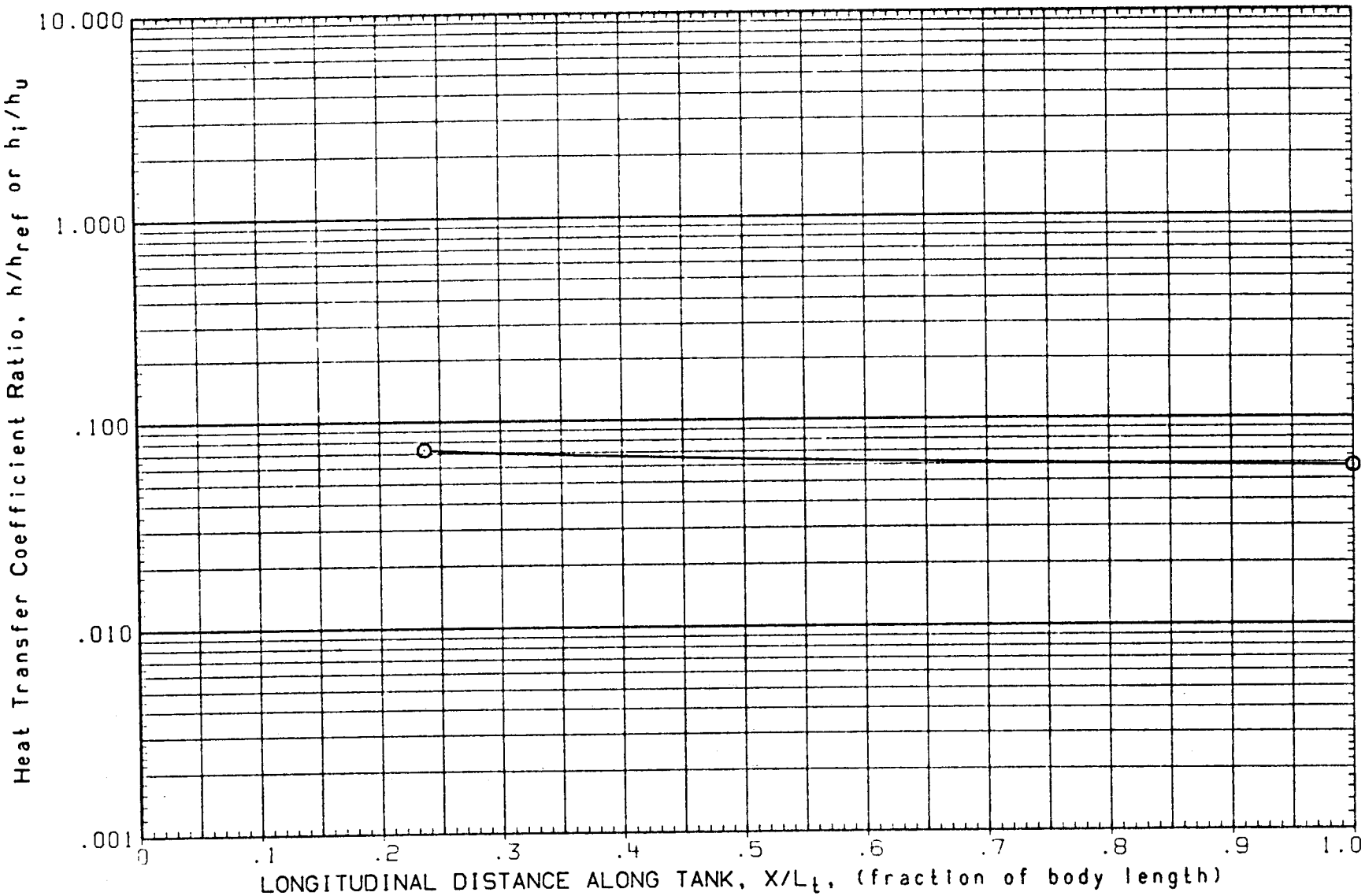

FIG. 4-4 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 355.160

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT34)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-7.500
(C9NT34)	▢	DATA NOT AVAILABLE		4.020	.000	-7.500
(V4LT28)	□	DATA NOT AVAILABLE		4.020	.000	-7.500
(X4LT28)	◇	DATA NOT AVAILABLE		4.020	.000	-7.500
(Y4LT28)	△	DATA NOT AVAILABLE		4.020	.000	-7.500

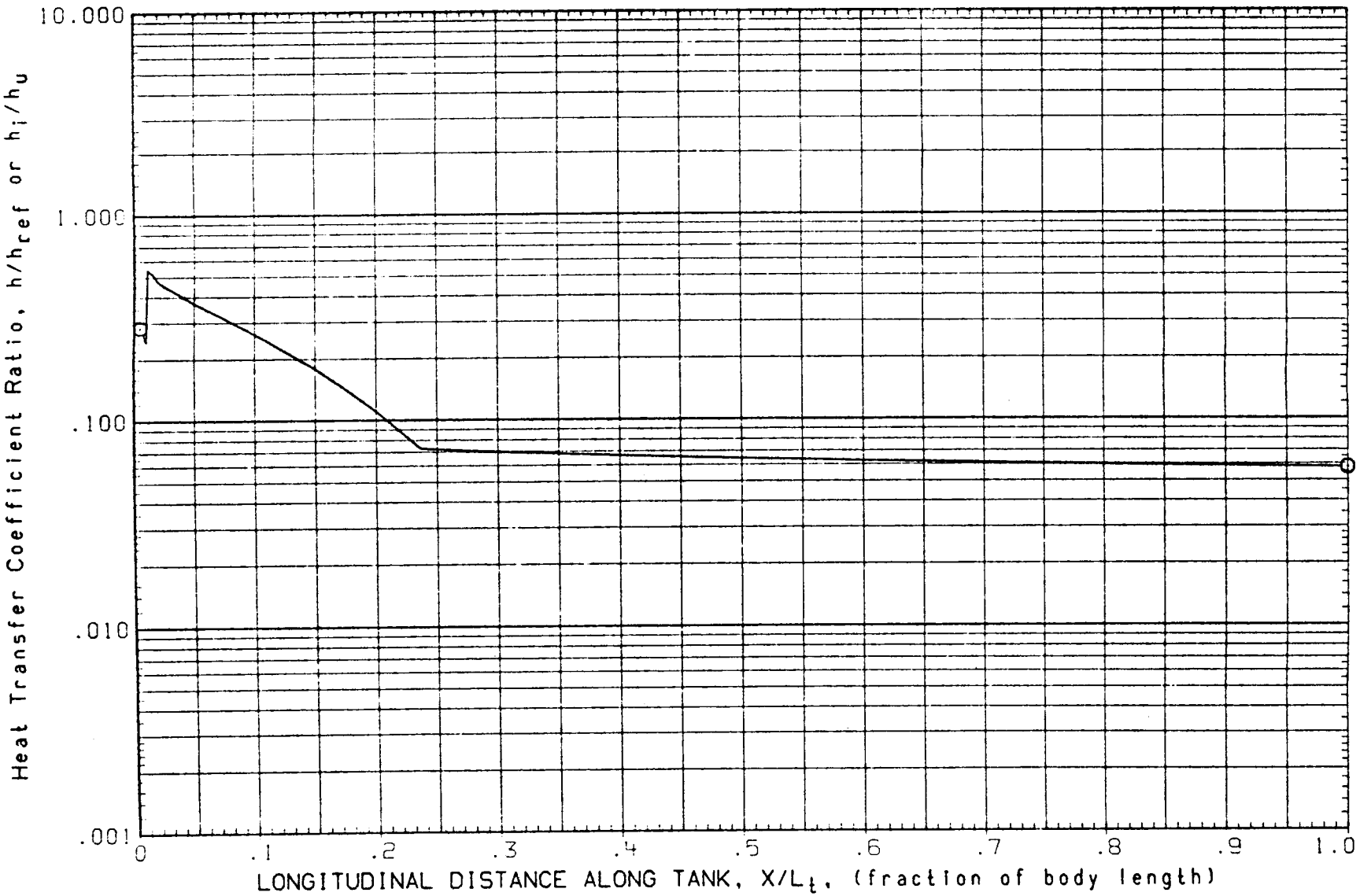

FIG. 4-4 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 360.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT36)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-4.500
(C9NT36)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-4.500
(V4LT30)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-4.500
(X4LT30)	◇	IH85 (W.L. TEST) OTS/ET = V4LT30/C9NT36=	HI/HU	4.020	.000	-4.500
(Y4LT30)	△	IH85 (W.L. THEORY) OTS/ET = V4LT30/A9NT36=	HI/HU	4.020	.000	-4.500

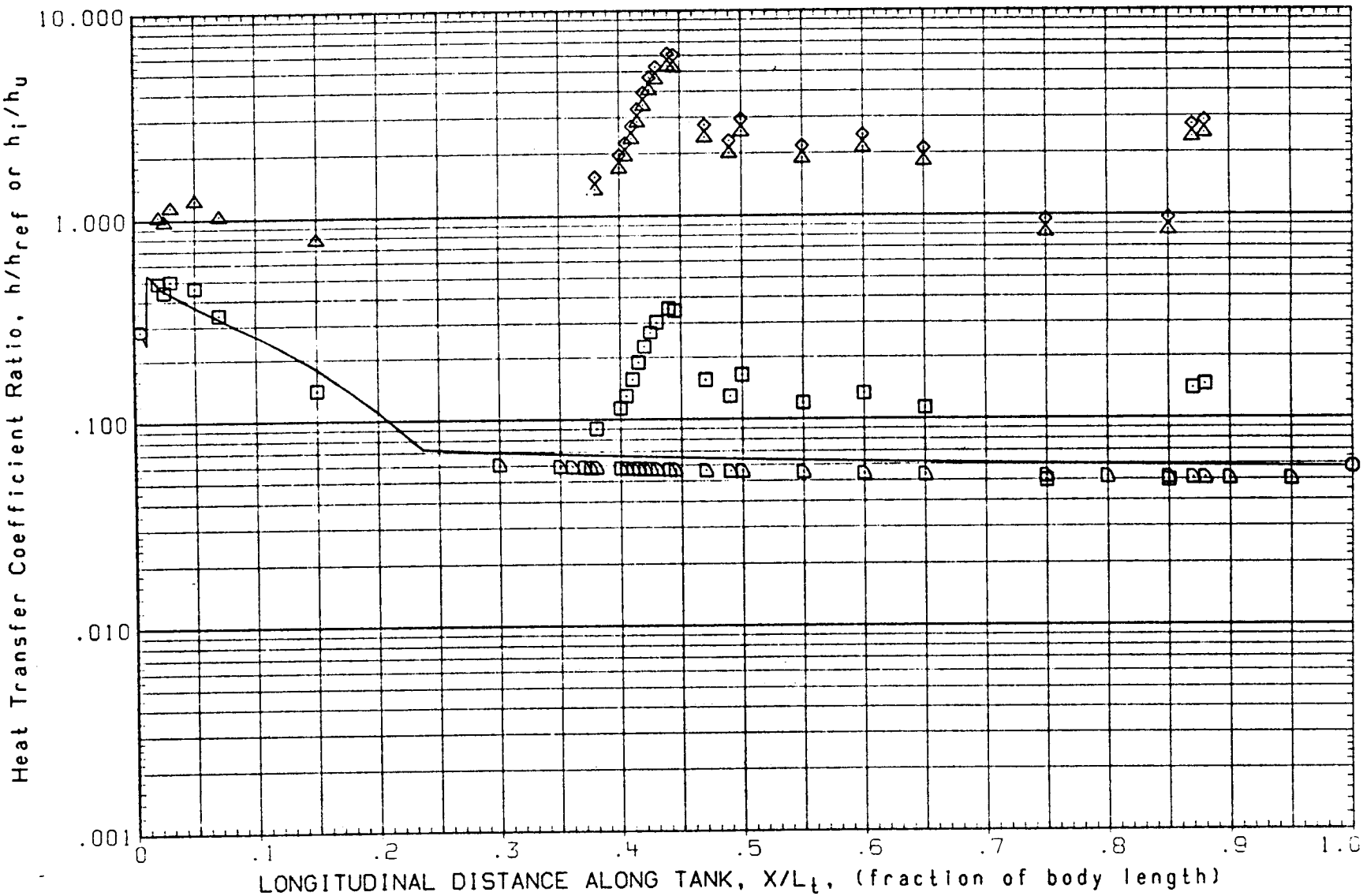

FIG. 4-5 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -4.5
0 < X/L_T < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = .000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT36)	○	DATA NOT AVAILABLE	4.020	.000	-4.500
(C9NT36)	□	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	4.020	.000	-4.500
(V4LT30)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	.000	-4.500
(X4LT30)	◇	IH85 (W.L. TEST) OTS/ET = V4LT30/C9NT36= HI/HU	4.020	.000	-4.500
(Y4LT30)	△	IH85 (W.L. THEORY) OTS/ET = V4LT30/A9NT36= HI/HU	4.020	.000	-4.500

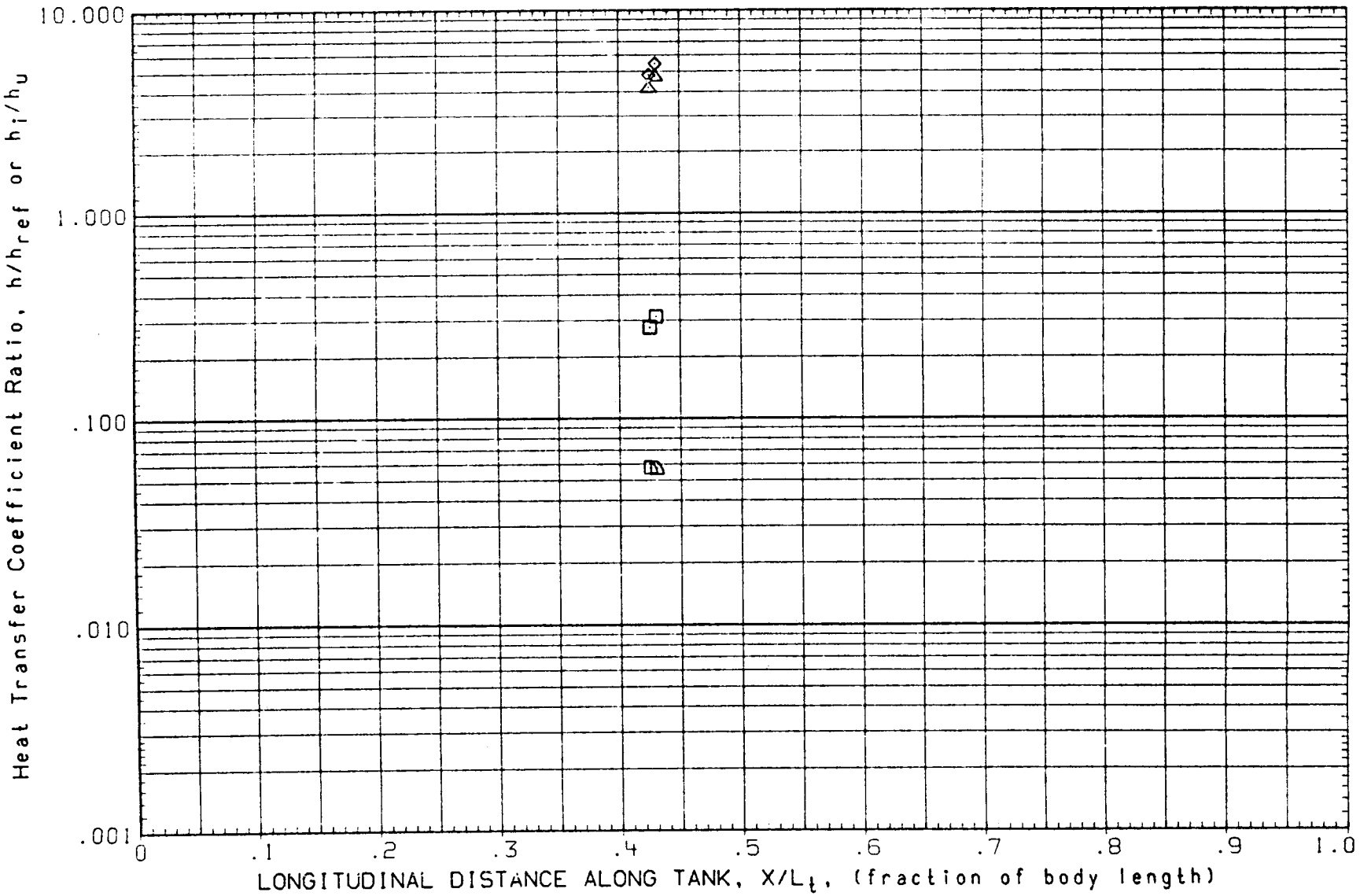

FIG. 4-5 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 5.625

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT36)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-4.500
(C9NT36)	⌂	DATA NOT AVAILABLE		4.020	.000	-4.500
(V4LT30)	□	DATA NOT AVAILABLE		4.020	.000	-4.500
(X4LT30)	◇	DATA NOT AVAILABLE		4.020	.000	-4.500
(Y4LT30)	△	DATA NOT AVAILABLE		4.020	.000	-4.500

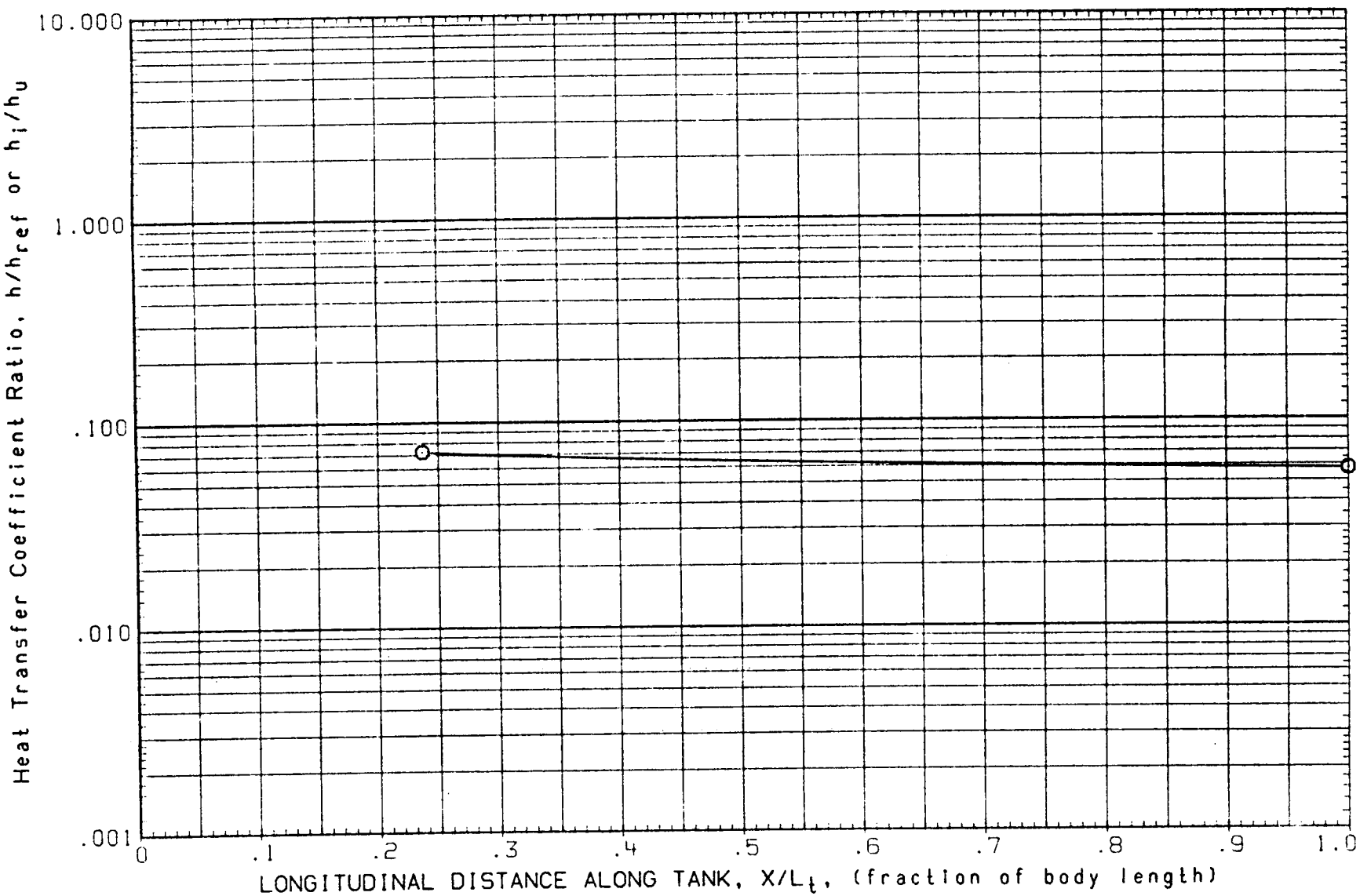

FIG. 4-5 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 5.630

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT36)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-4.500
(C9NT36)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-4.500
(V4LT30)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-4.500
(X4LT30)	◇	IH85 (W.L. TEST) OTS/ET = V4LT30/C9NT36=	HI/HU	4.020	.000	-4.500
(Y4LT30)	△	IH85 (W.L. THEORY) OTS/ET = V4LT30/A9NT36=	HI/HU	4.020	.000	-4.500

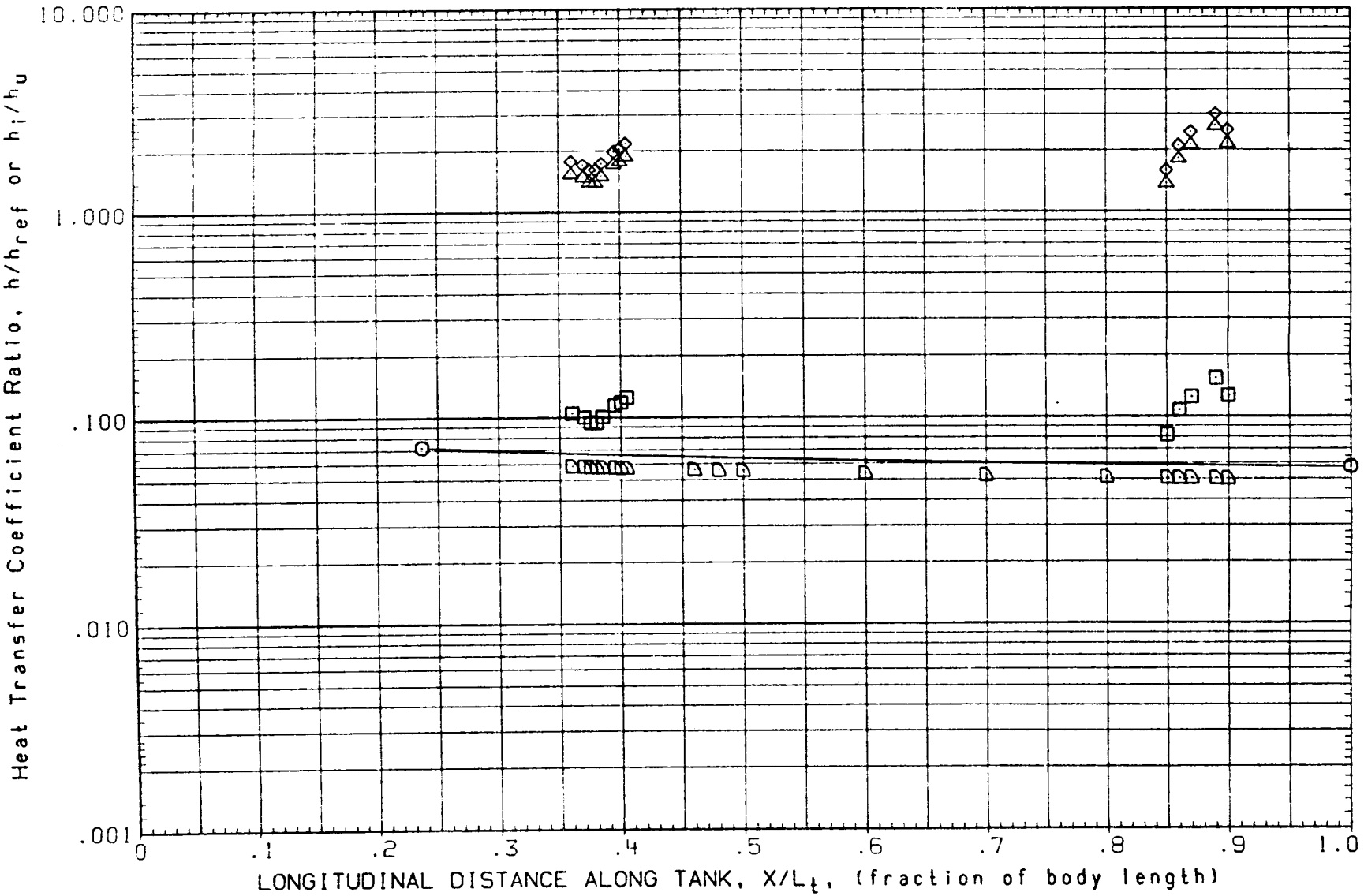

FIG. 4-5 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 11.250

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT36)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-4.500
(C9NT36)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-4.500
(V4LT30)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-4.500
(X4LT30)	◇	IH85 (W.L. TEST) OTS/ET = V4LT30/C9NT36= HI/HU		4.020	.000	-4.500
(Y4LT30)	△	IH85 (W.L. THEORY) OTS/ET = V4LT30/A9NT36= HI/HU		4.020	.000	-4.500

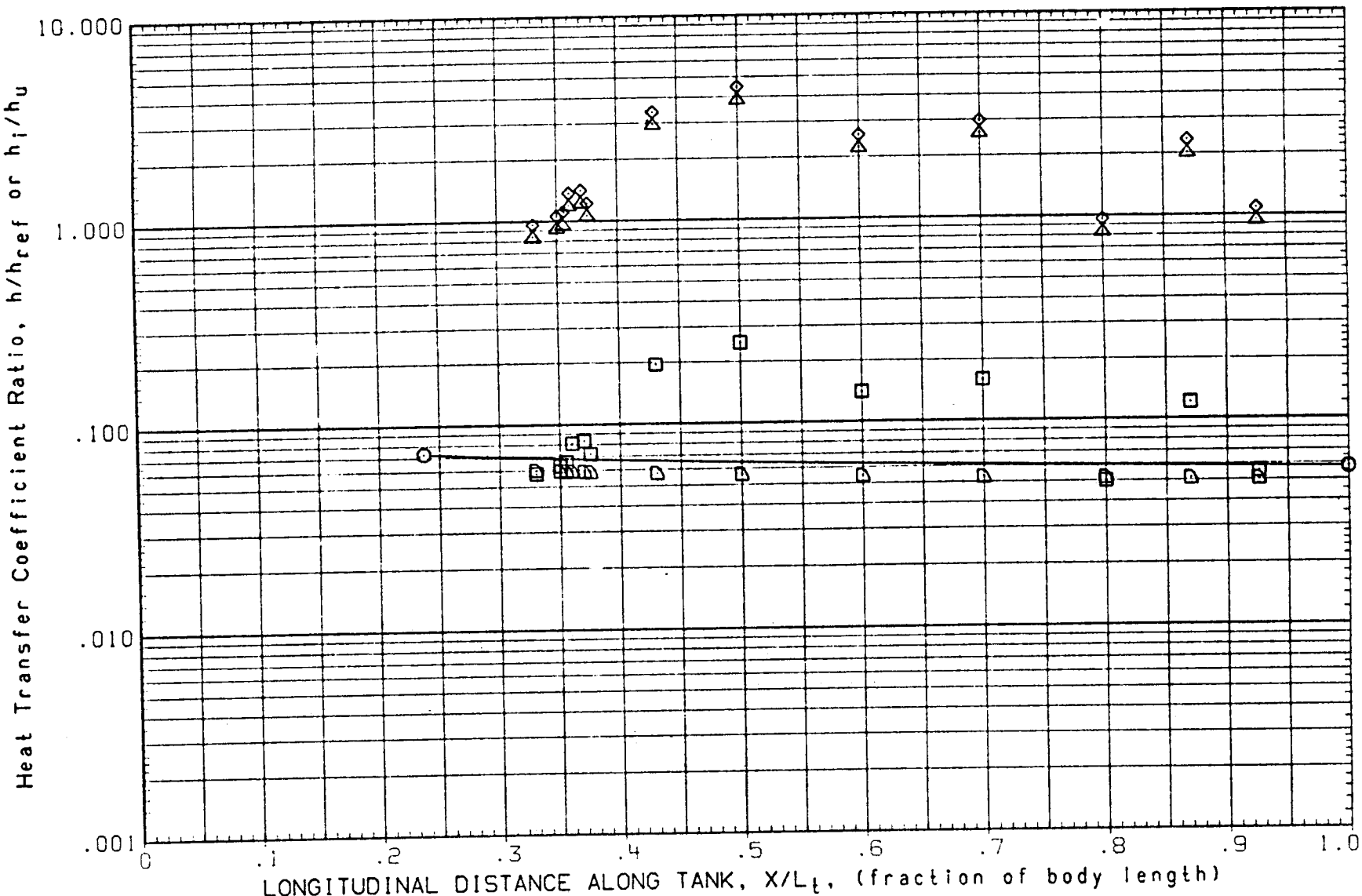

FIG. 4-5 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 17.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT36)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-4.500
(C9NT36)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-4.500
(V4LT30)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-4.500
(X4LT30)	◇	IH85 (W.L. TEST) OTS/ET = V4LT30/C9NT36=	HI/HU	4.020	.000	-4.500
(Y4LT30)	△	IH85 (W.L. THEORY) OTS/ET = V4LT30/A9NT36=	HI/HU	4.020	.000	-4.500

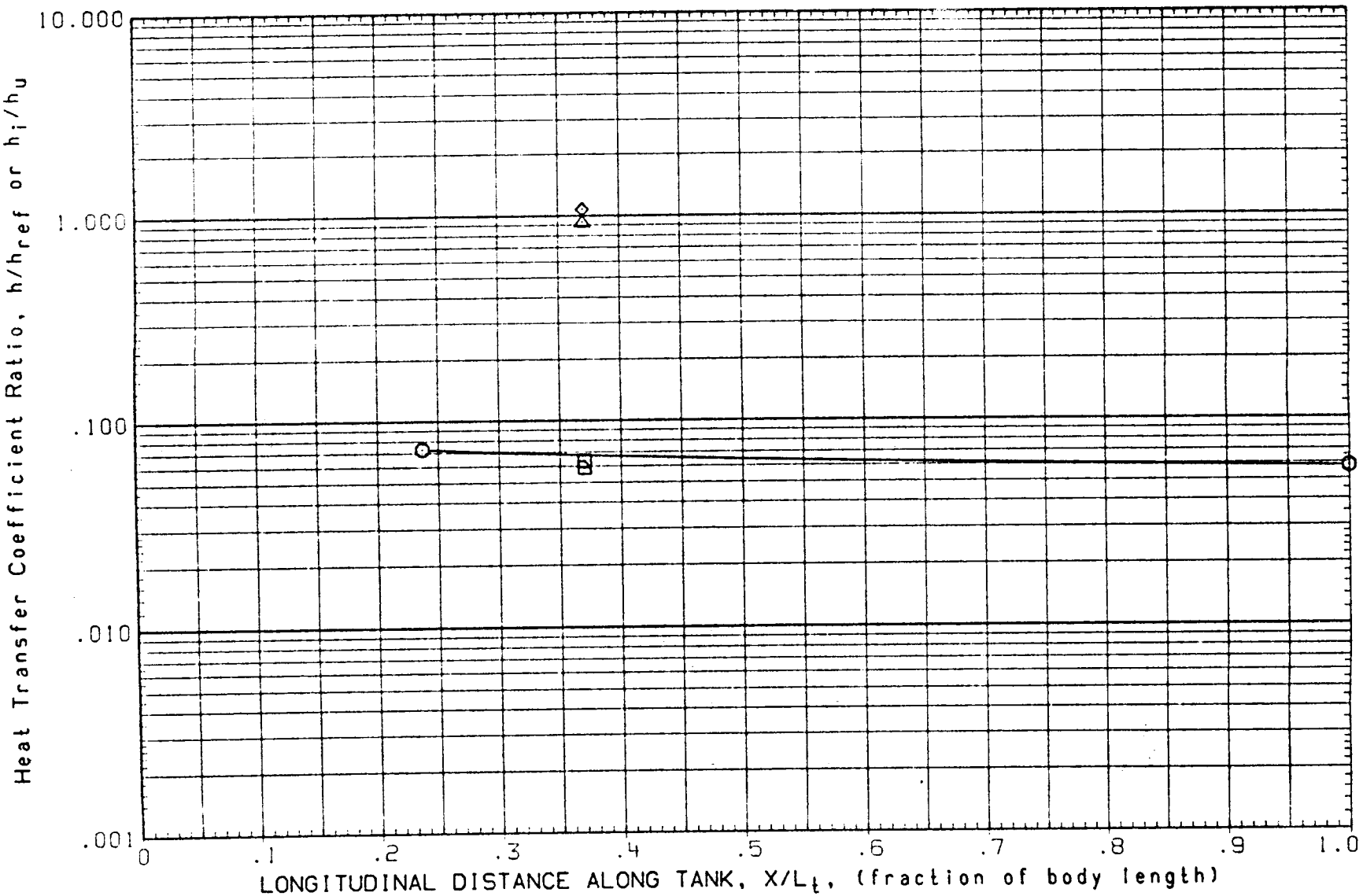

FIG. 4-5 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 20.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT36)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-4.500
(C9NT36)	⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-4.500
(V4LT30)	□	IH85, AEDC V4!A-W5, CONFIGURATION 0 (T) S		4.020	.000	-4.500
(X4LT30)	◇	IH85 (W.L. TEST) OTS/ET = V4LT30/C9NT36=	HI/HU	4.020	.000	-4.500
(Y4LT30)	△	IH85 (W.L. THEORY) OTS/ET = V4LT30/A9NT36=	HI/HU	4.020	.000	-4.500

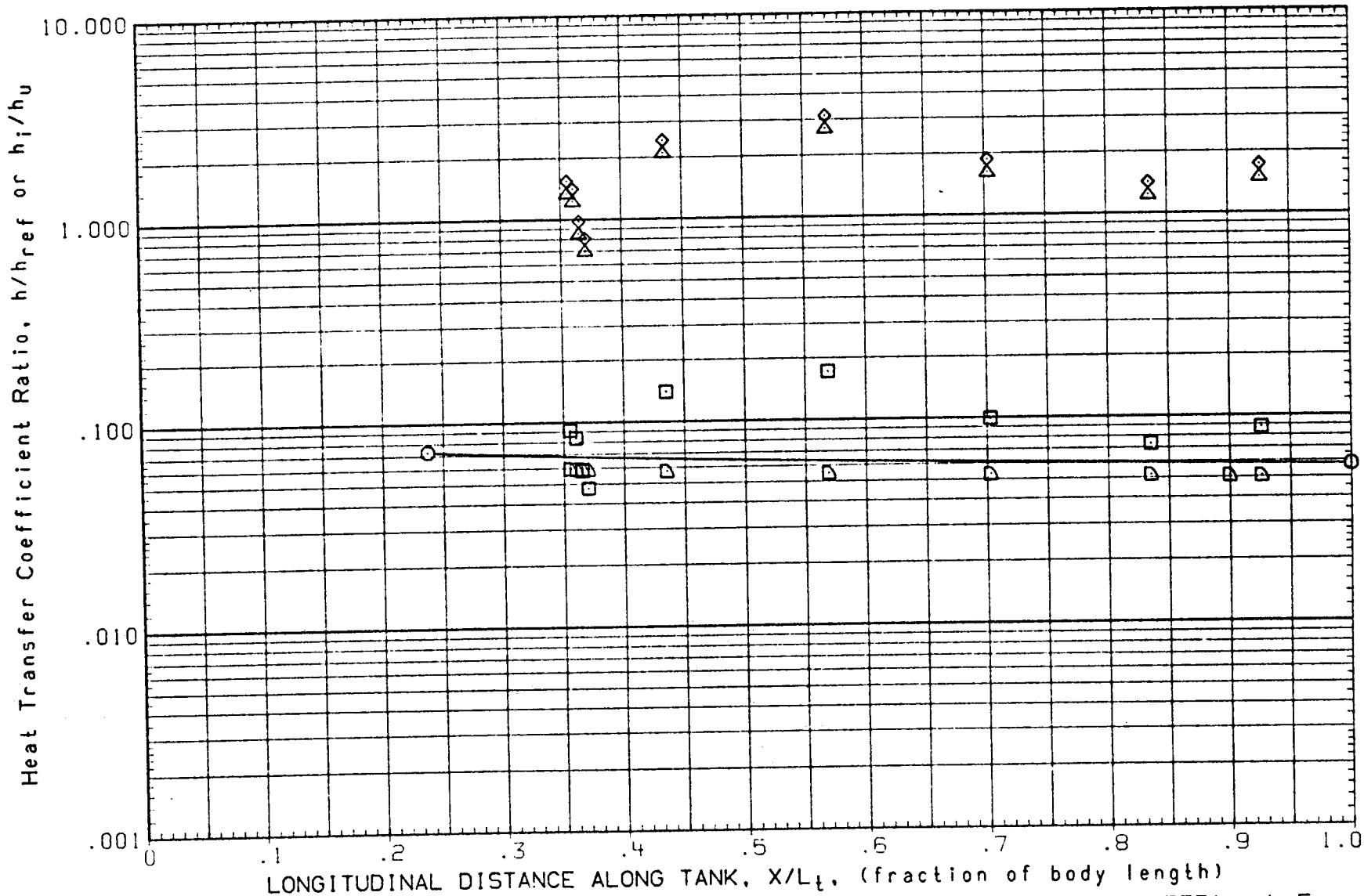

FIG. 4-5 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 23.070

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT36)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-4.500
(C9NT36)	◐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-4.500
(V4LT30)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-4.500
(X4LT30)	◇	IH85 (W.L. TEST) OTS/ET = V4LT30/C9NT36=	HI/HU	4.020	.000	-4.500
(Y4LT30)	△	IH85 (W.L. THEORY) OTS/ET = V4LT30/A9NT36=	HI/HU	4.020	.000	-4.500

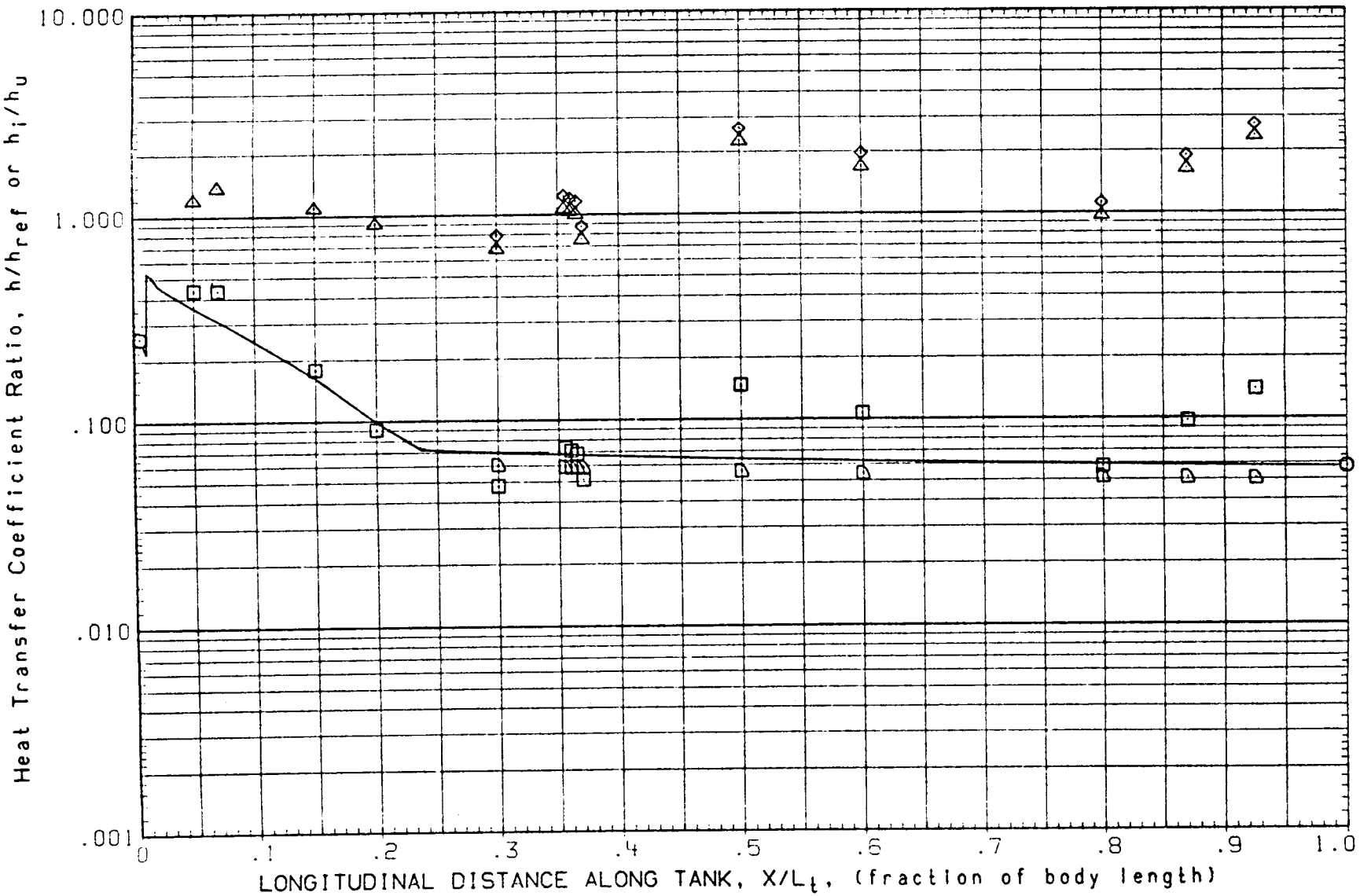

FIG. 4-5 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 29.800

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT36)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-4.500
(C9NT36)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-4.500
(V4LT30)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-4.500
(X4LT30)	◇	IH85 (W.L. TEST) OTS/ET = V4LT30/C9NT36=	HI/HU	4.020	.000	-4.500
(Y4LT30)	△	IH85 (W.L. THEORY) OTS/ET = V4LT30/A9NT36=	HI/HU	4.020	.000	-4.500

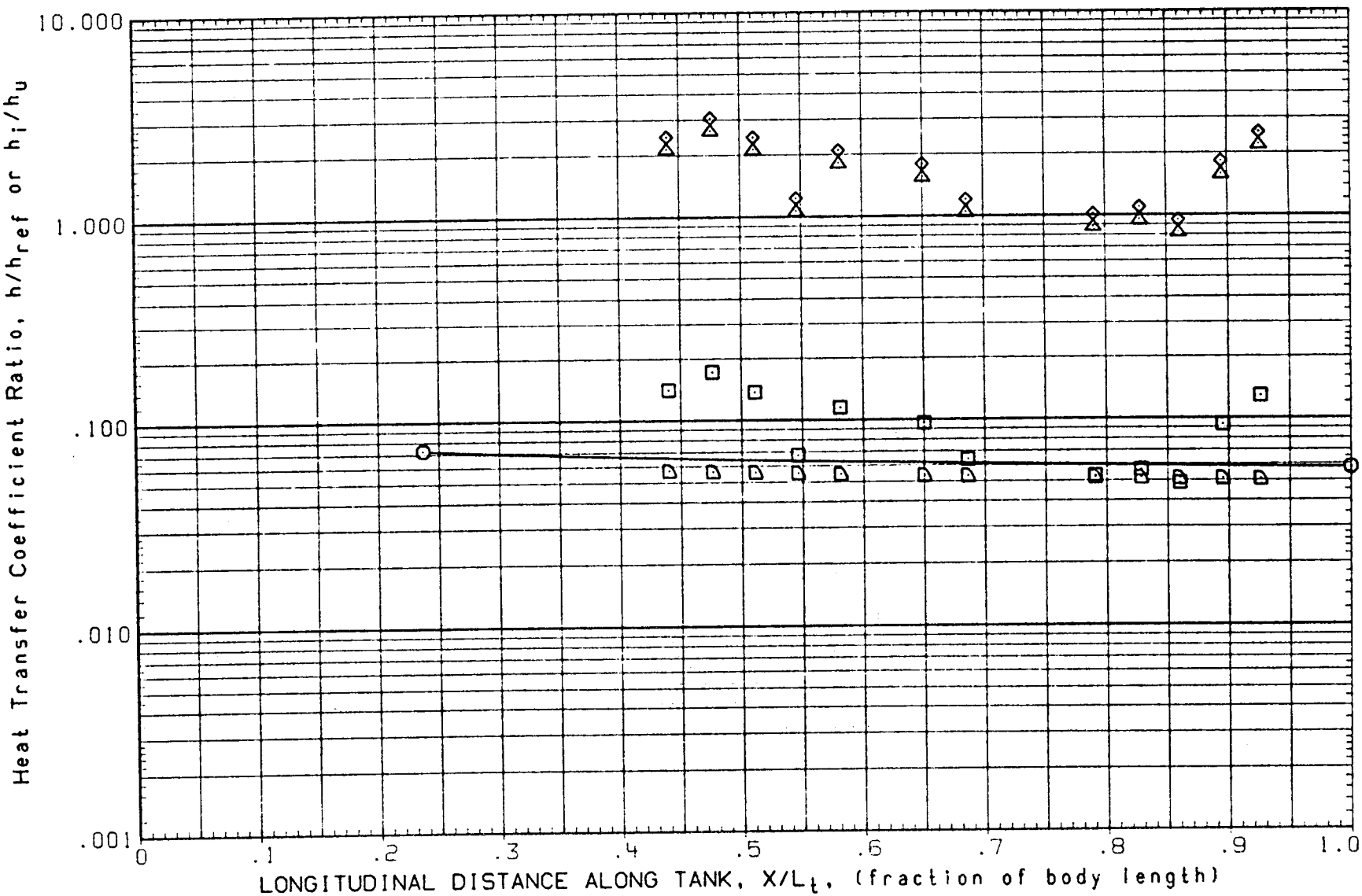

FIG. 4-5 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 31.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT36)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-4.500
(C9NT36)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-4.500
(V4LT30)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-4.500
(X4LT30)	◇	IH85 (W.L. TEST) OTS/ET = V4LT30/C9NT36=	HI/HU	4.020	.000	-4.500
(Y4LT30)	△	IH85 (W.L. THEORY) OTS/ET = V4LT30/A9NT36=	HI/HU	4.020	.000	-4.500

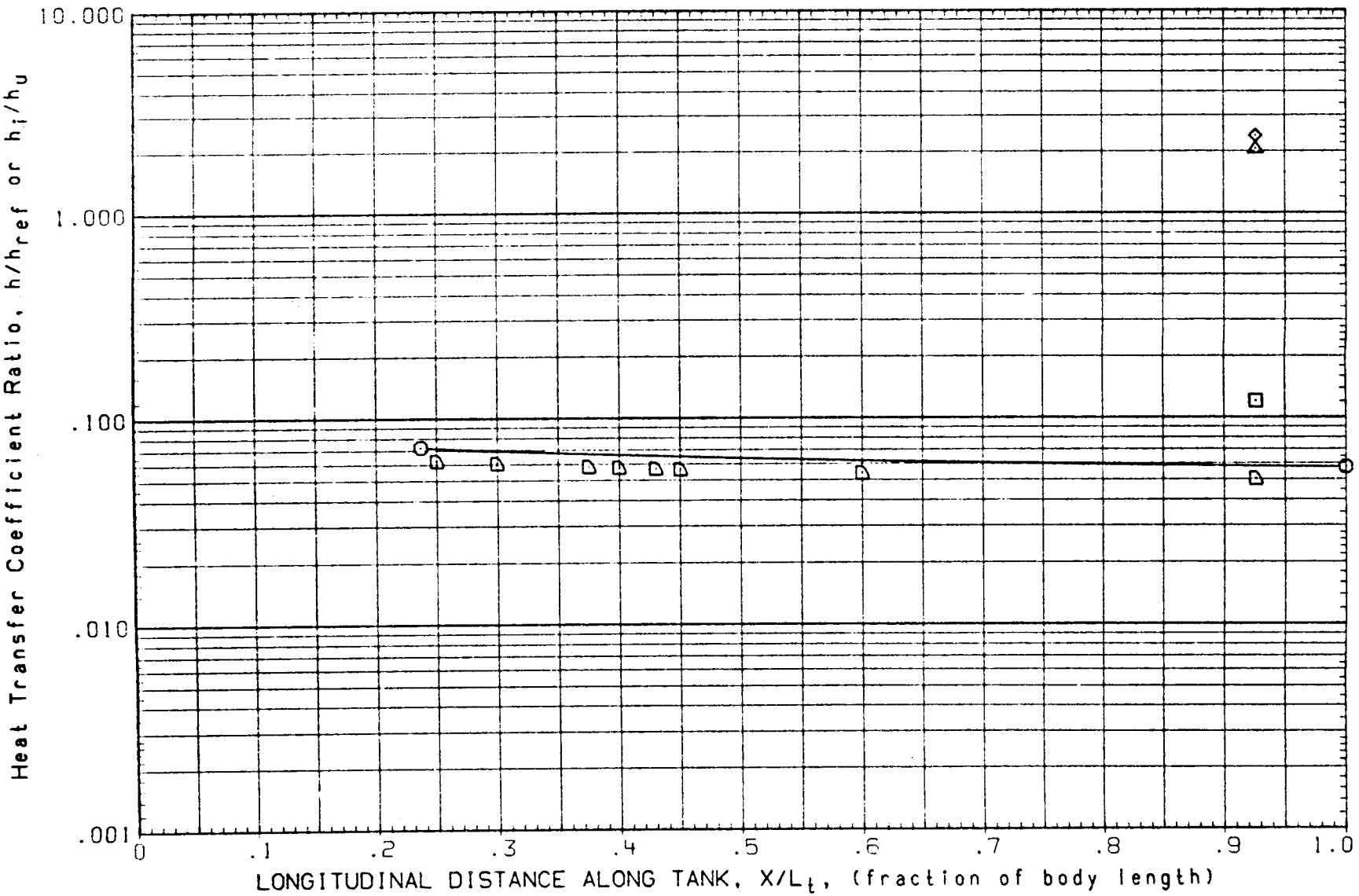

FIG. 4-5 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 33.750

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT36)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-4.500
(C9NT36)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-4.500
(V4LT30)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-4.500
(X4LT30)	◇	IH85 (W.L. TEST) OTS/ET = V4LT30/C9NT36= HI/HU		4.020	.000	-4.500
(Y4LT30)	△	IH85 (W.L. THEORY) OTS/ET = V4LT30/A9NT36= HI/HU		4.020	.000	-4.500

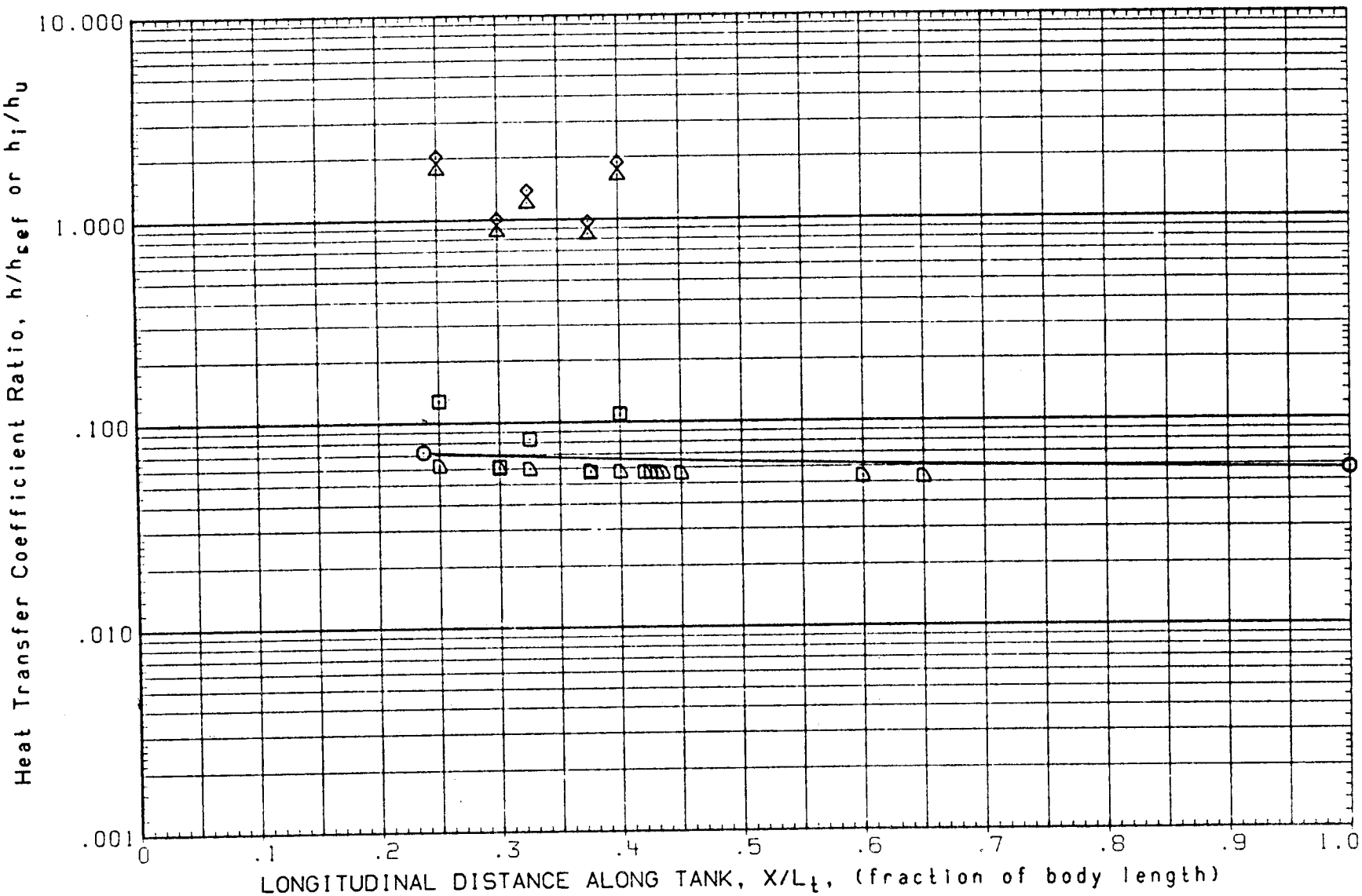

FIG. 4-5 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 36.320

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT36)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-4.500
(C9NT36)	□	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-4.500
(V4LT30)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-4.500
(X4LT30)	◇	IH85 (W.L. TEST) OTS/ET = V4LT30/C9NT36=	HI/HU	4.020	.000	-4.500
(Y4LT30)	△	IH85 (W.L. THEORY) OTS/ET = V4LT30/A9NT36=	HI/HU	4.020	.000	-4.500

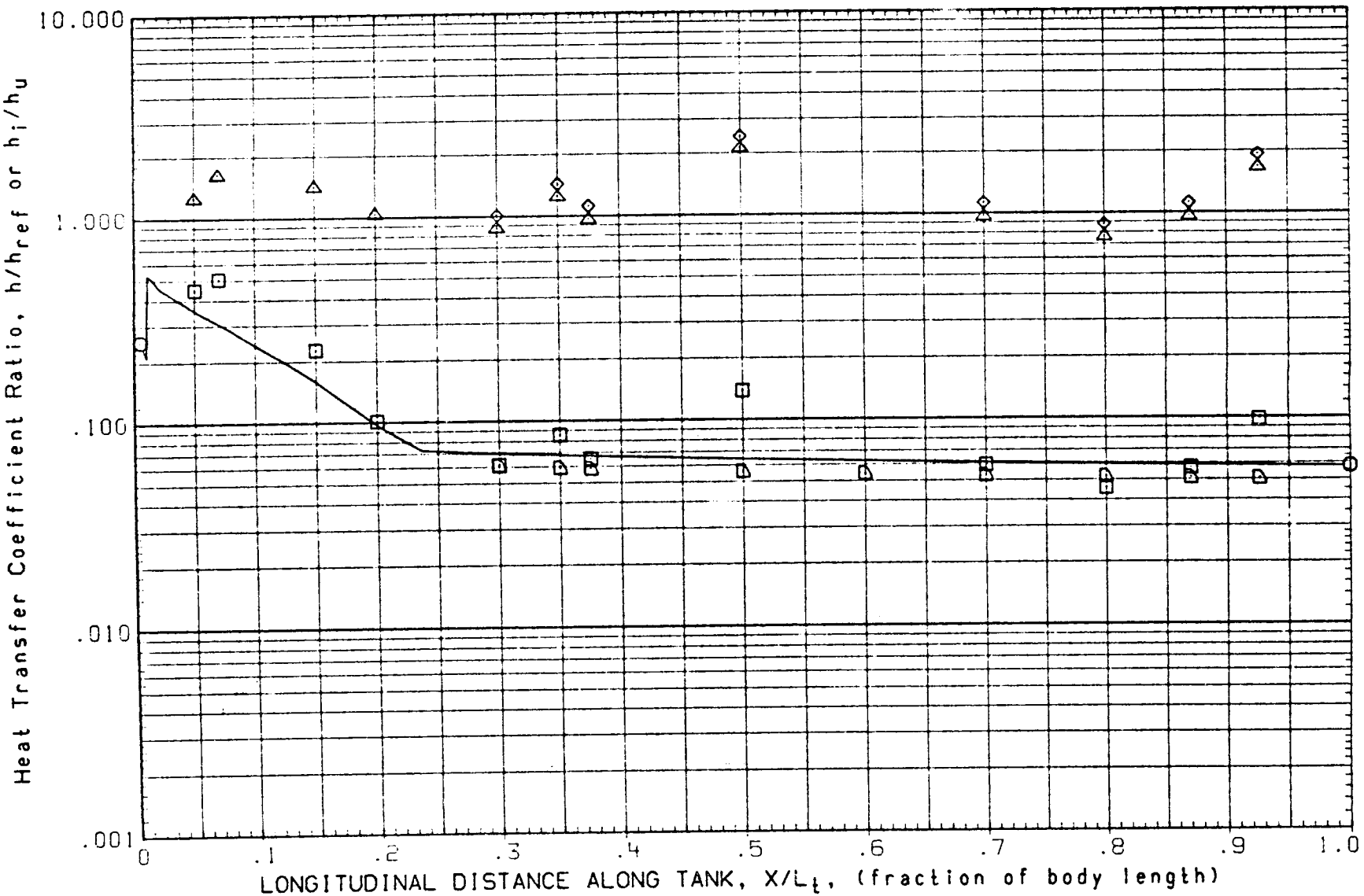

FIG. 4-5 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 37.700

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT36)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-4.500
(C9NT36)	⬠	DATA NOT AVAILABLE		4.020	.000	-4.500
(Y4LT30)	□	DATA NOT AVAILABLE		4.020	.000	-4.500
(X4LT30)	◇	DATA NOT AVAILABLE		4.020	.000	-4.500
(Y4LT30)	△	DATA NOT AVAILABLE		4.020	.000	-4.500

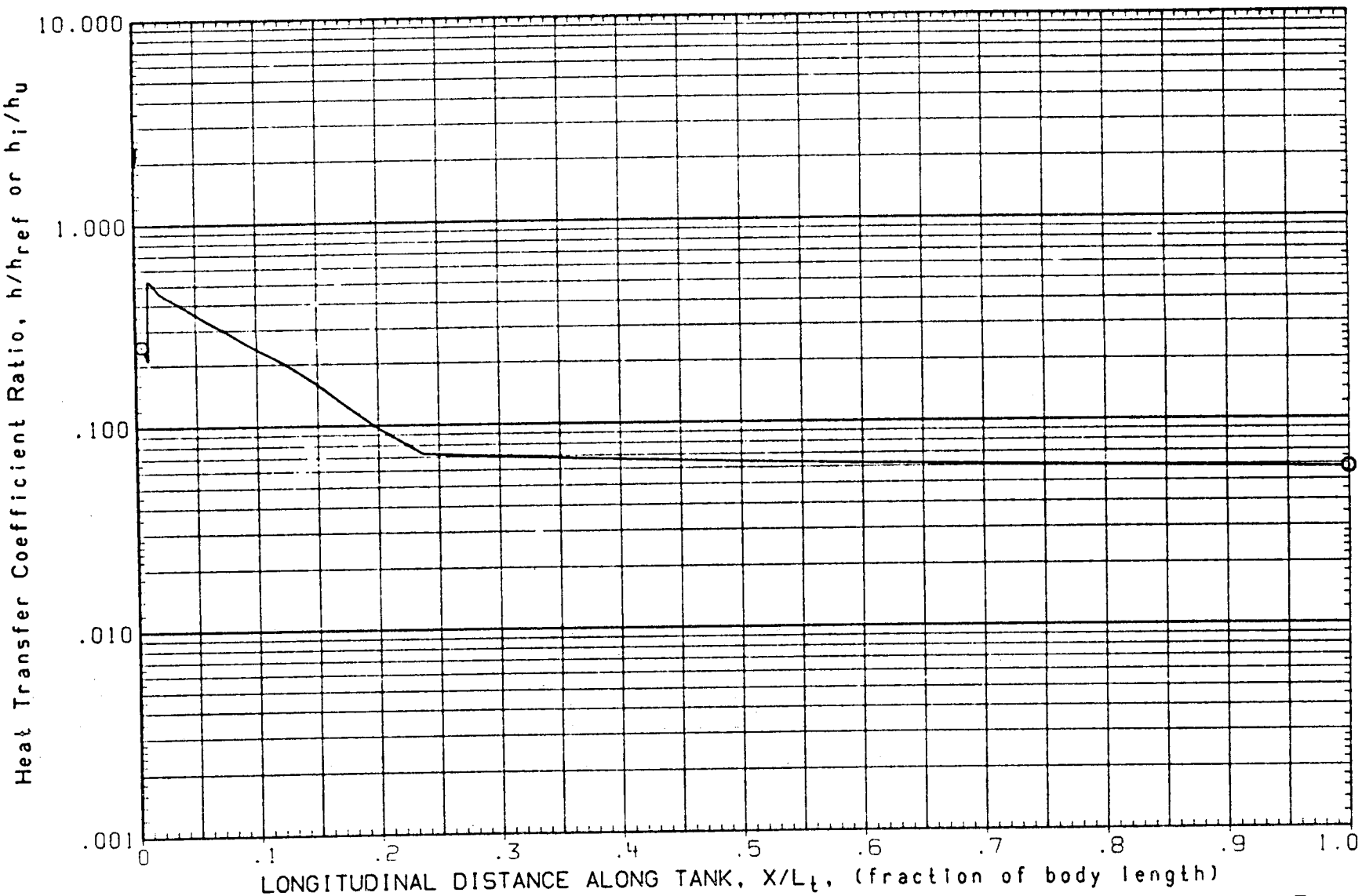

FIG. 4-5 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 39.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT36)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-4.500
(C9NT36)	◊	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-4.500
(V4LT30)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-4.500
(X4LT30)	◇	IH85 (W.L. TEST) OTS/ET = V4LT30/C9NT36=	HI/HU	4.020	.000	-4.500
(Y4LT30)	△	IH85 (W.L. THEORY) OTS/ET = V4LT30/A9NT36=	HI/HU	4.020	.000	-4.500

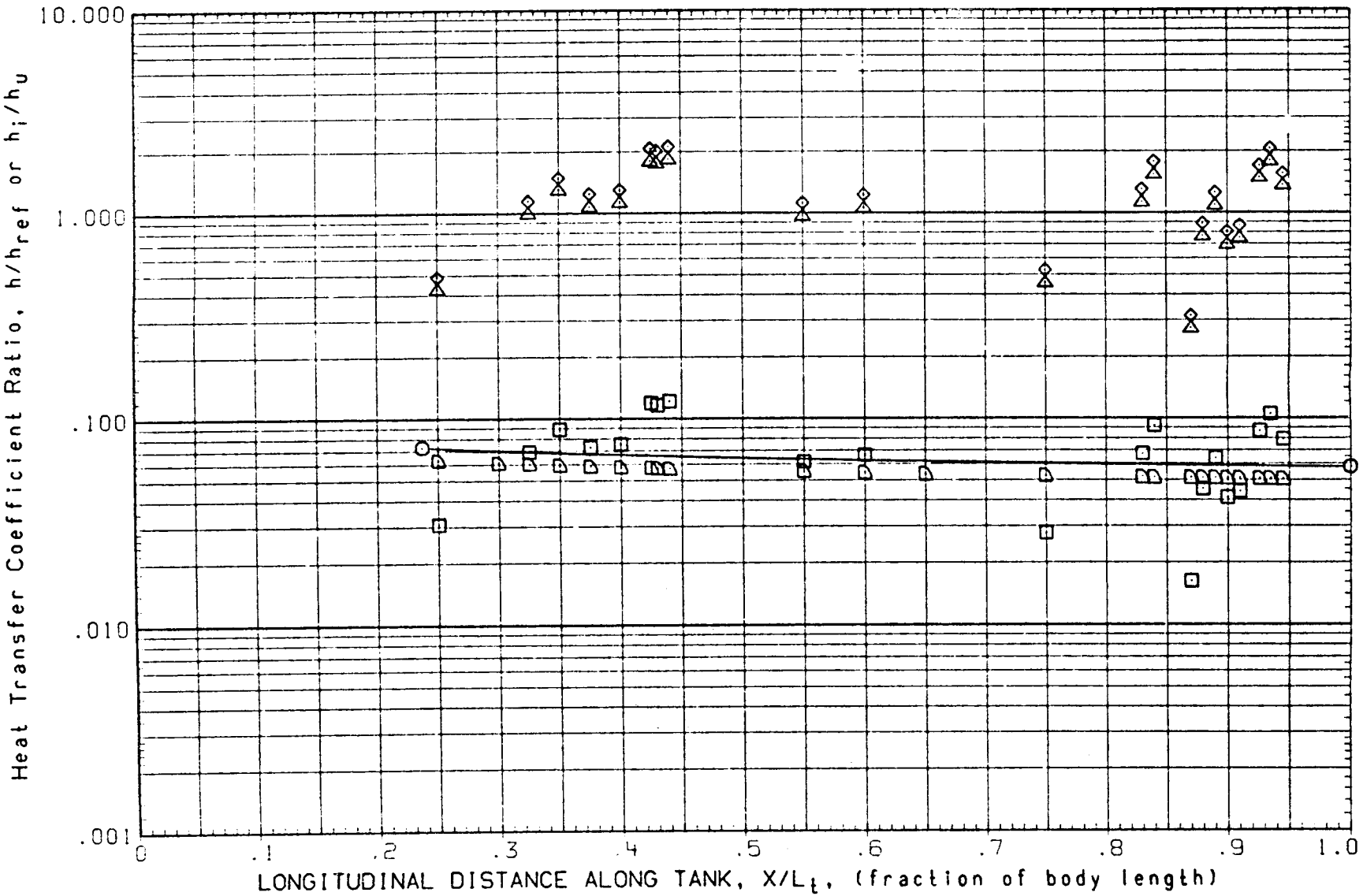

FIG. 4-5 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 45.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT36)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-4.500
(C9NT36)	▢	DATA NOT AVAILABLE		4.020	.000	-4.500
(V4LT30)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-4.500
(X4LT30)	◇	DATA NOT AVAILABLE		4.020	.000	-4.500
(Y4LT30)	△	IH85 (W.L. THEORY) OTS/ET = V4LT30/A9NT36= HI/HU		4.020	.000	-4.500

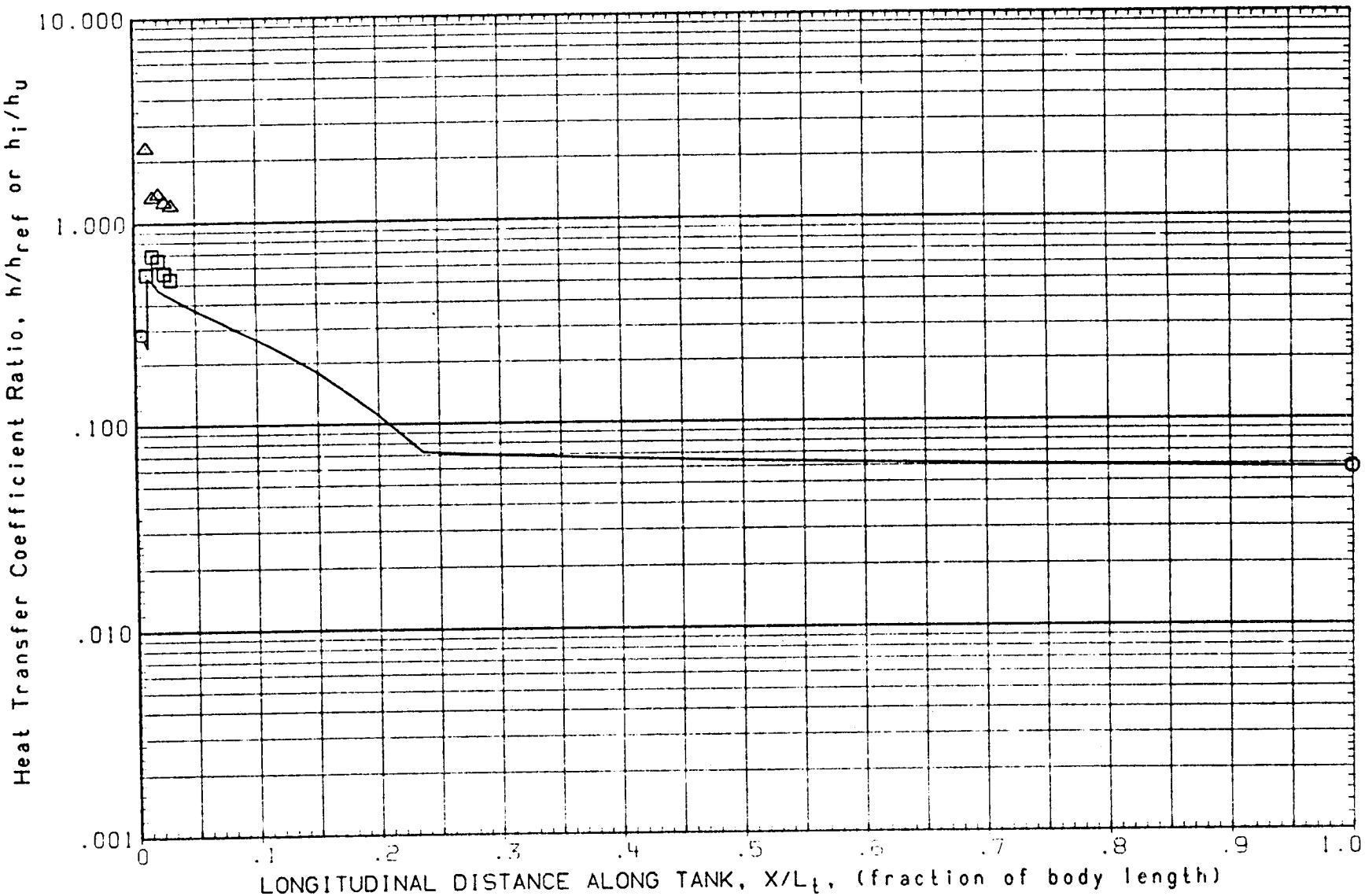

FIG. 4-5 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 HRF = 1.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT36)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-4.500
(S9NT36)	⬠	DATA NOT AVAILABLE		4.020	.000	-4.500
(Y4LT30)	□	DATA NOT AVAILABLE		4.020	.000	-4.500
(X4LT30)	◇	DATA NOT AVAILABLE		4.020	.000	-4.500
(Y4LT30)	△	DATA NOT AVAILABLE		4.020	.000	-4.500

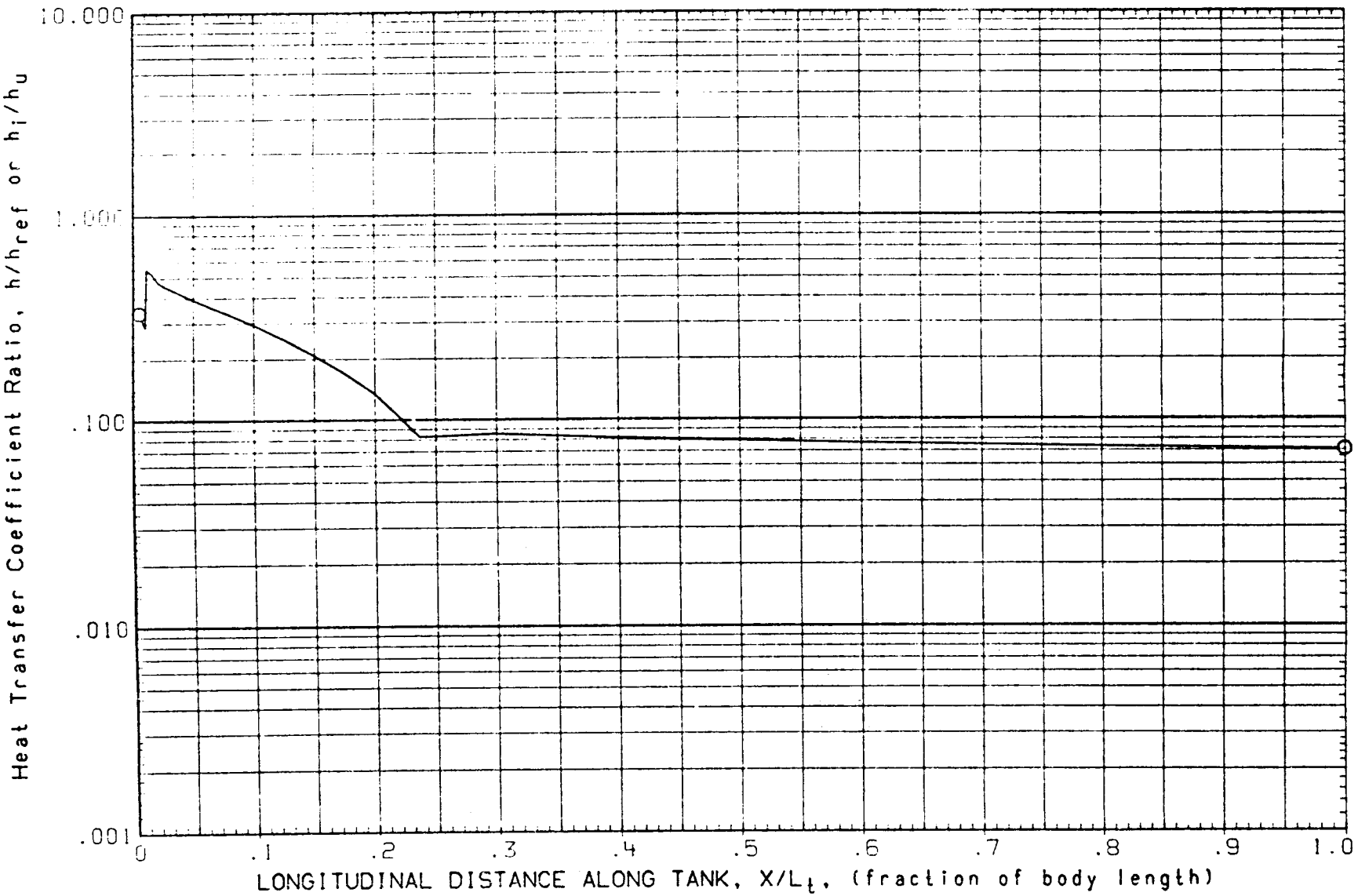

FIG. 4-5 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 235.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT36)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-4.500
(C9NT36)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-4.500
(V4LT30)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-4.500
(X4LT30)	◇	IH85 (W.L. TEST) OTS/ET = V4LT30/C9NT36=	HI/HU	4.020	.000	-4.500
(Y4LT30)	△	IH85 (W.L. THEORY) OTS/ET = V4LT30/A9NT36=	HI/HU	4.020	.000	-4.500

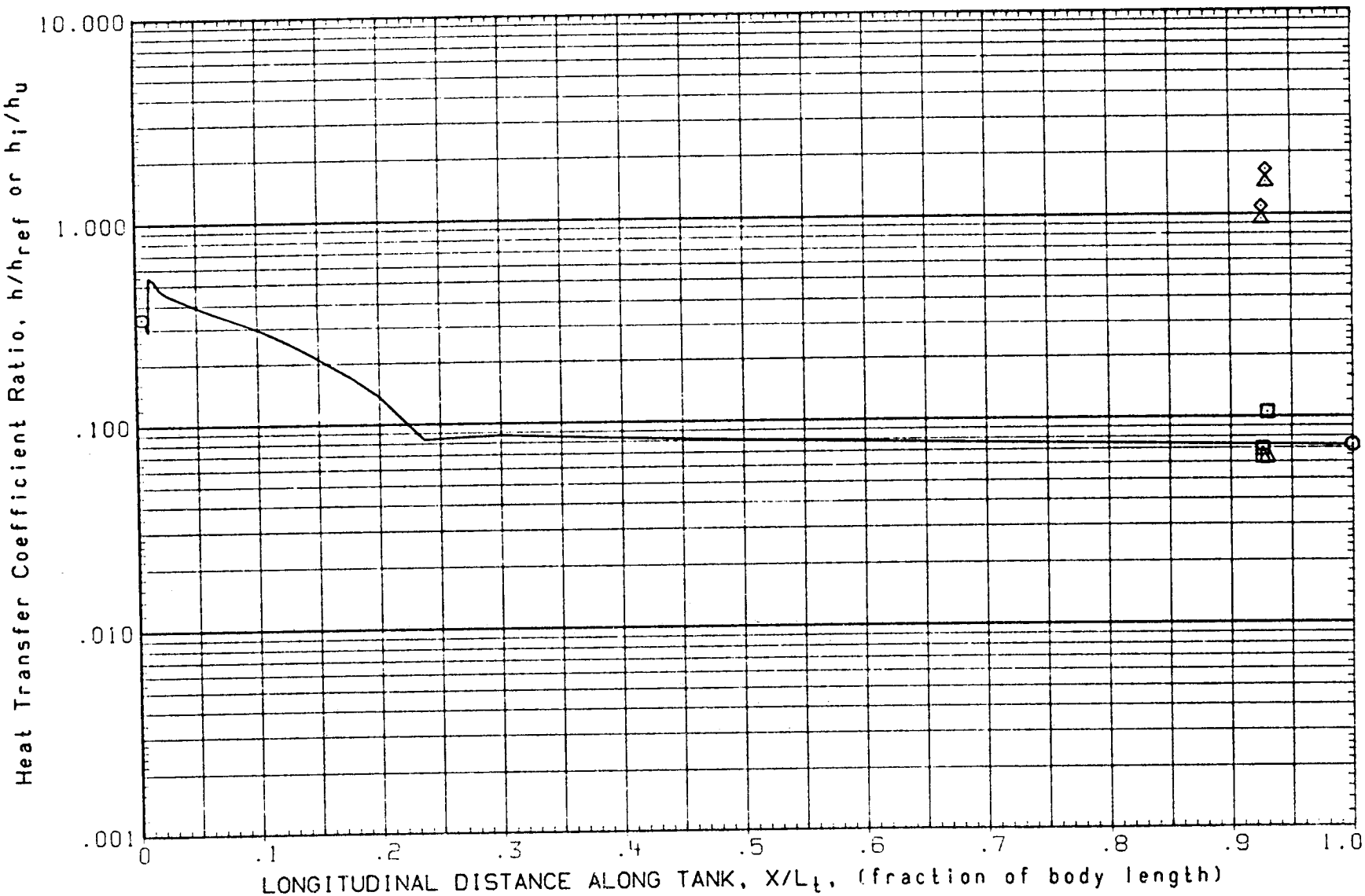

FIG. 4-5 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 247.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(2ONT36)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-4.500
(3NT36)	⬠	DATA NOT AVAILABLE		4.020	.000	-4.500
(4LT30)	□	DATA NOT AVAILABLE		4.020	.000	-4.500
(X4LT30)	◇	DATA NOT AVAILABLE		4.020	.000	-4.500
(Y4LT30)	△	DATA NOT AVAILABLE		4.020	.000	-4.500

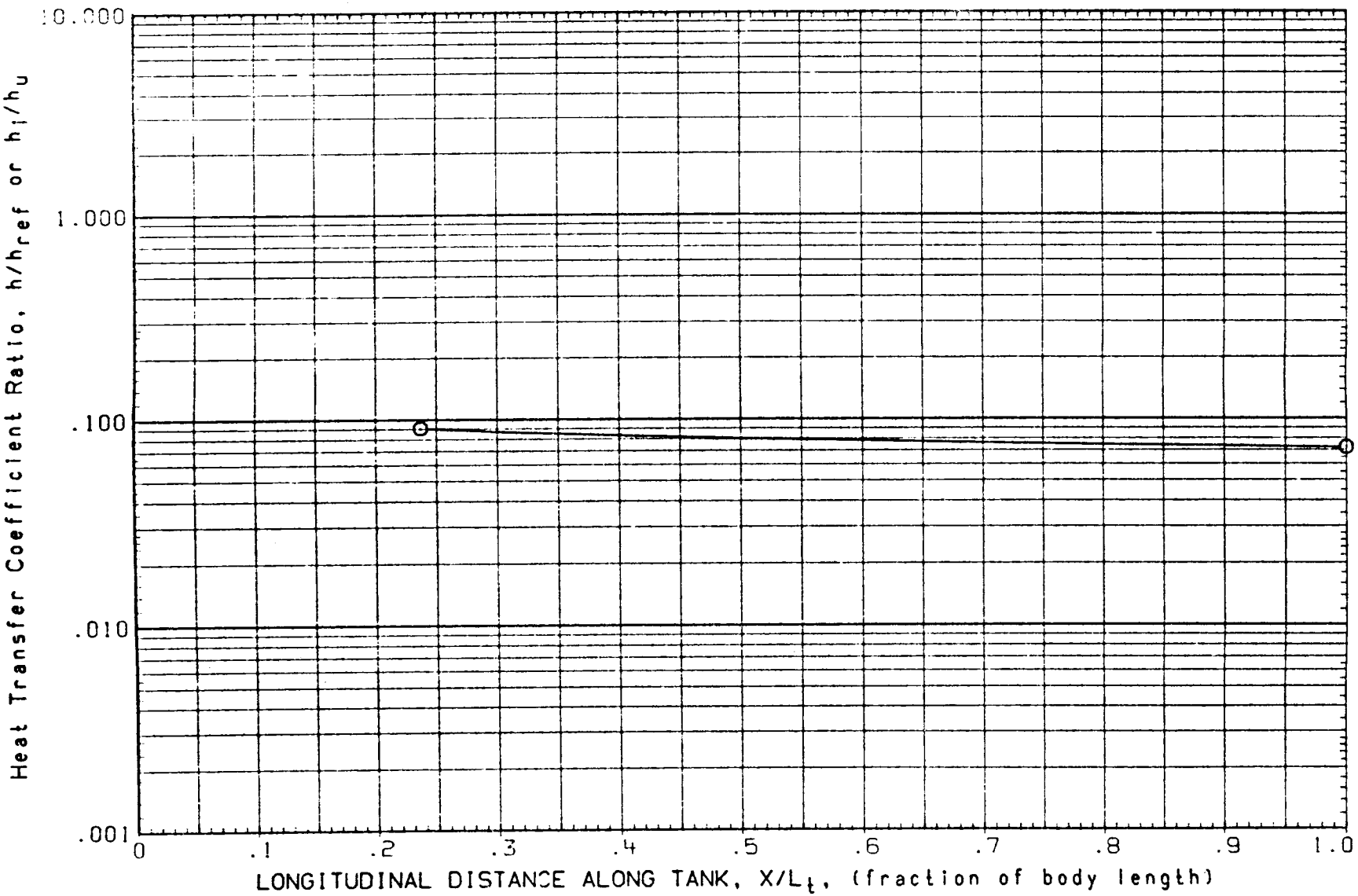

FIG. 4-5 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 247.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT36)	○	EXTERNAL TANK THEORY, N.S ,TURBULENT	HU/HREF	4.020	.000	-4.500
(C9NT36)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-4.500
(V4LT30)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-4.500
(X4LT30)	◇	IH85 (W.L. TEST) OTS/ET = V4LT30/C9NT36=	HI/HU	4.020	.000	-4.500
(Y4LT30)	△	IH85 (W.L. THEORY) OTS/ET = V4LT30/A9NT36=	HI/HU	4.020	.000	-4.500

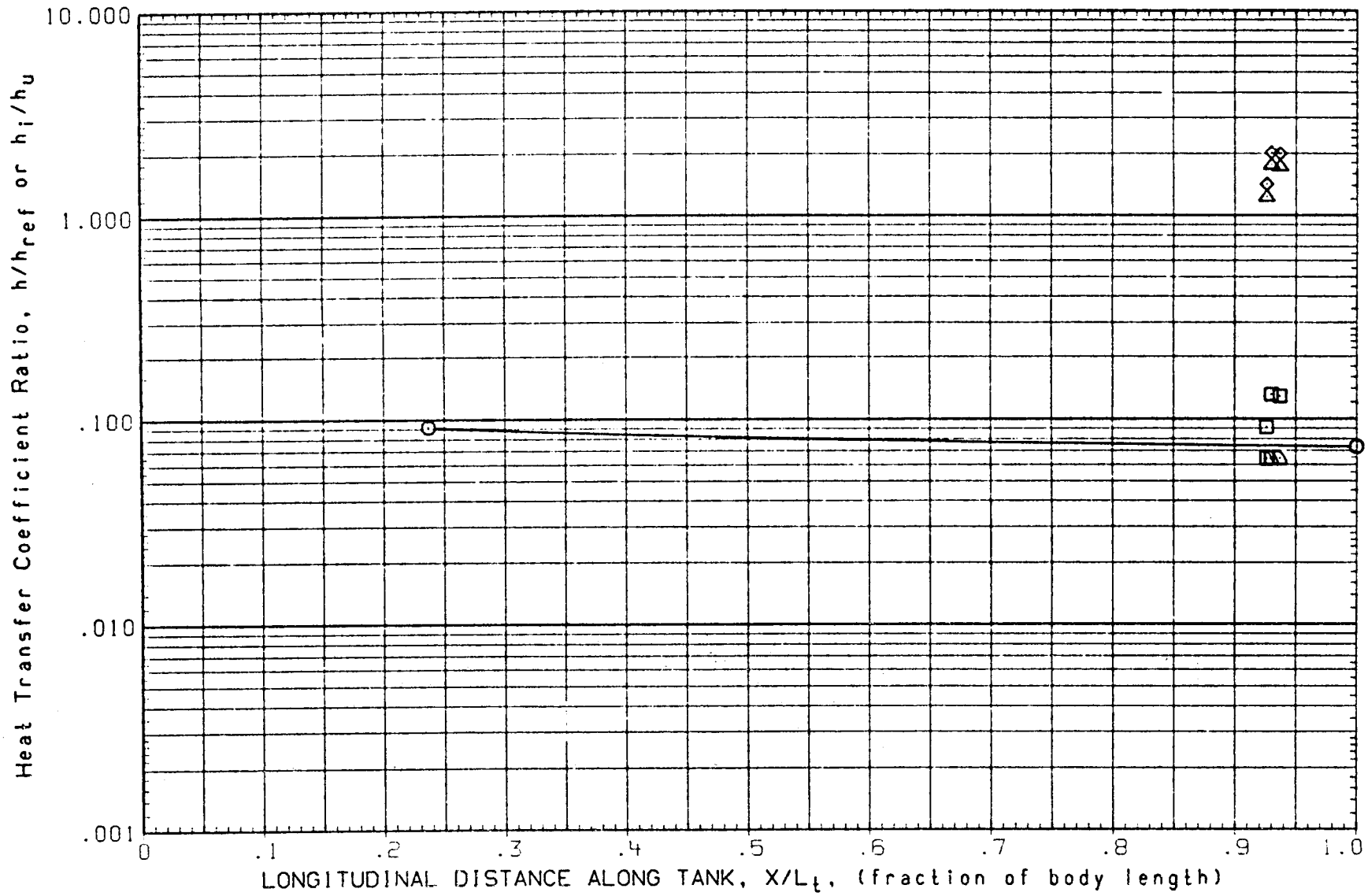

FIG. 4-5 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 250.570

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT36)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-4.500
(C9NT36)	◺	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-4.500
(V4LT30)	□	IH85, AEDC V41A-N5, CONFIGURATION 0 (T) S		4.020	.000	-4.500
(X4LT30)	◇	IH85 (W.L. TEST) OTS/ET = V4LT30/C9NT36=	HI/HU	4.020	.000	-4.500
(Y4LT30)	△	IH85 (W.L. THEORY) OTS/ET = V4LT30/A9NT36=	HI/HU	4.020	.000	-4.500

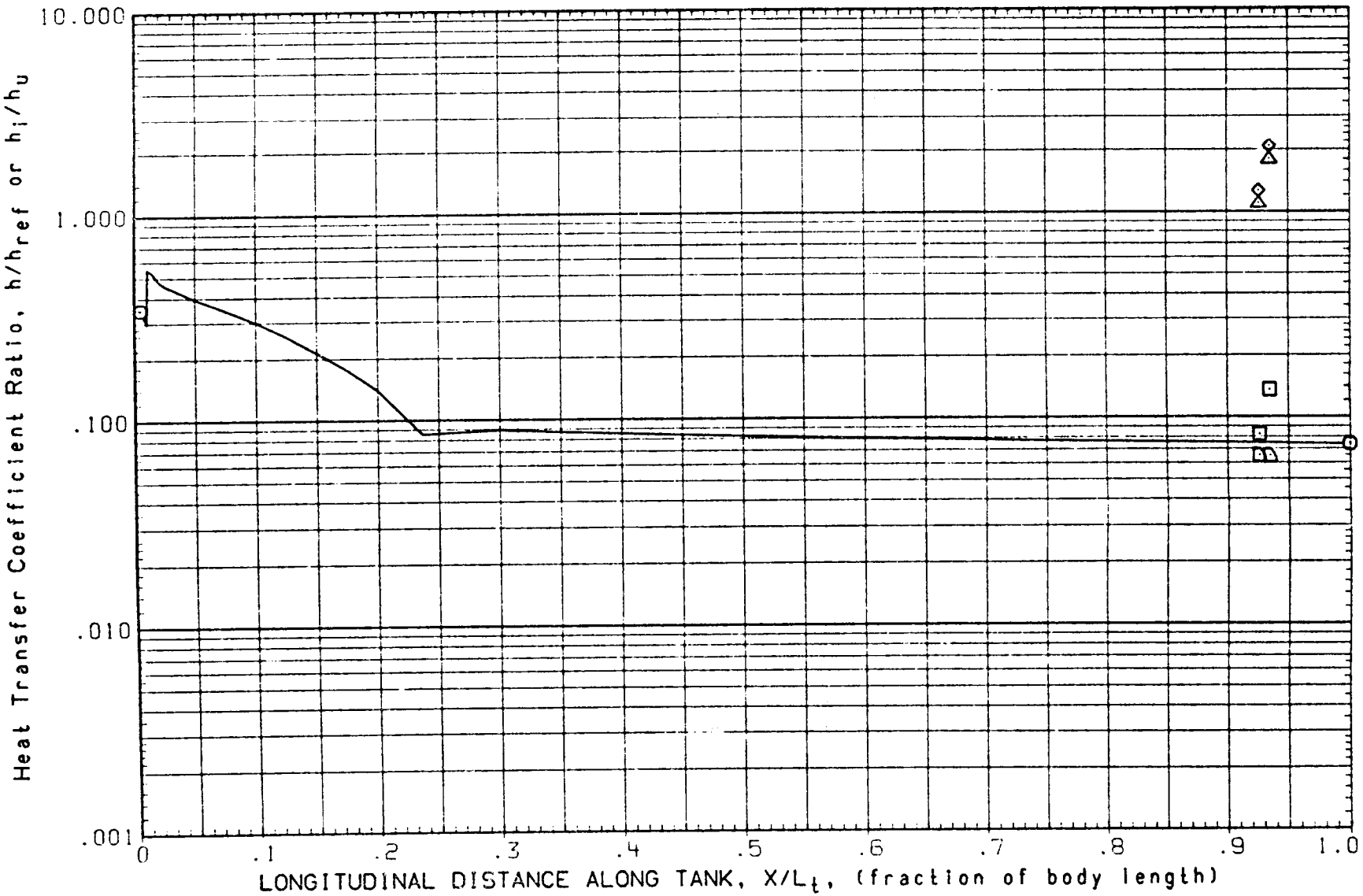

FIG. 4-5 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 258.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT36)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-4.500
(C9NT36)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-4.500
(V4LT30)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-4.500
(X4LT30)	◇	IH85 (W.L. TEST) OTS/ET = V4LT30/C9NT36=	HI/HU	4.020	.000	-4.500
(Y4LT30)	△	IH85 (W.L. THEORY) OTS/ET = V4LT30/A9NT36=	HI/HU	4.020	.000	-4.500

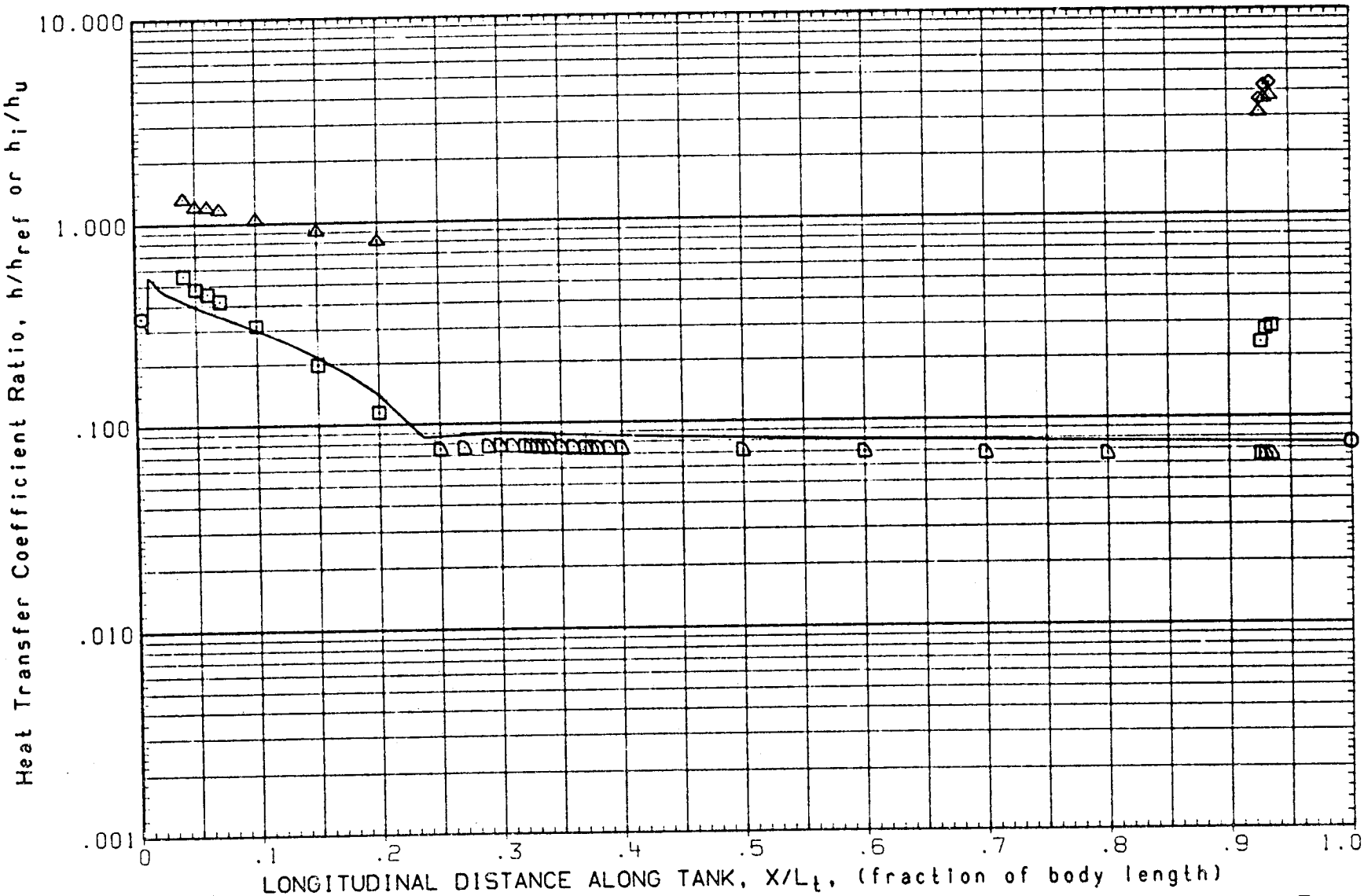

FIG. 4-5 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 270.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT36)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-4.500
(C9NT36)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-4.500
(V4LT30)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-4.500
(X4LT30)	◇	IH85 (W.L. TEST) OTS/ET = V4LT30/C9NT36=	HI/HU	4.020	.000	-4.500
(Y4LT30)	△	IH85 (W.L. THEORY) OTS/ET = V4LT30/A9NT36=	HI/HU	4.020	.000	-4.500

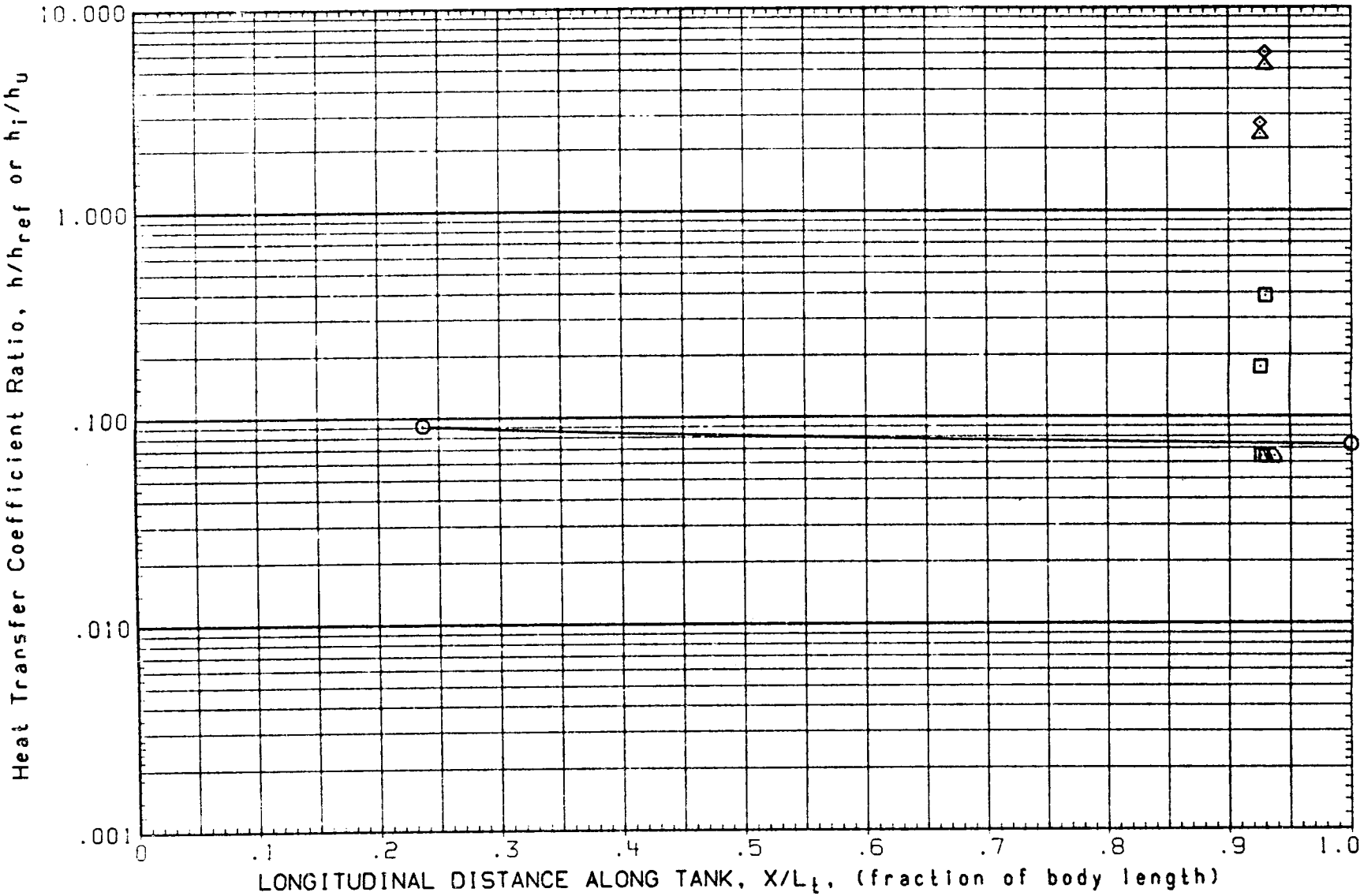

FIG. 4-5 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 289.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT36)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-4.500
(C9NT36)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-4.500
(V4LT30)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-4.500
(X4LT30)	◇	IH85 (W.L. TEST) OTS/ET = V4LT30/C9NT36=	HI/HU	4.020	.000	-4.500
(Y4LT30)	△	IH85 (W.L. THEORY) OTS/ET = V4LT30/A9NT36=	HI/HU	4.020	.000	-4.500

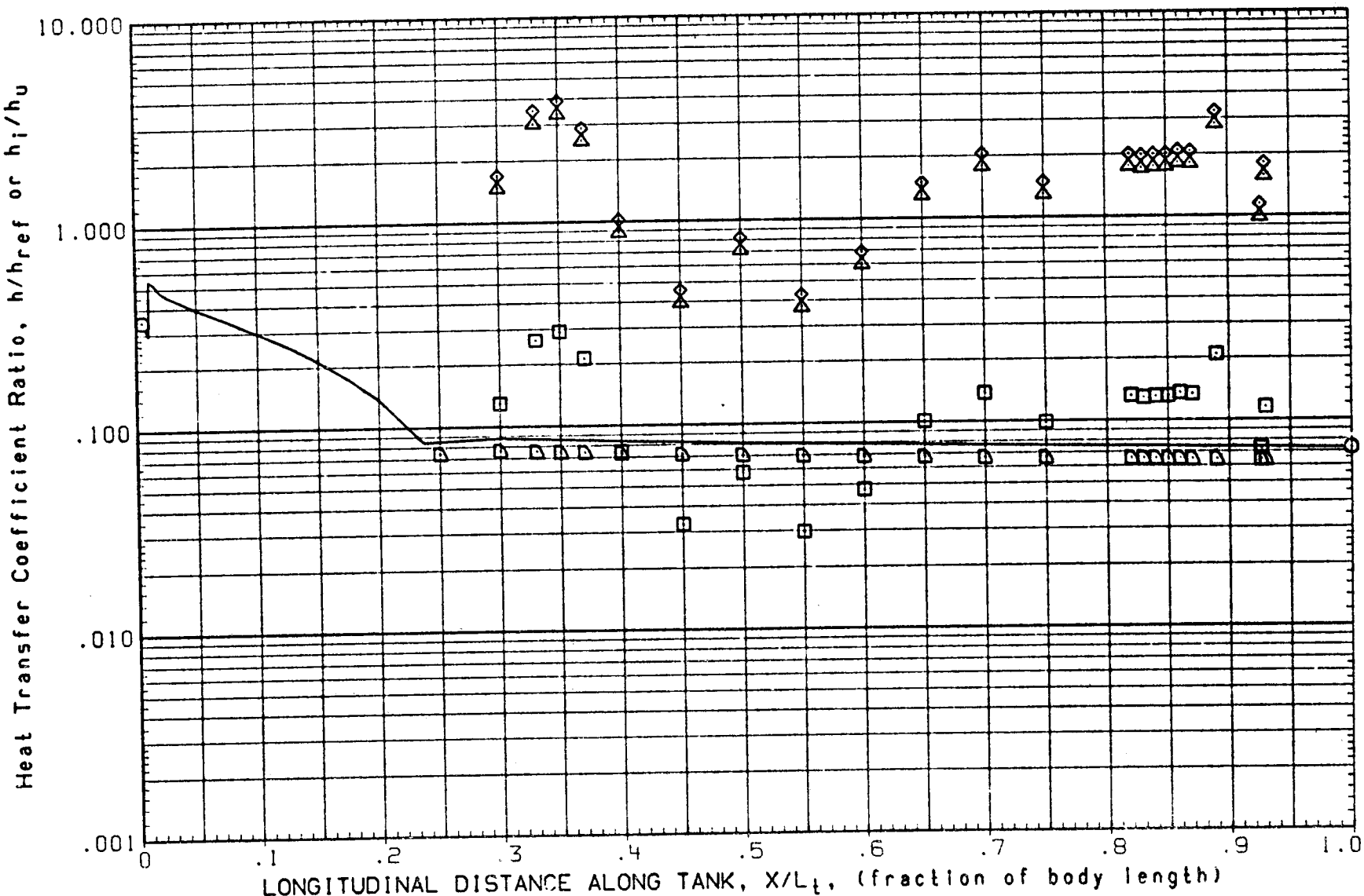

FIG. 4-5 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 292.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT36)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-4.500
(C9NT36)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-4.500
(V4LT30)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-4.500
(X4LT30)	◇	IH85 (W.L. TEST) OTS/ET = V4LT30/C9NT36=	HI/HU	4.020	.000	-4.500
(Y4LT30)	△	IH85 (W.L. THEORY) OTS/ET = V4LT30/A9NT36=	HI/HU	4.020	.000	-4.500

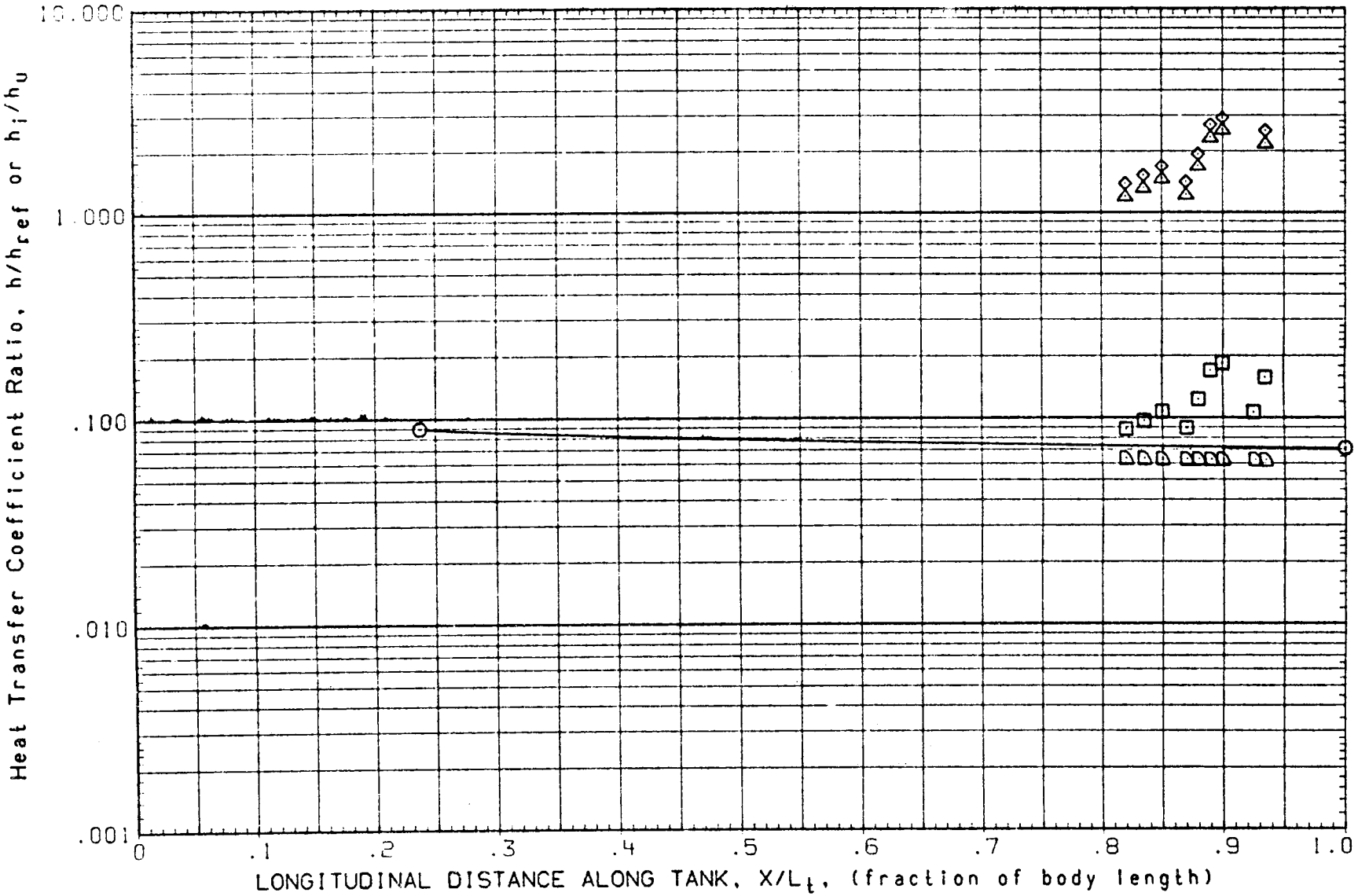

FIG. 4-5 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 301.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT36)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-4.500
(C9NT36)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-4.500
(V4LT30)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-4.500
(X4LT30)	◇	IH85 (W.L. TEST) OTS/ET = V4LT30/C9NT36=	HI/HU	4.020	.000	-4.500
(Y4LT30)	△	IH85 (W.L. THEORY) OTS/ET = V4LT30/A9NT36=	HI/HU	4.020	.000	-4.500

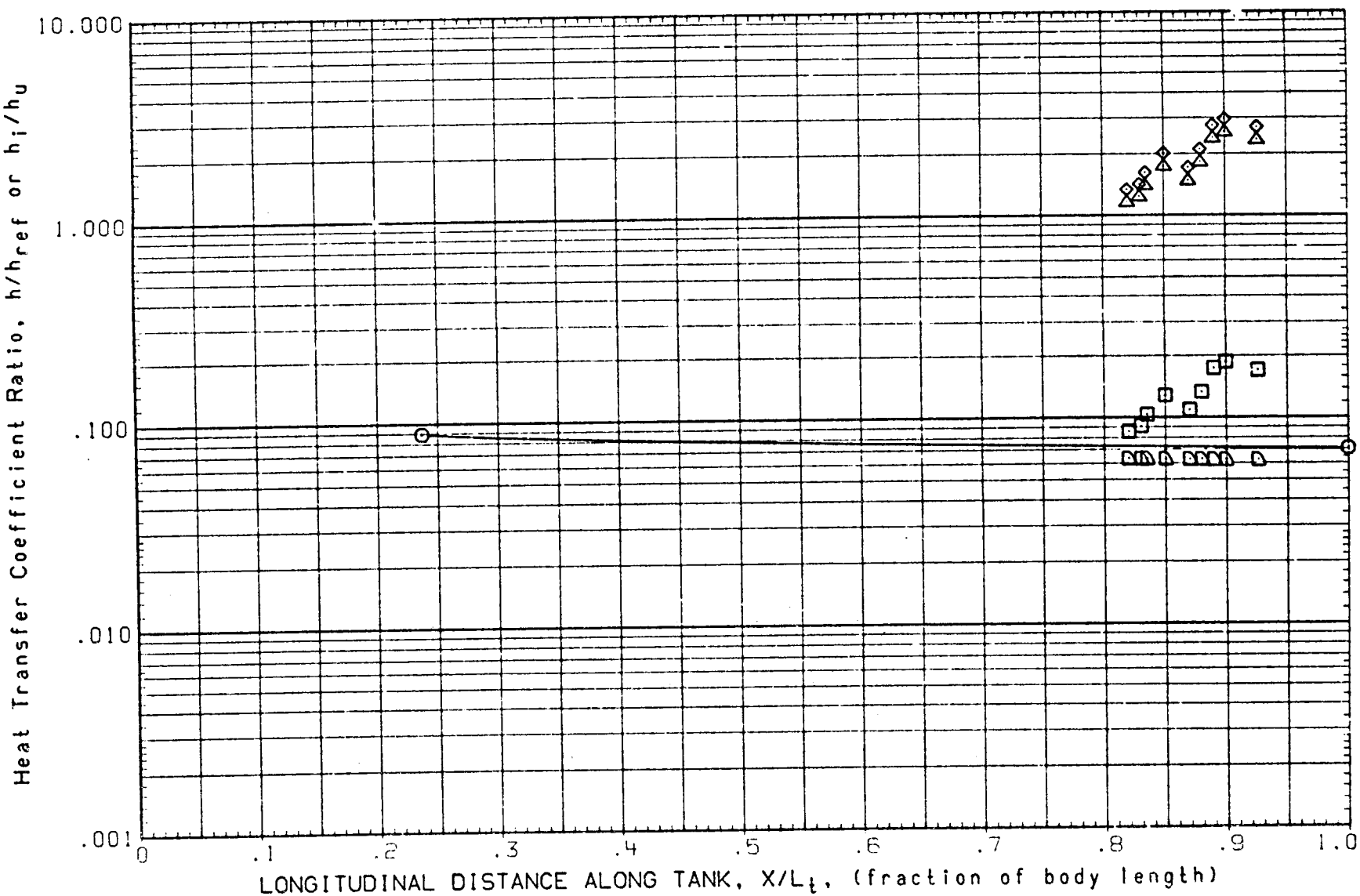

FIG. 4-5 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 305.400

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT36)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-4.500
(C9NT36)	△	TANK ALONE (REATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-4.500
(V4LT30)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-4.500
(X4LT30)	◇	IH85 (W.L. TEST) OTS/ET = V4LT30/C9NT36=	HI/HU	4.020	.000	-4.500
(Y4LT30)	△	IH85 (W.L. THEORY) OTS/ET = V4LT30/A9NT36=	HI/HU	4.020	.000	-4.500

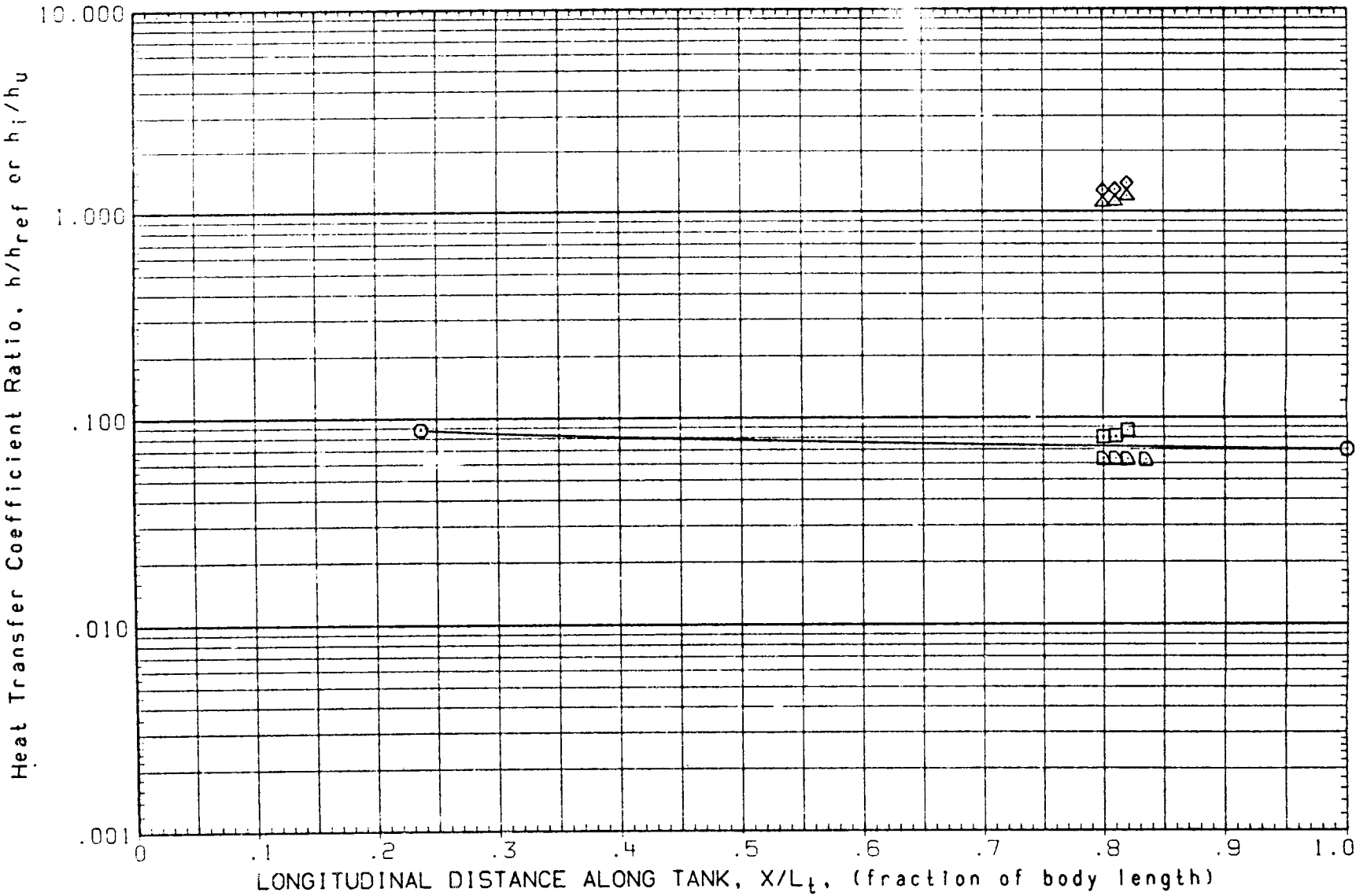

FIG. 4-5 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 309.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT36)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-4.500
(C9NT36)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-4.500
(V4LT30)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-4.500
(X4LT30)	◇	IH85 (W.L. TEST) OTS/ET = V4LT30/C9NT36=	HI/HU	4.020	.000	-4.500
(Y4LT30)	△	IH85 (W.L. THEORY) OTS/ET = V4LT30/A9NT36=	HI/HU	4.020	.000	-4.500

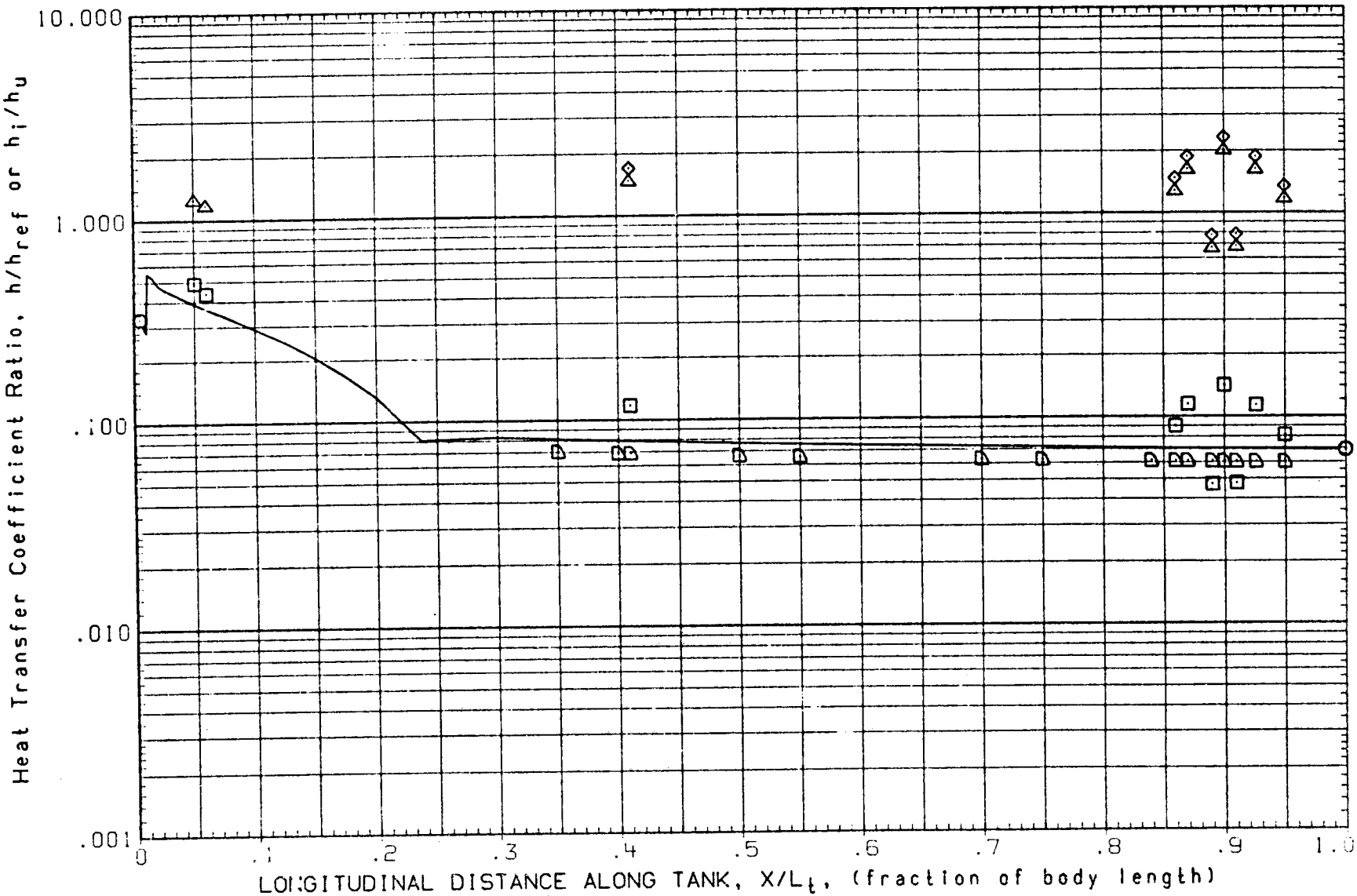

FIG. 4-5 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 315.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(C9NT36)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-4.500
(C9NT36)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-4.500
(V4LT30)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-4.500
(X4LT30)	◇	IH85 (W.L. TEST) OTS/ET = V4LT30/C9NT36=	HI/HU	4.020	.000	-4.500
(Y4LT30)	△	IH85 (W.L. THEORY) OTS/ET = V4LT30/A9NT36=	HI/HU	4.020	.000	-4.500

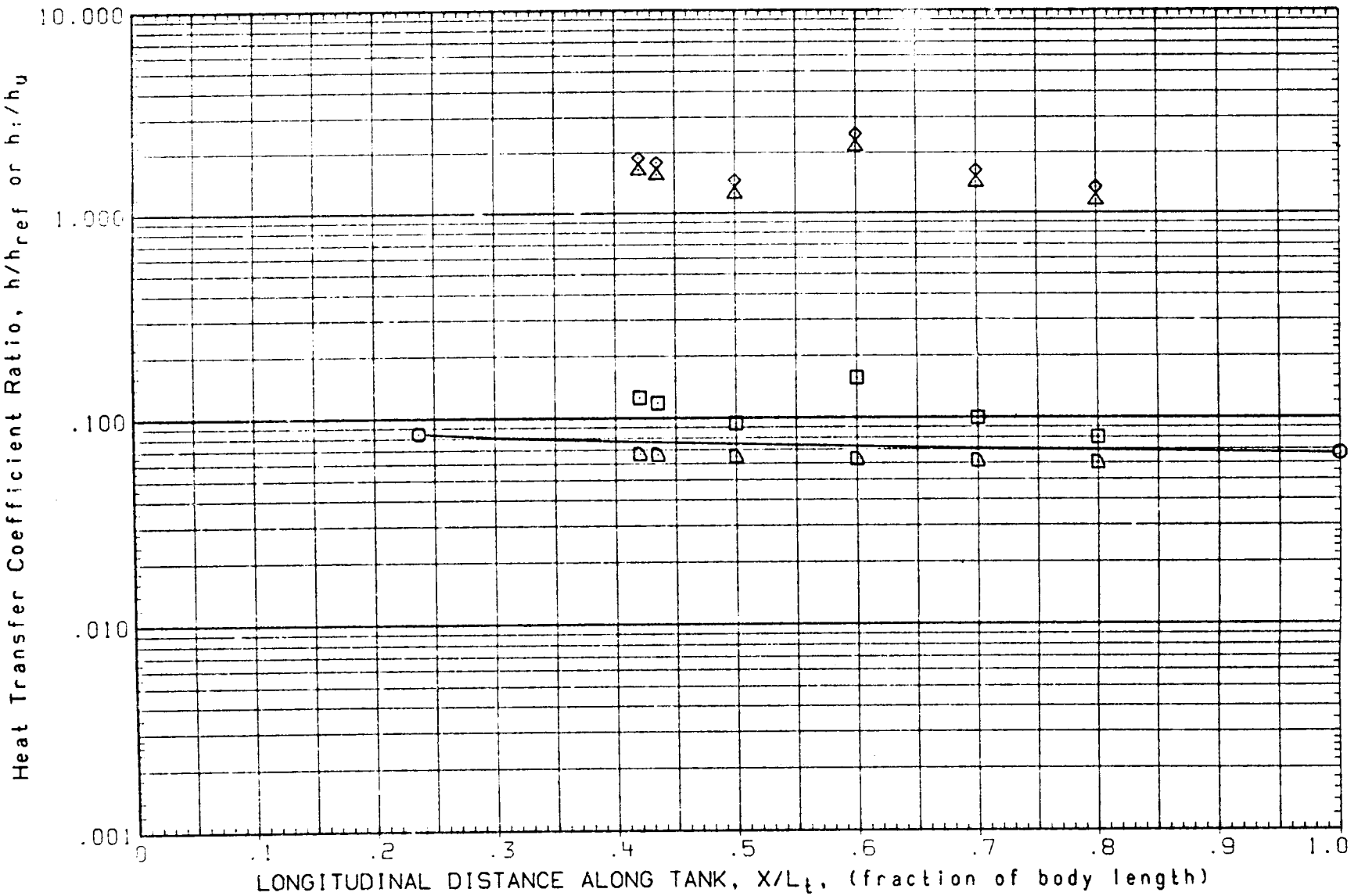

FIG. 4-5 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 322.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT36)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-4.500
(C9NT36)	□	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-4.500
(V4LT30)	⊡	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-4.500
(X4LT30)	◇	IH85 (W.L. TEST) OTS/ET = V4LT30/C9NT36=	HI/HU	4.020	.000	-4.500
(Y4LT30)	△	IH85 (W.L. THEORY) OTS/ET = V4LT30/A9NT36=	HI/HU	4.020	.000	-4.500

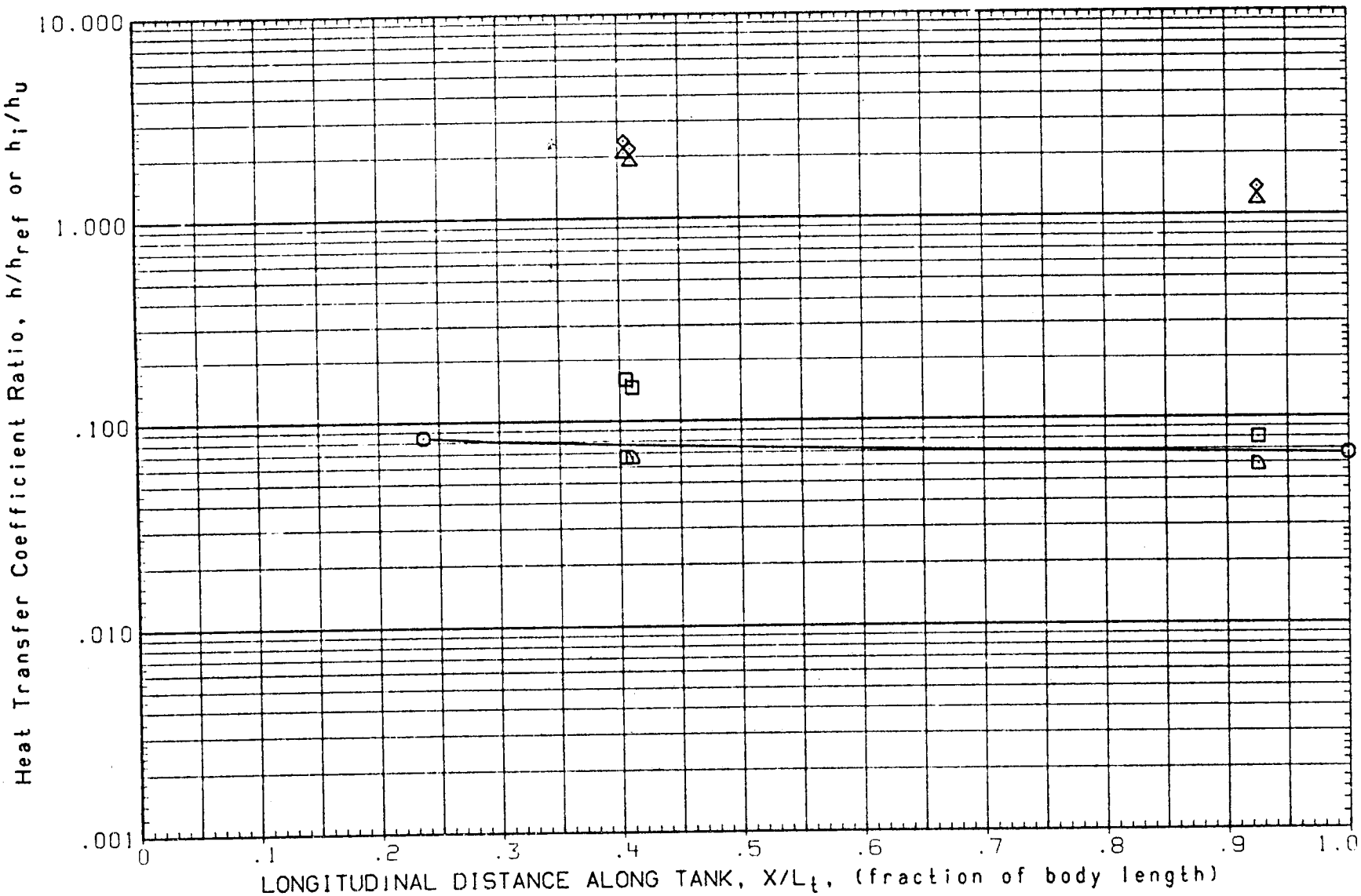

FIG. 4-5 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 324.450

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT36)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-4.500
(C9NT36)	□	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-4.500
(V4LT30)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-4.500
(V4LT30)	◇	IH85 (W.L. TEST) OTS/ET = V4LT30/C9NT36= HI/HU		4.020	.000	-4.500
(V4LT30)	△	IH95 (W.L. THEORY) OTS/ET = V4LT30/A9NT36= HI/HU		4.020	.000	-4.500

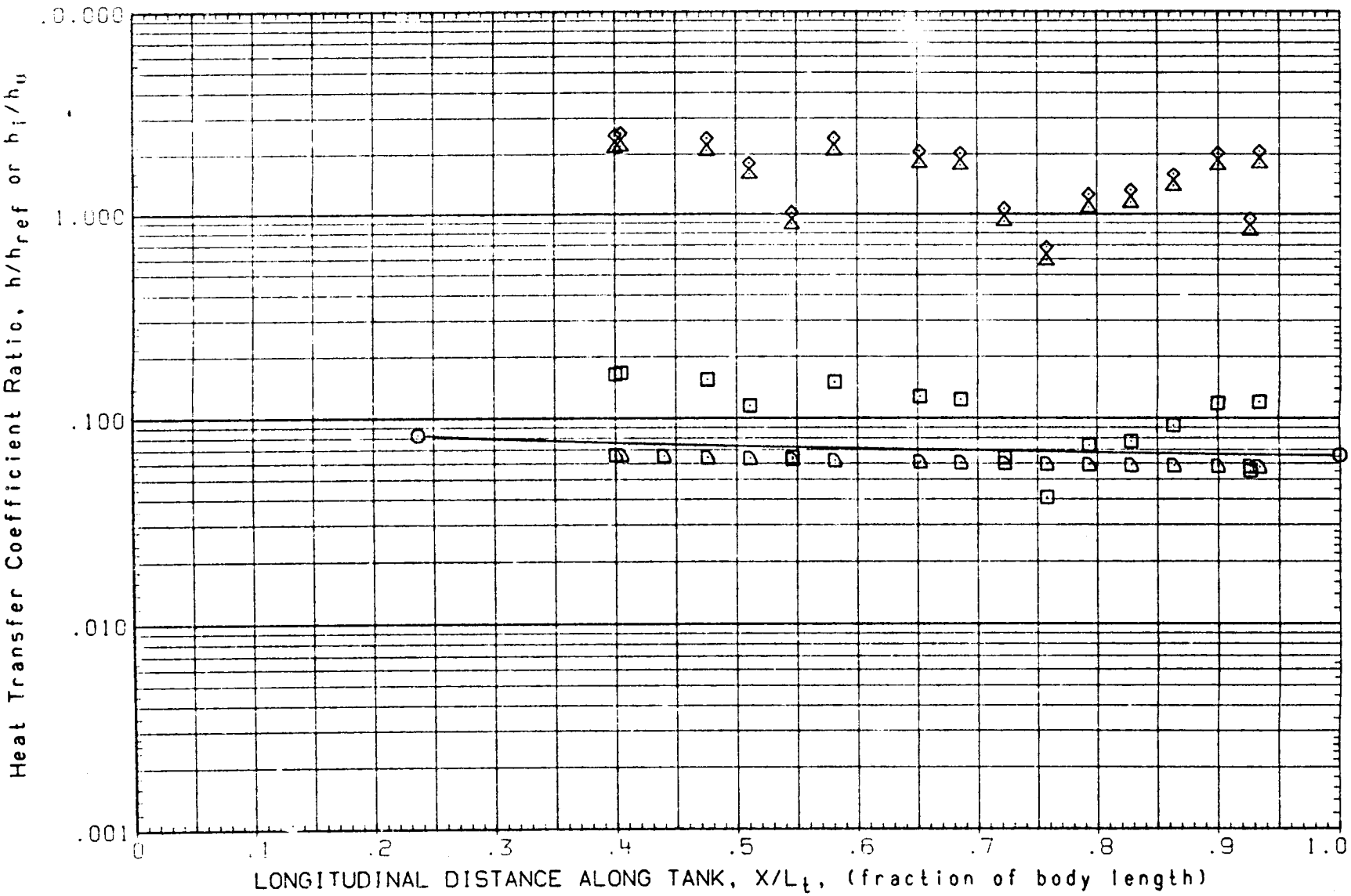

FIG. 4-5 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 326.850

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT36)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-4.500
(C9NT36)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-4.500
(V4LT30)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-4.500
(X4LT30)	◇	IH85 (W.L. TEST) OTS/ET = V4LT30/C9NT36=	HI/HU	4.020	.000	-4.500
(Y4LT30)	△	IH85 (W.L. THEORY) OTS/ET = V4LT30/A9NT36=	HI/HU	4.020	.000	-4.500

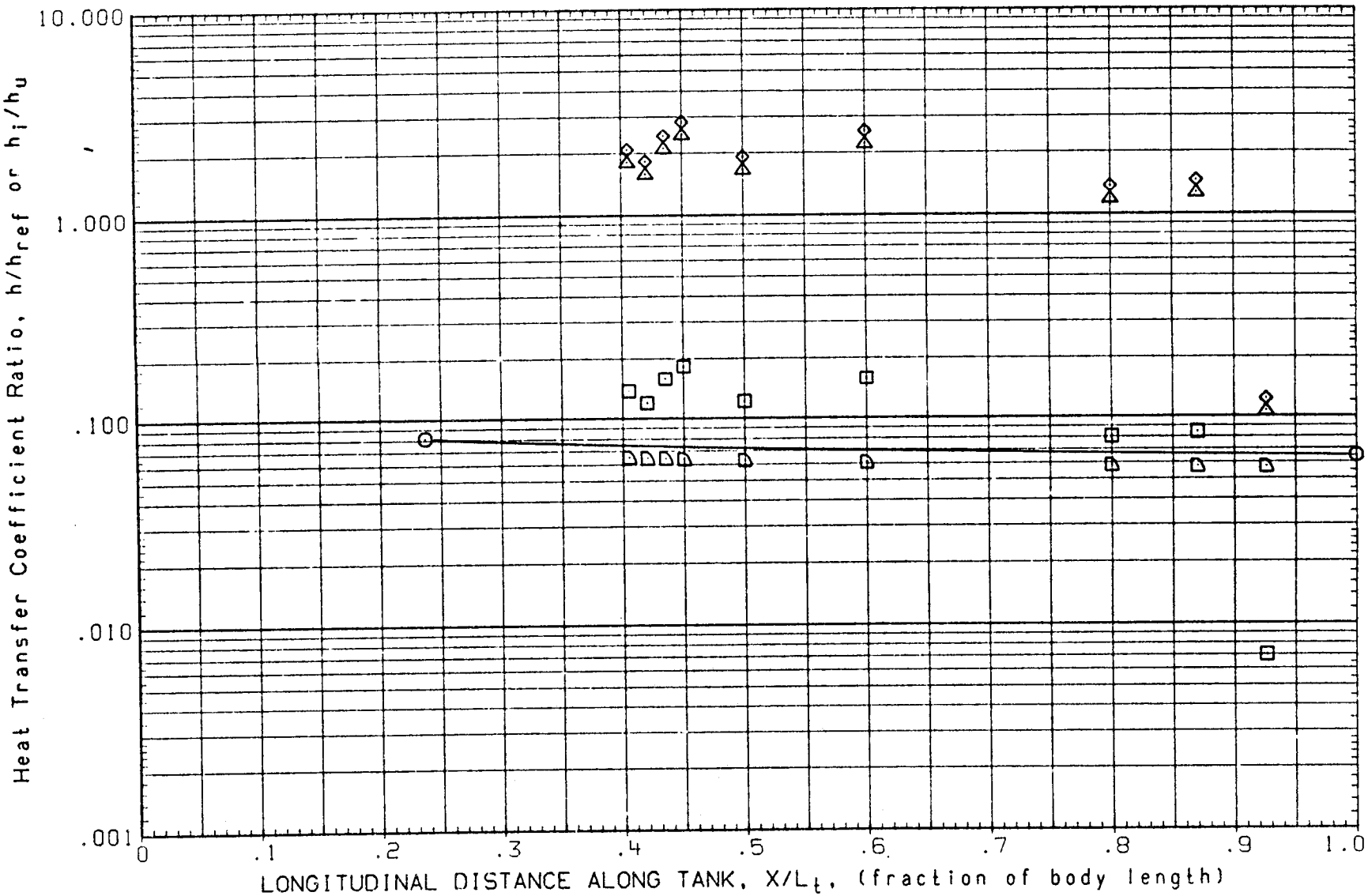

FIG. 4-5 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 330.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(C9NT36)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-4.500
(C9NT36)	□	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-4.500
(V4LT30)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-4.500
(X4LT30)	◇	IH85 (W.L. TEST) OTS/ET = V4LT30/C9NT36=	HI/HU	4.020	.000	-4.500
(Y4LT30)	△	IH85 (W.L. THEORY) OTS/ET = V4LT30/A9NT36=	HI/HU	4.020	.000	-4.500

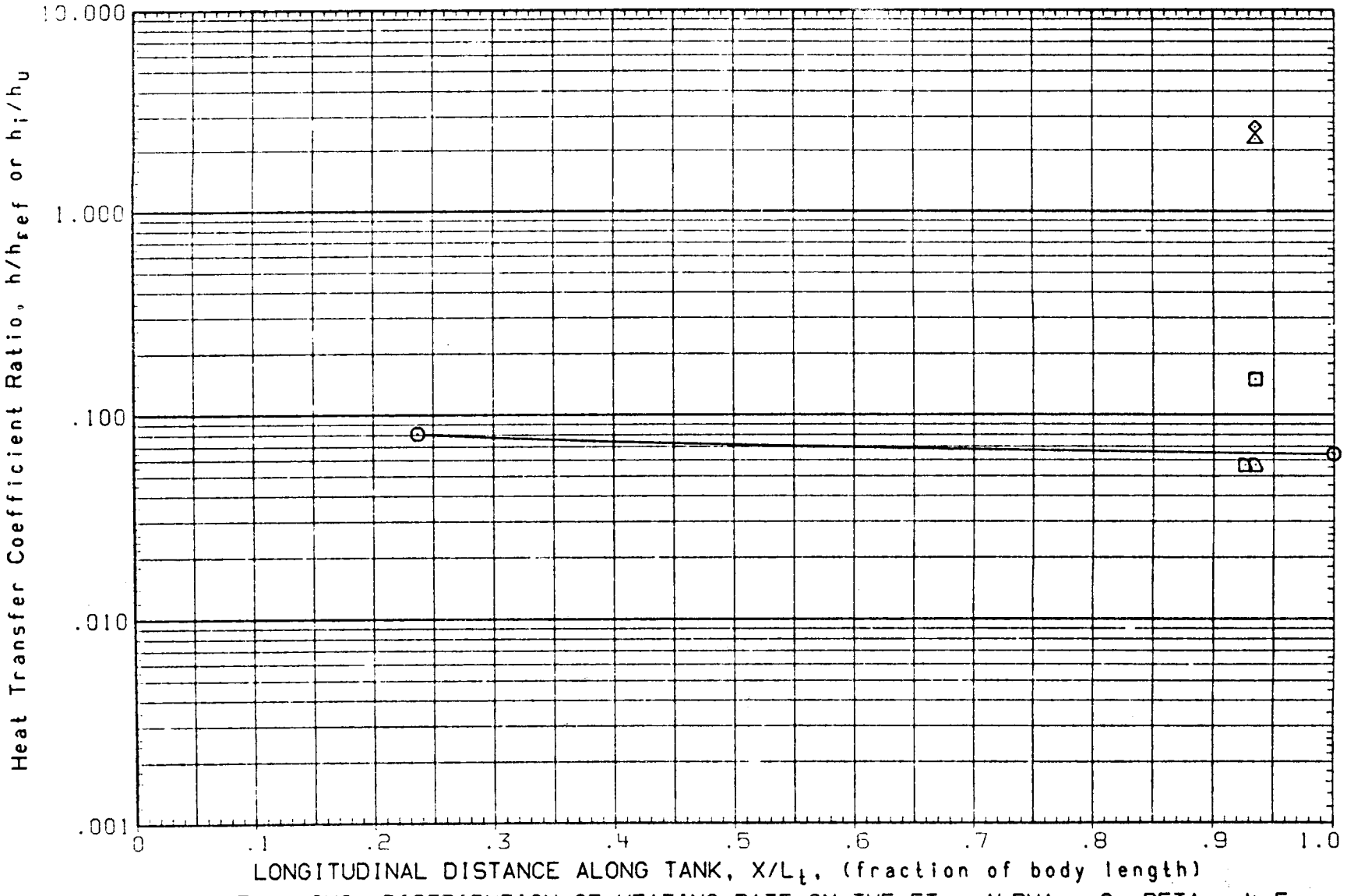

FIG. 4-5 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 334.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT36)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-4.500
(C9NT36)	⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-4.500
(V4LT30)	□	IH85, AEDC V41A-W5, CONFIGURATION O (T) S		4.020	.000	-4.500
(X4LT30)	◇	IH85 (W.L. TEST) OTS/ET = V4LT30/C9NT36=	HI/HU	4.020	.000	-4.500
(Y4LT30)	△	IH85 (W.L. THEORY) OTS/ET = V4LT30/A9NT36=	HI/HU	4.020	.000	-4.500

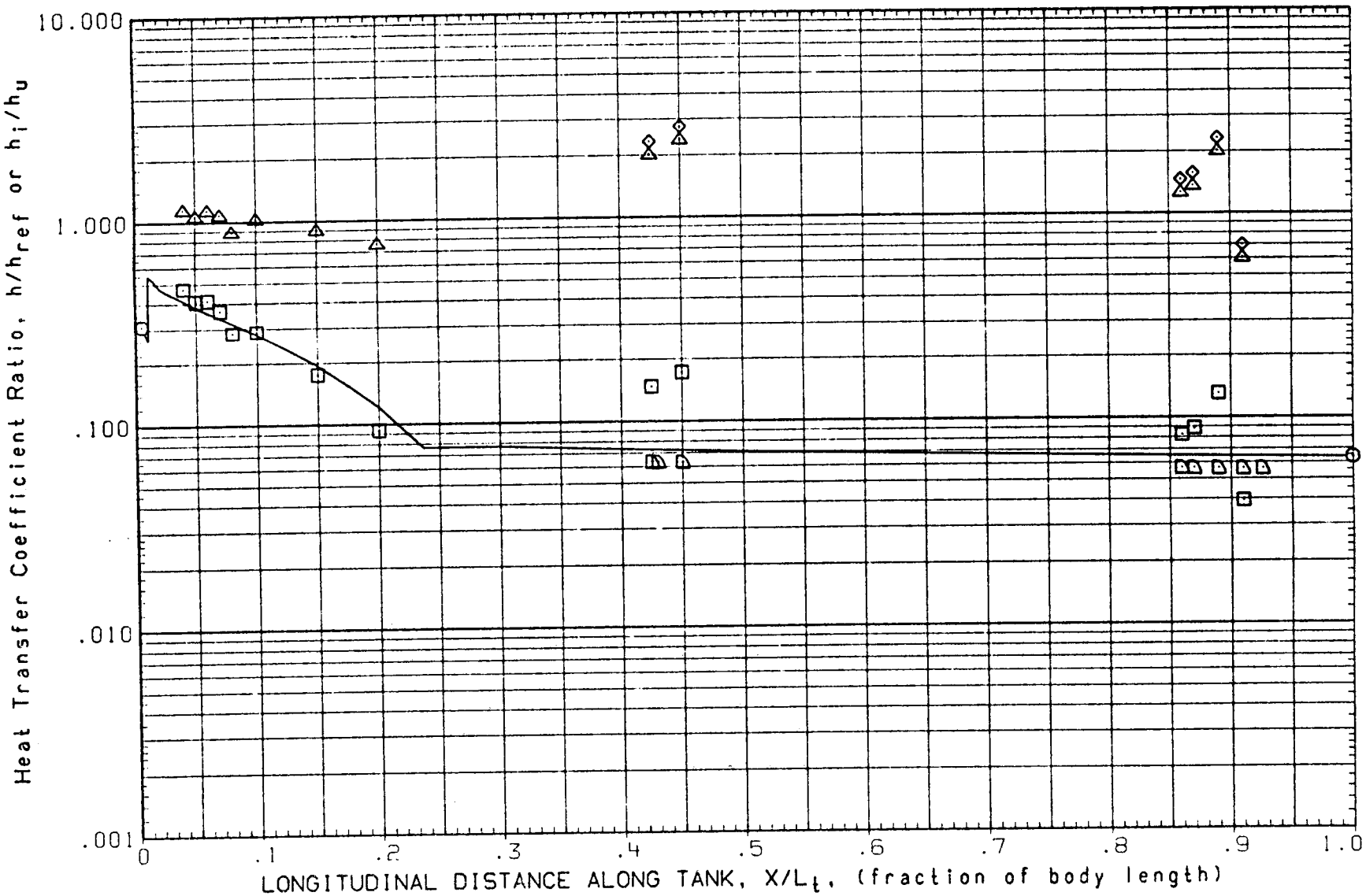

FIG. 4-5 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 337.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(02NT36)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-4.500
(03NT36)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-4.500
(V4LT30)	□	DATA NOT AVAILABLE		4.020	.000	-4.500
(X4LT30)	◇	DATA NOT AVAILABLE		4.020	.000	-4.500
(Y4LT30)	△	DATA NOT AVAILABLE		4.020	.000	-4.500

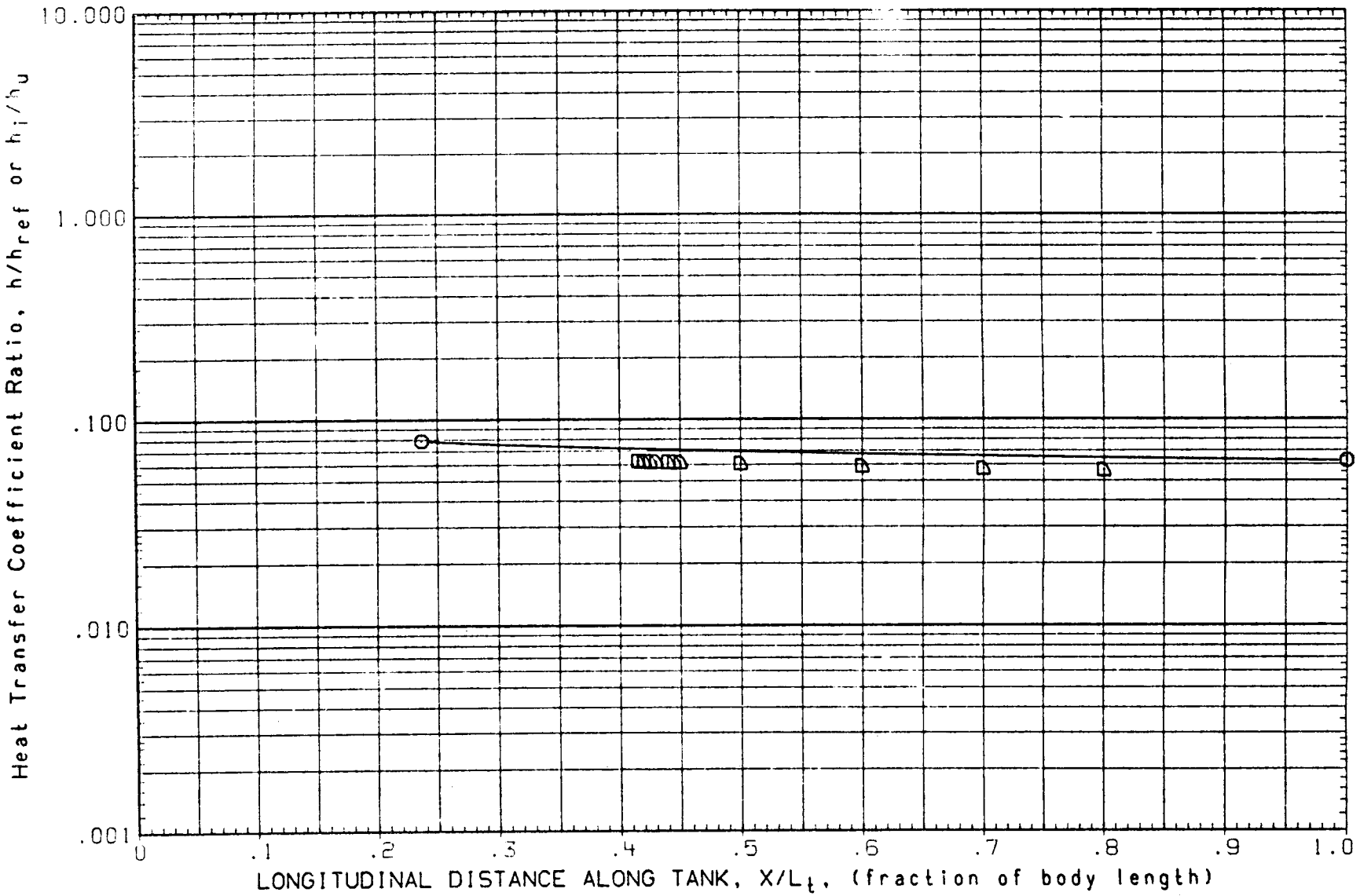

FIG. 4-5 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 343.120

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT36)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-4.500
(C9NT36)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-4.500
(V4LT30)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-4.500
(X4LT30)	◇	IH85 (W.L. TEST) OTS/ET = V4LT30/C9NT36=	HI/HU	4.020	.000	-4.500
(Y4LT30)	△	IH85 (W.L. THEORY) OTS/ET = V4LT30/A9NT36=	HI/HU	4.020	.000	-4.500

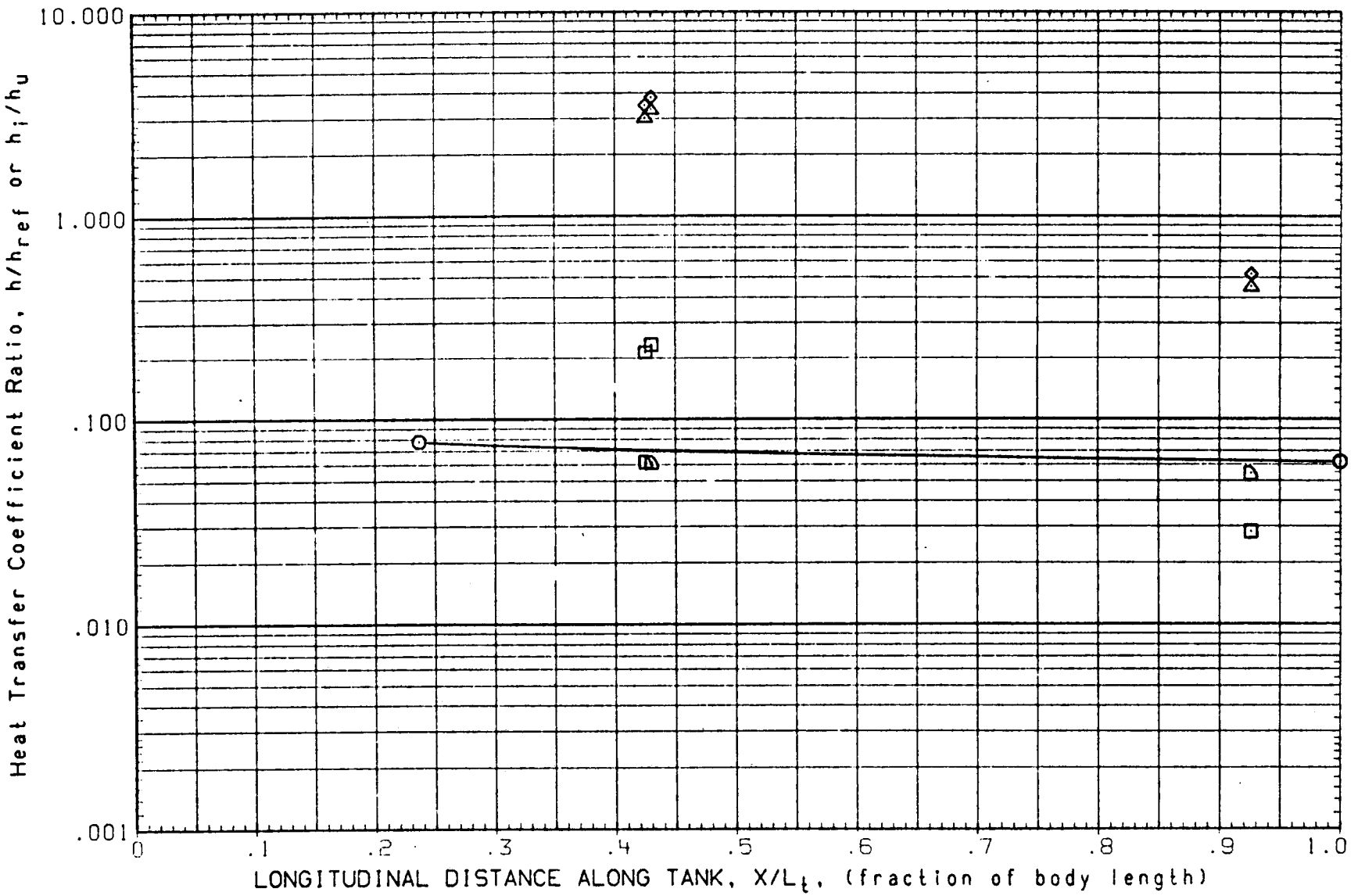

FIG. 4-5 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 345.560

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT36)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-4.500
(C9NT36)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-4.500
(V4LT30)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-4.500
(X4LT30)	◇	IH85 (W.L. TEST) OTS/ET = V4LT30/C9NT36=	HI/HU	4.020	.000	-4.500
(Y4LT30)	△	IH85 (W.L. THEORY) OTS/ET = V4LT30/A9NT36=	HI/HU	4.020	.000	-4.500

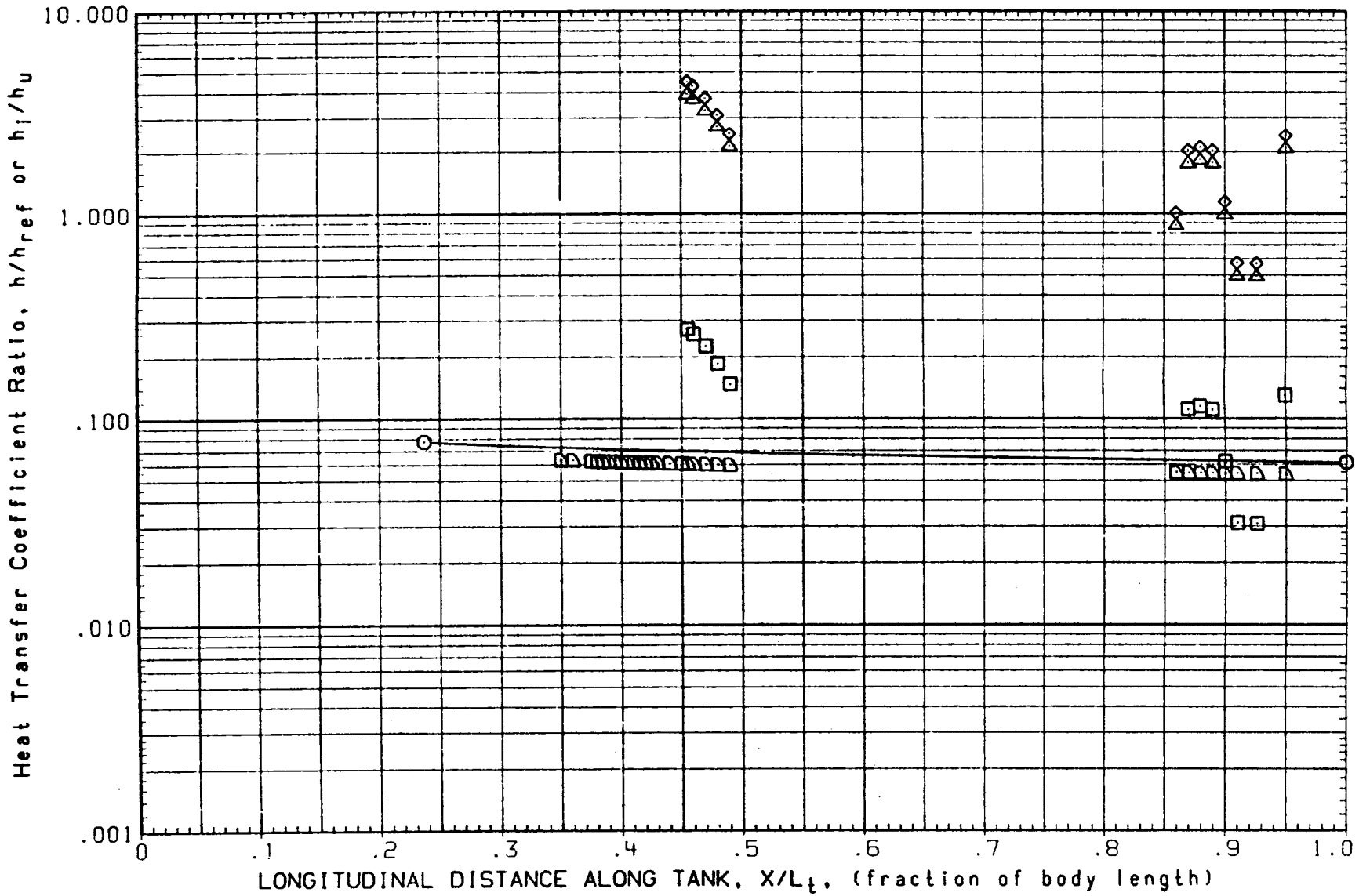

FIG. 4-5 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 348.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT36)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	4.020	.000	-4.500
(C9NT36)	⌂	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	4.020	.000	-4.500
(V4LT30)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	.000	-4.500
(X4LT30)	◇	IH85 (W.L. TEST) OTS/ET = V4LT30/C9NT36= HI/HU	4.020	.000	-4.500
(Y4LT30)	△	IH85 (W.L. THEORY) OTS/ET = V4LT30/A9NT36= HI/HU	4.020	.000	-4.500

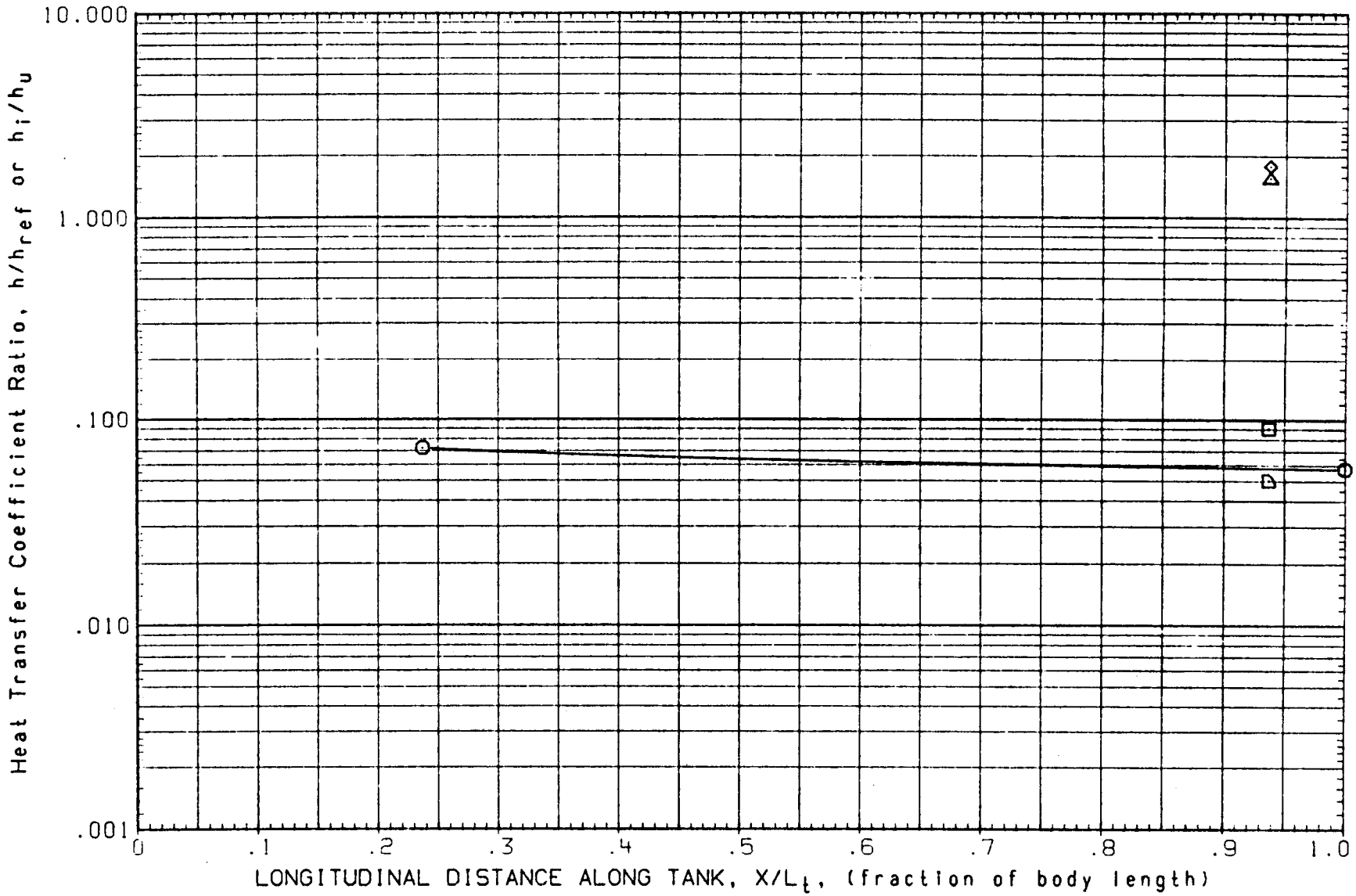

FIG. 4-5 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 352.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT36)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-4.500
(C9NT36)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	-4.500
(V4LT30)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	-4.500
(X4LT30)	◇	IH85 (W.L. TEST) OTS/ET = V4LT30/C9NT36=	HI/HU	4.020	.000	-4.500
(Y4LT30)	△	IH85 (W.L. THEORY) OTS/ET = V4LT30/A9NT36=	HI/HU	4.020	.000	-4.500

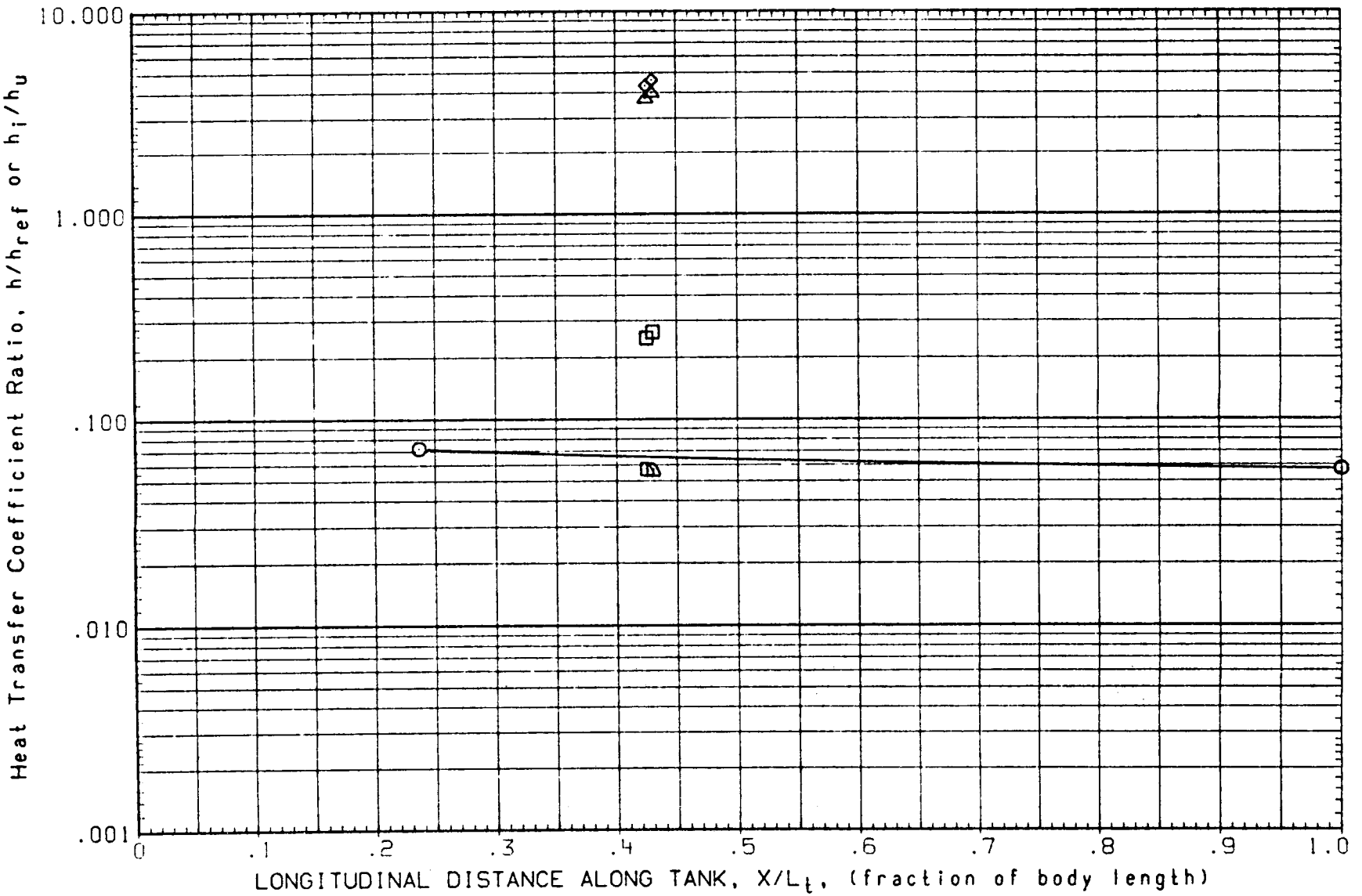

FIG. 4-5 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 354.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT36)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-4.500
(C9NT36)	⬔	DATA NOT AVAILABLE		4.020	.000	-4.500
(V4LT30)	□	DATA NOT AVAILABLE		4.020	.000	-4.500
(X4LT30)	◇	DATA NOT AVAILABLE		4.020	.000	-4.500
(Y4LT30)	△	DATA NOT AVAILABLE		4.020	.000	-4.500

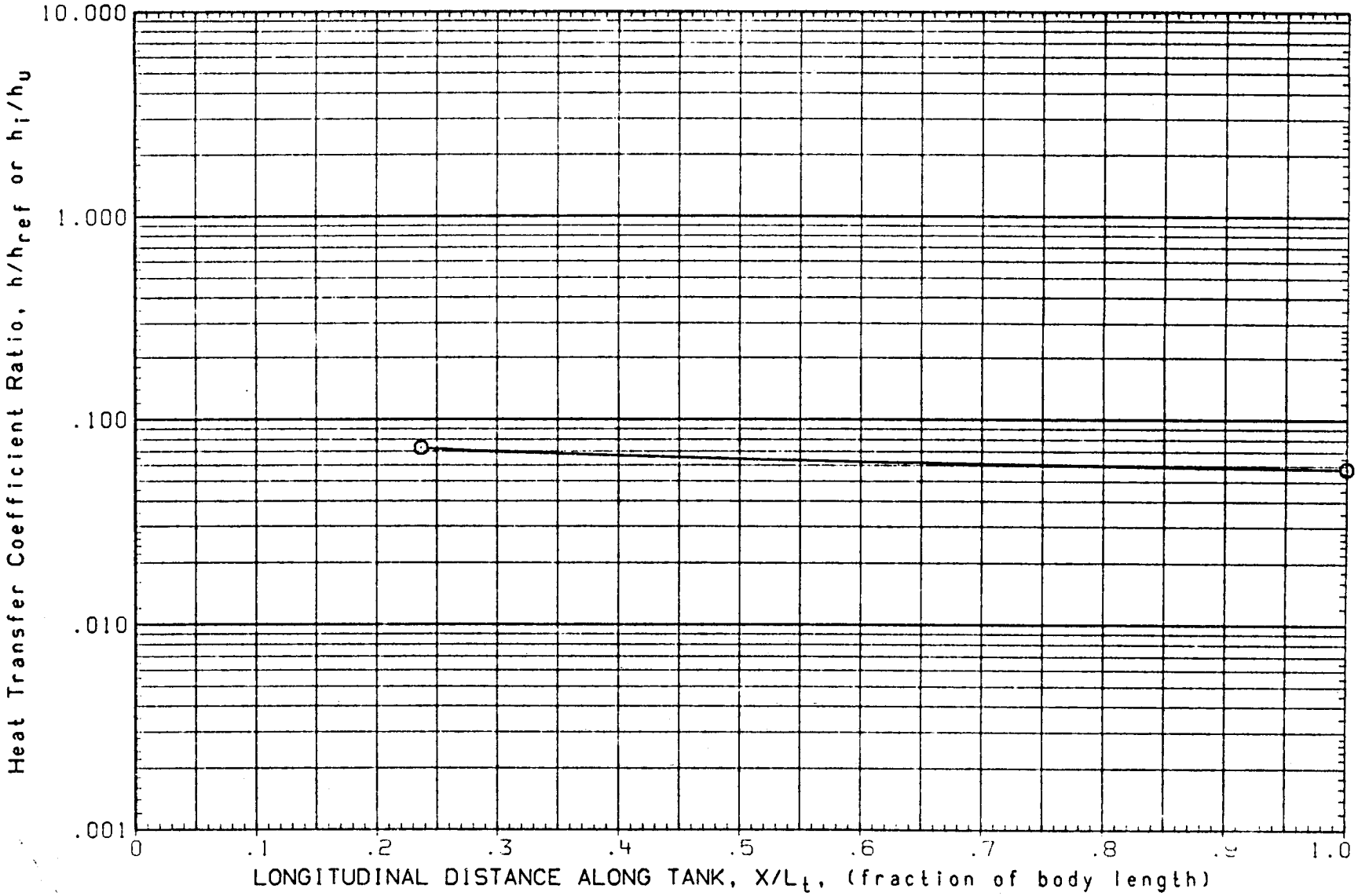

FIG. 4-5 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 355.160

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT36)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	-4.500
(C9NT36)	⬠	DATA NOT AVAILABLE		4.020	.000	-4.500
(V4LT30)	□	DATA NOT AVAILABLE		4.020	.000	-4.500
(X4LT30)	◇	DATA NOT AVAILABLE		4.020	.000	-4.500
(Y4LT30)	△	DATA NOT AVAILABLE		4.020	.000	-4.500

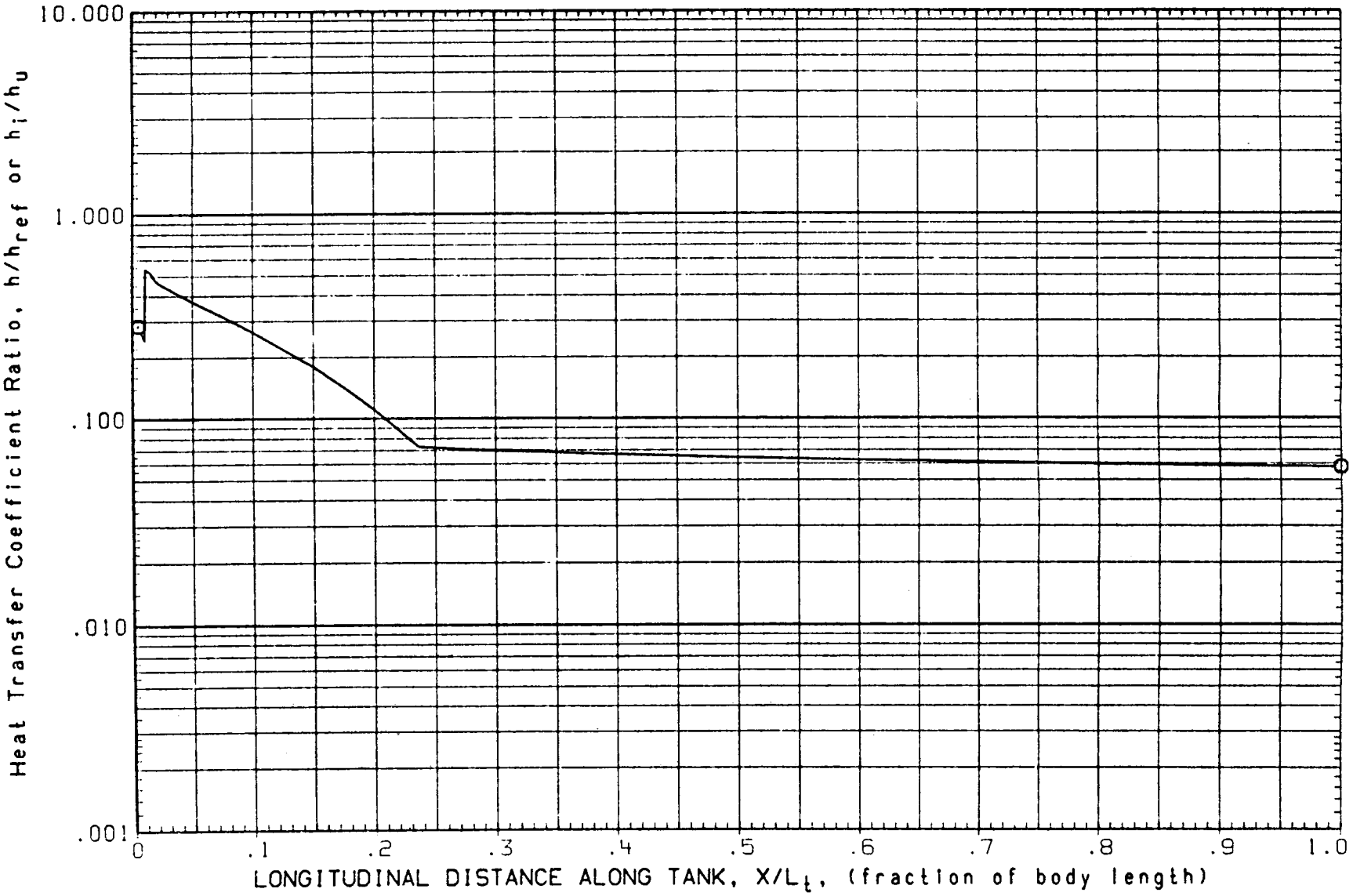

FIG. 4-5 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 360.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT38)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	.000
(C9NT38)	⊏⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	.000
(V4LT32)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	.000
(X4LT32)	◇	IH85 (W.L. TEST) OTS/ET = V4LT32/C9NT38= HI/HU		4.020	.000	.000
(Y4LT32)	△	IH85 (W.L. THEORY) OTS/ET = V4LT32/A9NT38= HI/HU		4.020	.000	.000

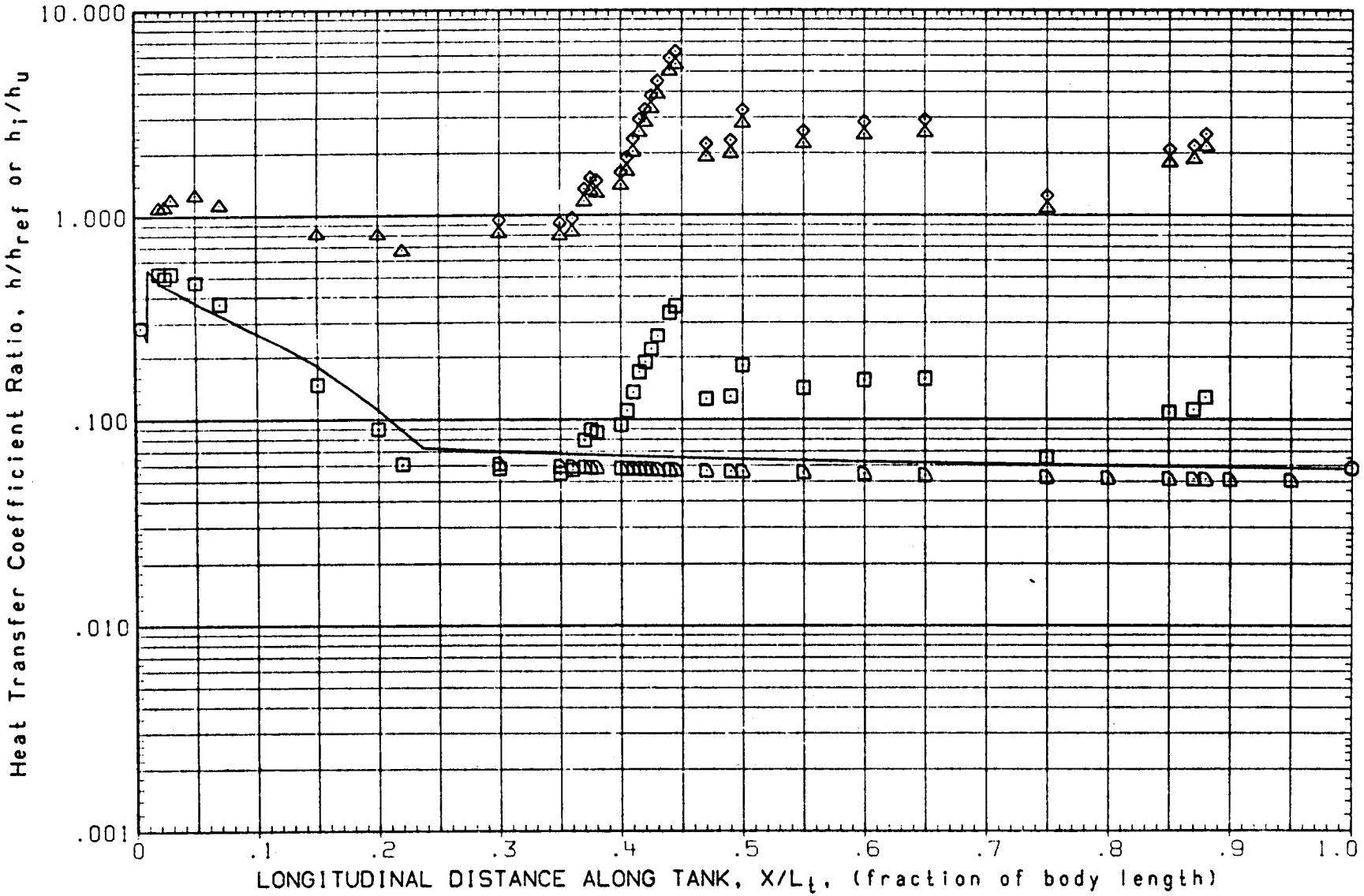

FIG. 4-6 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = .000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT38)	○	DATA NOT AVAILABLE	4.020	.000	.000
(C9NT38)	⊐	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	4.020	.000	.000
(V4LT32)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	.000	.000
(X4LT32)	◇	IH85 (W.L. TEST) OTS/ET = V4LT32/C9NT38= HI/HU	4.020	.000	.000
(Y4LT32)	△	IH85 (W.L. THEORY) OTS/ET = V4LT32/A9NT38= HI/HU	4.020	.000	.000

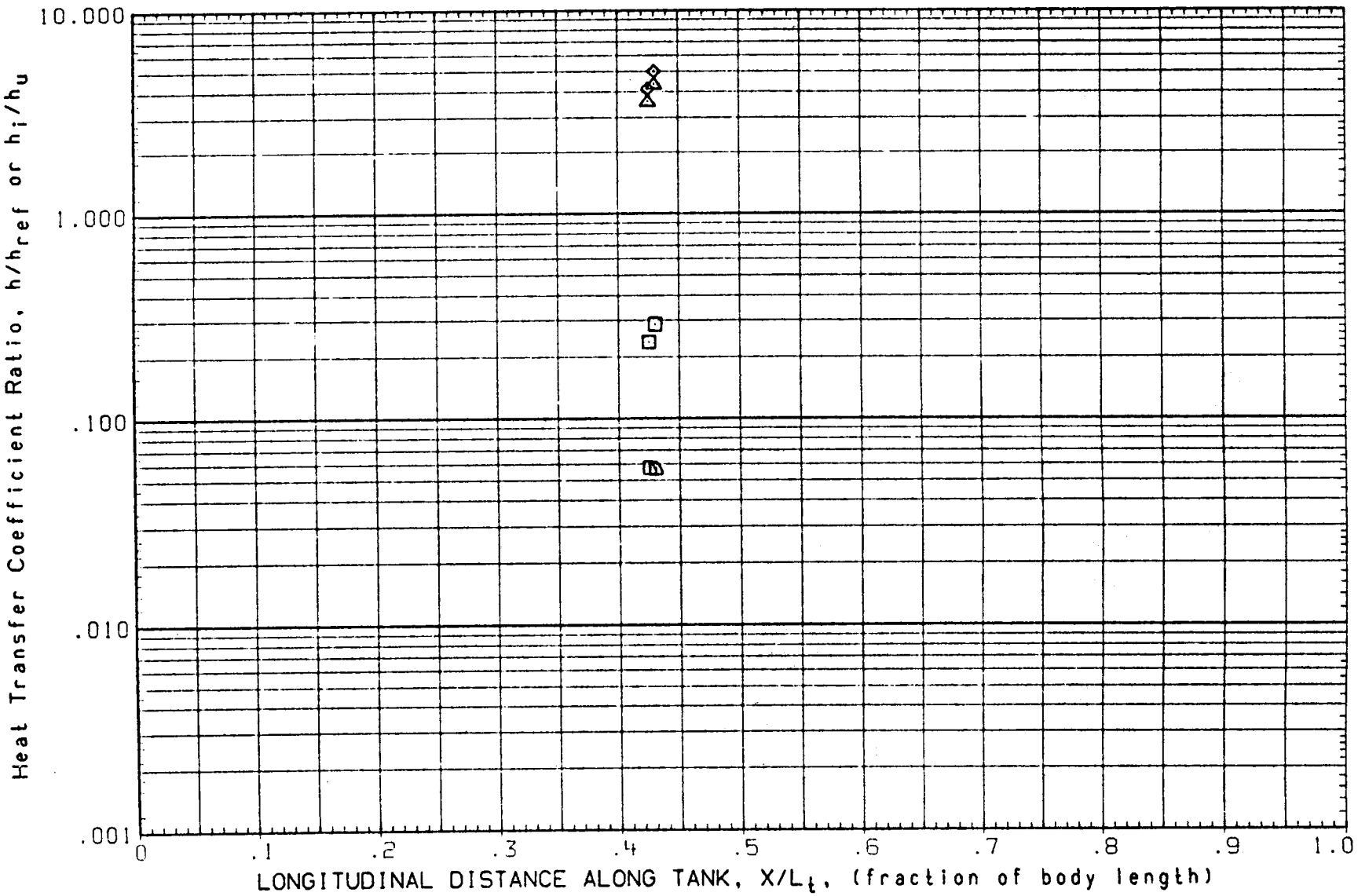

FIG. 4-6 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 5.625

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT38)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	.000
(C9NT38)	◗	DATA NOT AVAILABLE		4.020	.000	.000
(Y4LT32)	□	DATA NOT AVAILABLE		4.020	.000	.000
(X4LT32)	◇	DATA NOT AVAILABLE		4.020	.000	.000
(Y4LT32)	△	DATA NOT AVAILABLE		4.020	.000	.000

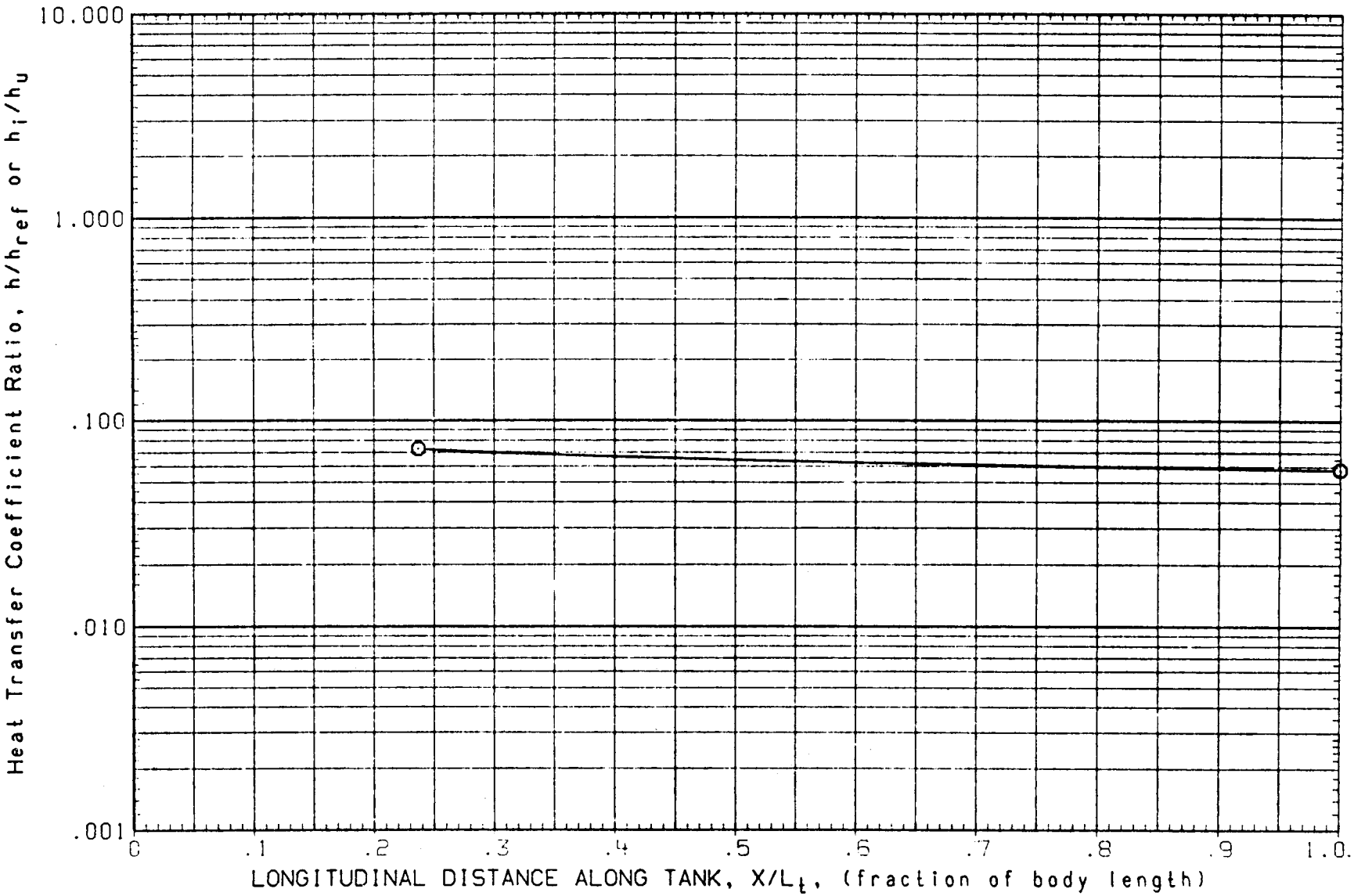

FIG. 4-6 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 5.630

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(C9NT38)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	.000
(C9NT38)	◐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	.000
(V4LT32)	□	IHR5, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	.000
(X4LT32)	◇	IHR5 (W.L. TEST) OTS/ET = V4LT32/C9NT38=	HI/HU	4.020	.000	.000
(Y4LT32)	△	IHR5 (W.L. THEORY) OTS/ET = V4LT32/A9NT38=	HI/HU	4.020	.000	.000

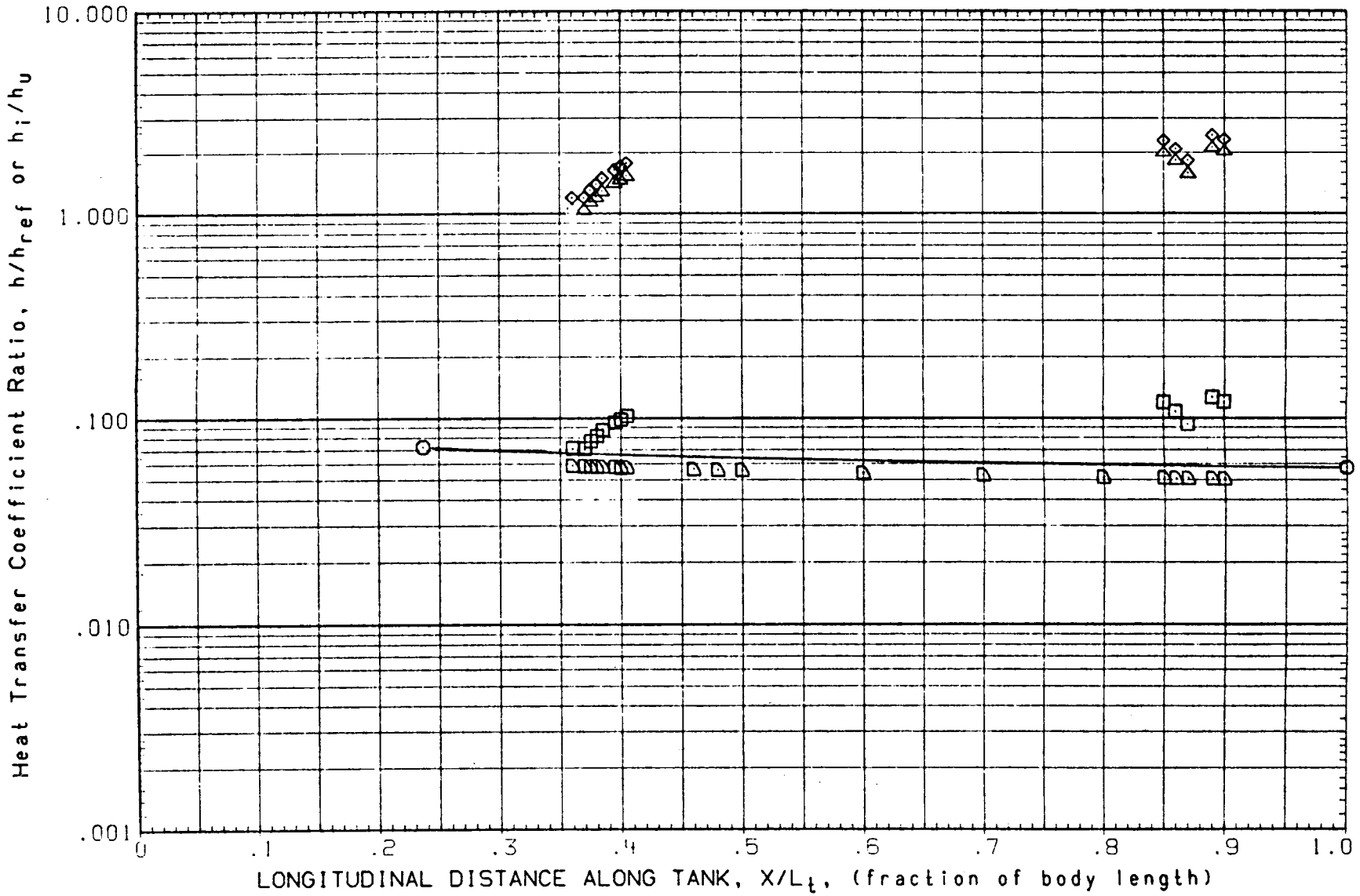

FIG. 4-6 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 11.250

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT38)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	.000
(C9NT38)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	.000
(V4LT32)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	.000
(X4LT32)	◇	IH85 (W.L. TEST) OTS/ET = V4LT32/C9NT38=	HI/HU	4.020	.000	.000
(Y4LT32)	△	IH85 (W.L. THEORY) OTS/ET = V4LT32/A9NT38=	HI/HU	4.020	.000	.000

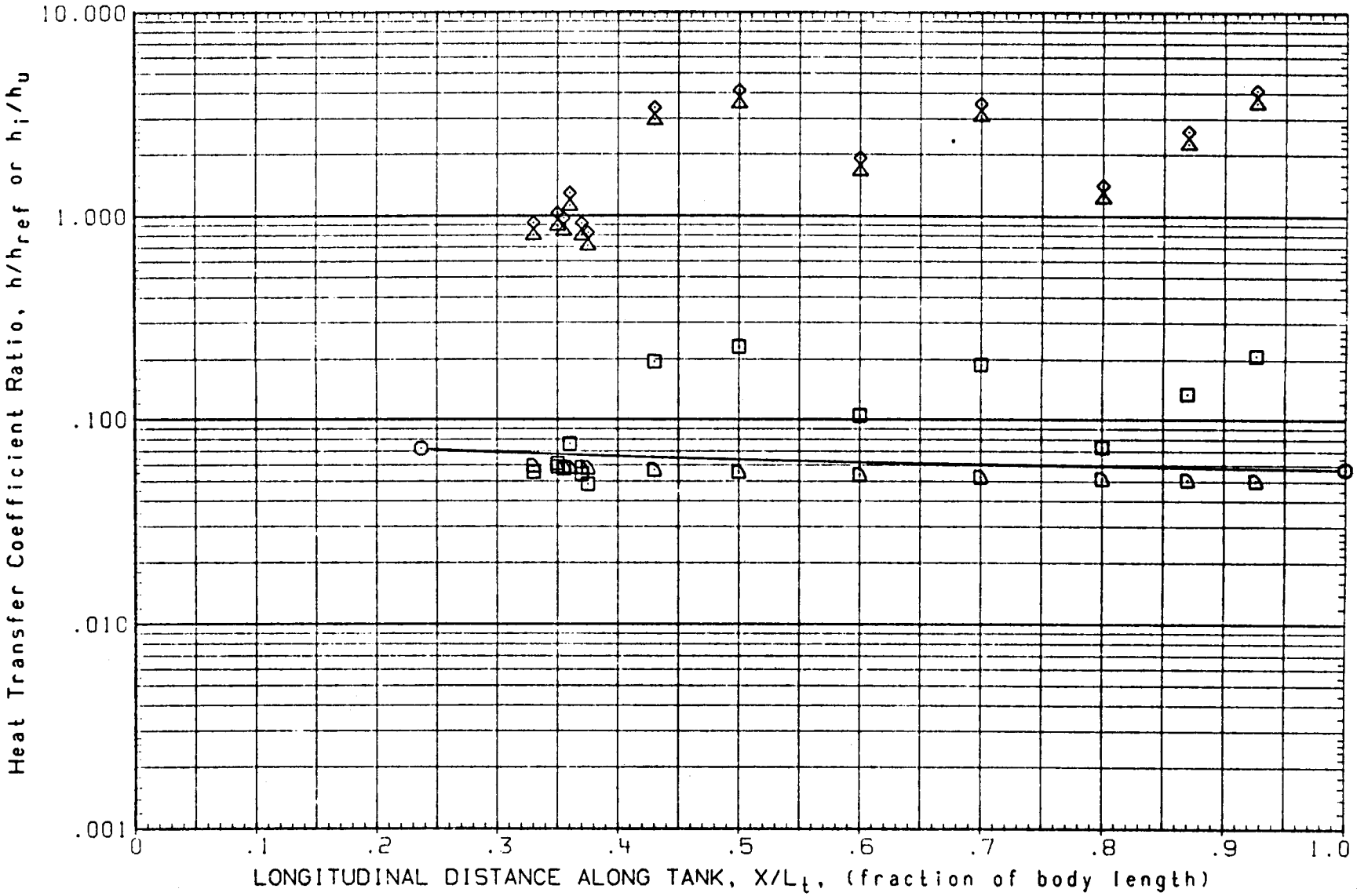

FIG. 4-6 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 17.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT38)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	.000
(C9NT38)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	.000
(V4LT32)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	.000
(X4LT32)	◇	IH85 (W.L. TEST) OTS/ET = V4LT32/C9NT38= HI/HU		4.020	.000	.000
(Y4LT32)	△	IH85 (W.L. THEORY) OTS/ET = V4LT32/A9NT38= HI/HU		4.020	.000	.000

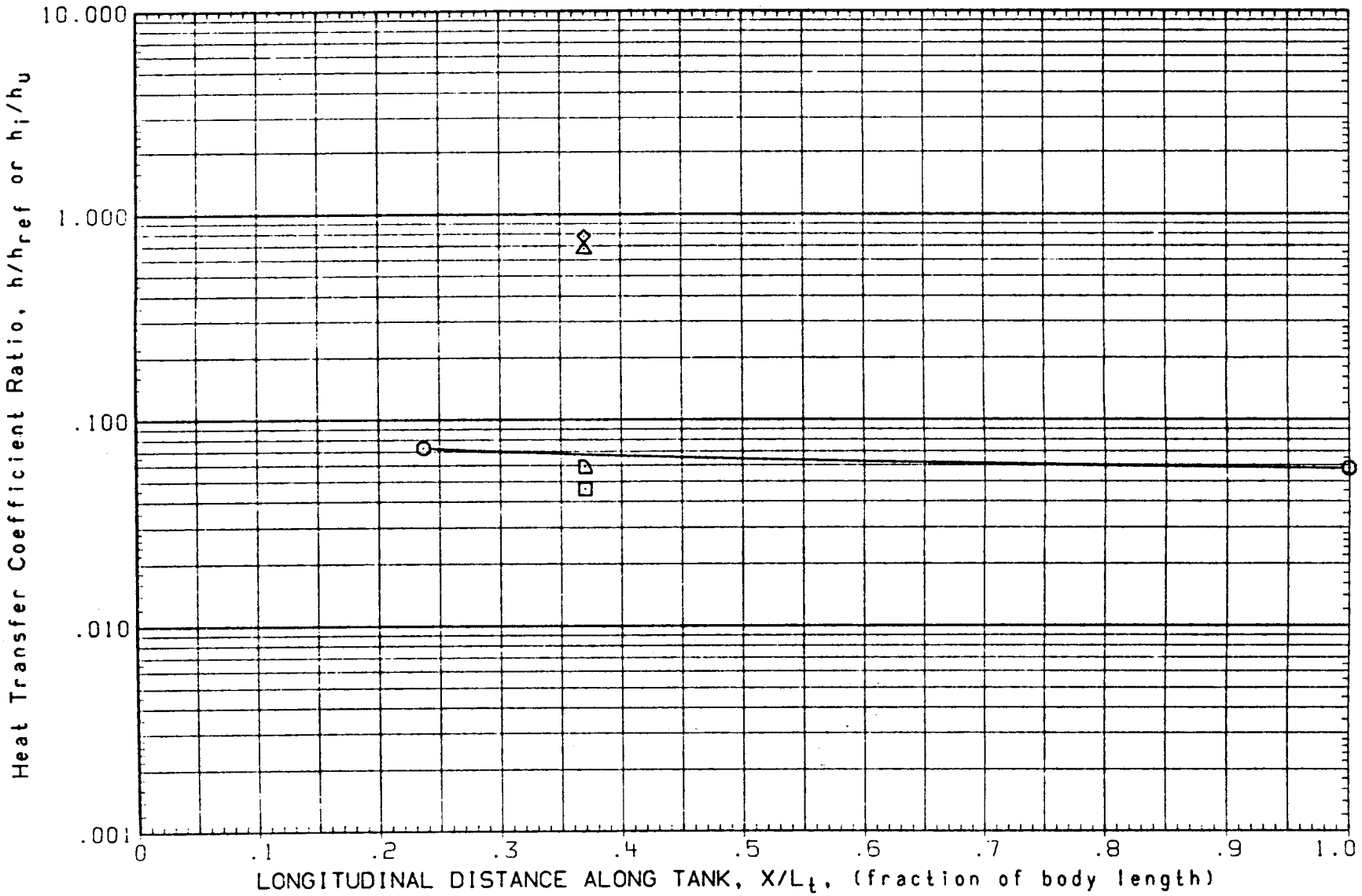

FIG. 4-6 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 20.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT38)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	.000
(C9NT38)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	.000
(V4LT32)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	.000
(X4LT32)	◇	IH85 (W.L. TEST) OTS/ET = V4LT32/C9NT38=	HI/HU	4.020	.000	.000
(Y4LT32)	△	IH85 (W.L. THEORY) OTS/ET = V4LT32/A9NT38=	HI/HU	4.020	.000	.000

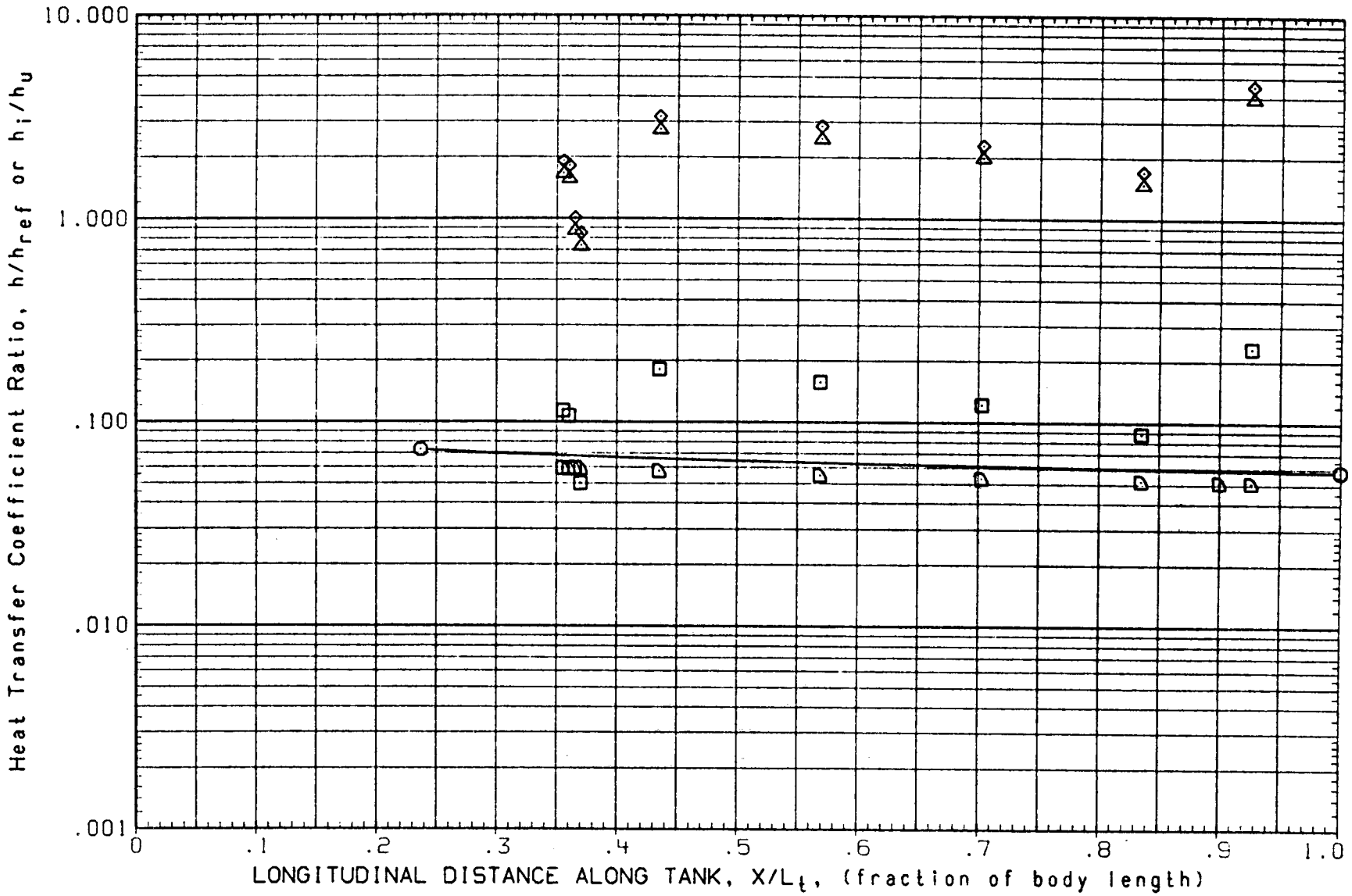

FIG. 4-6 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 23.070

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT38)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	.000
(C9NT38)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	.000
(V4LT32)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	.000
(X4LT32)	◇	IH85 (W.L. TEST) OTS/ET = V4LT32/C9NT38=	HI/HU	4.020	.000	.000
(Y4LT32)	△	IH85 (W.L. THEORY) OTS/ET = V4LT32/A9NT38=	HI/HU	4.020	.000	.000

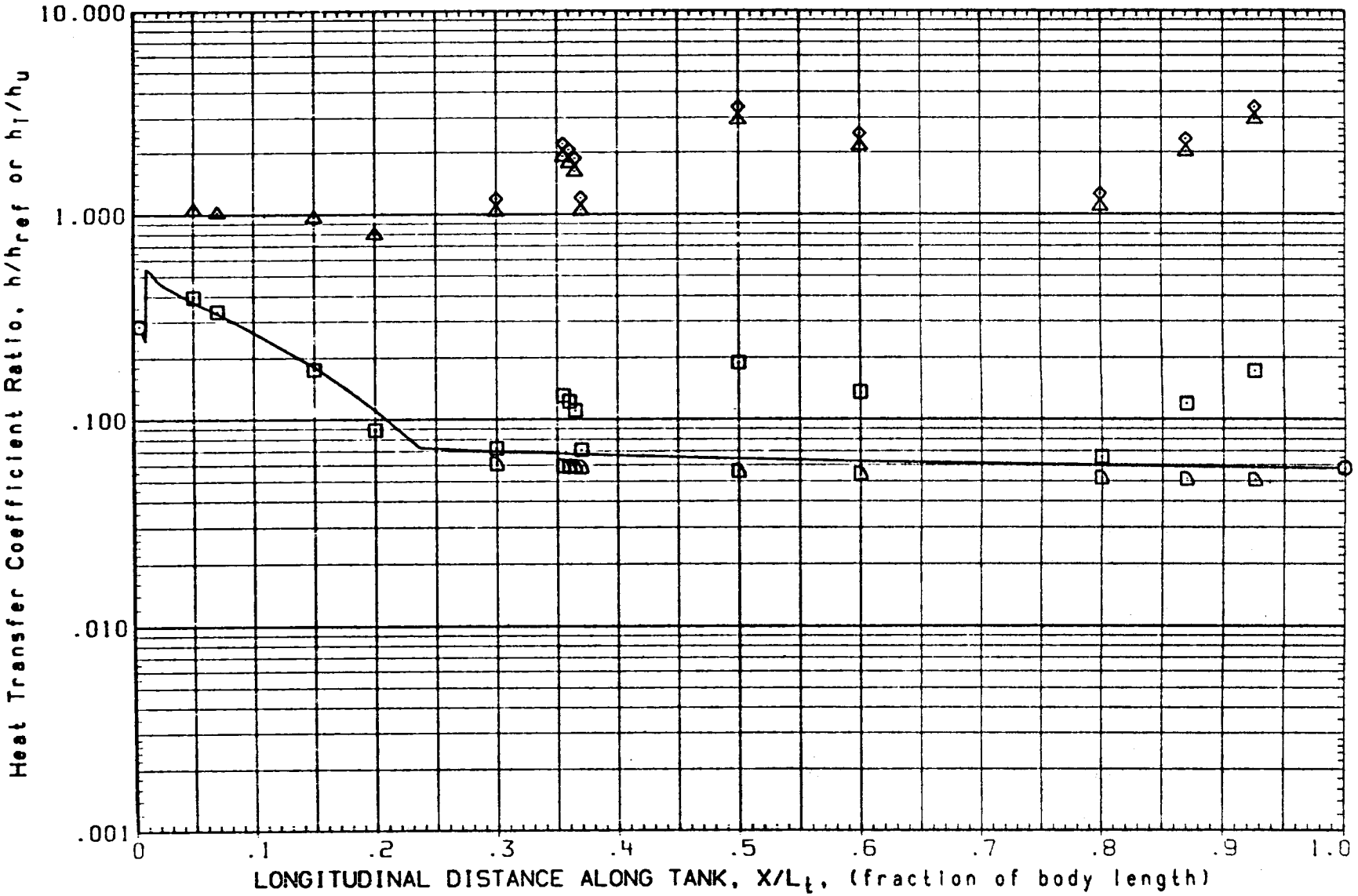

FIG. 4-6 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 29.800

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT38)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	.000
(C9NT38)	⬠	TANK ALONE CREATED DATA (.67 * THEORY)	HU/HREF	4.020	.000	.000
(V4LT32)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	.000
(X4LT32)	◇	IH85 (W.L. TEST) OTS/ET = V4LT32/C9NT38= HI/HU		4.020	.000	.000
(Y4LT32)	△	IH85 (W.L. THEORY) OTS/ET = V4LT32/A9NT38= HI/HU		4.020	.000	.000

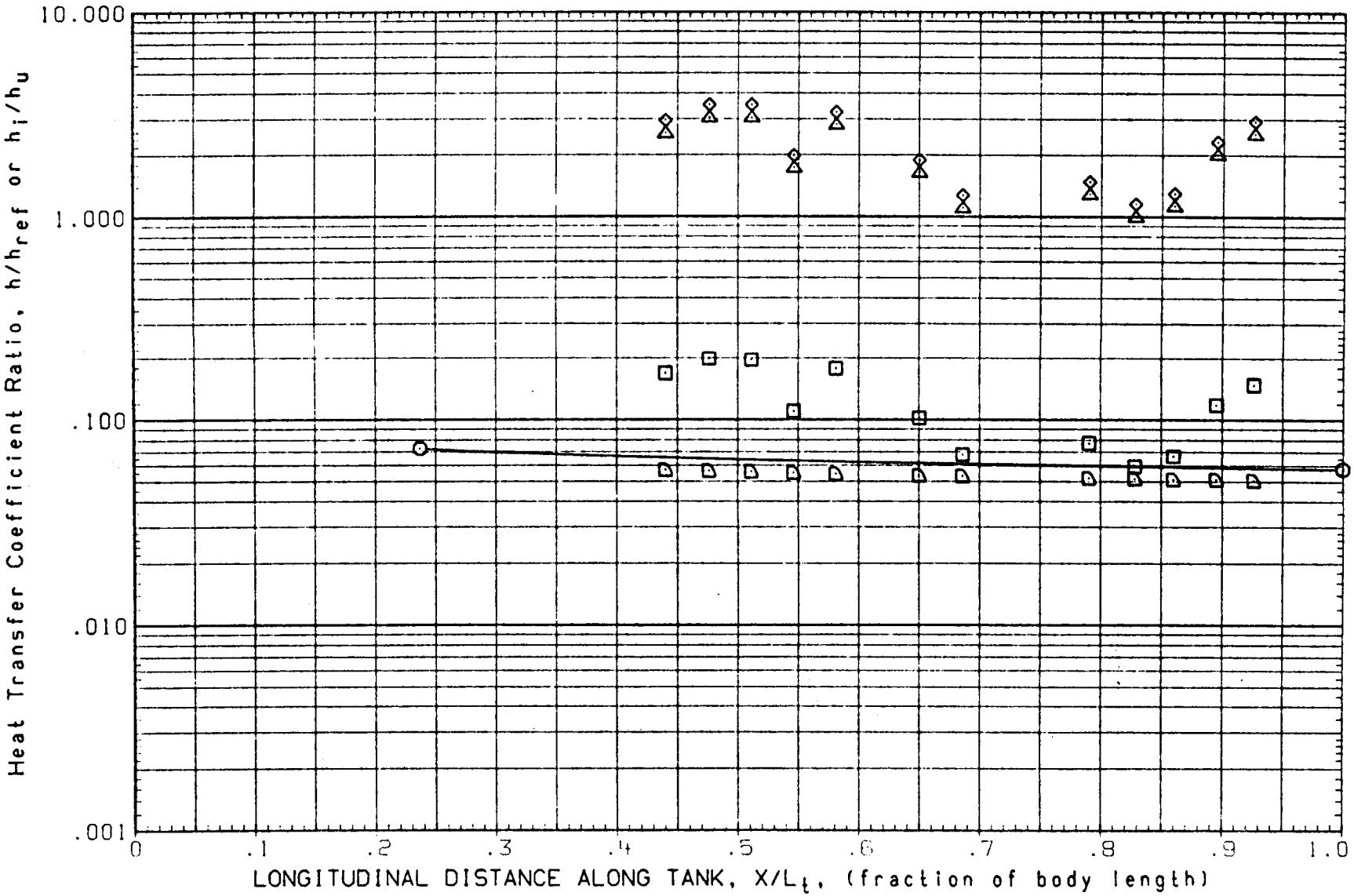

FIG. 4-6 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 31.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT38)	○	EXTERNAL TANK THEORY, N.S., TURBULENT	HU/HREF	4.020	.000	.000
(C9NT38)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	.000
(V4LT32)	□	IH85, AEDC V41A-N5, CONFIGURATION 0 (T) S		4.020	.000	.000
(X4LT32)	◇	IH85 (W.L. TEST) OTS/ET = V4LT32/C9NT38	HI/HU	4.020	.000	.000
(Y4LT32)	△	IH85 (W.L. THEORY) OTS/ET V4LT32/A9NT38	HI/HU	4.020	.000	.000

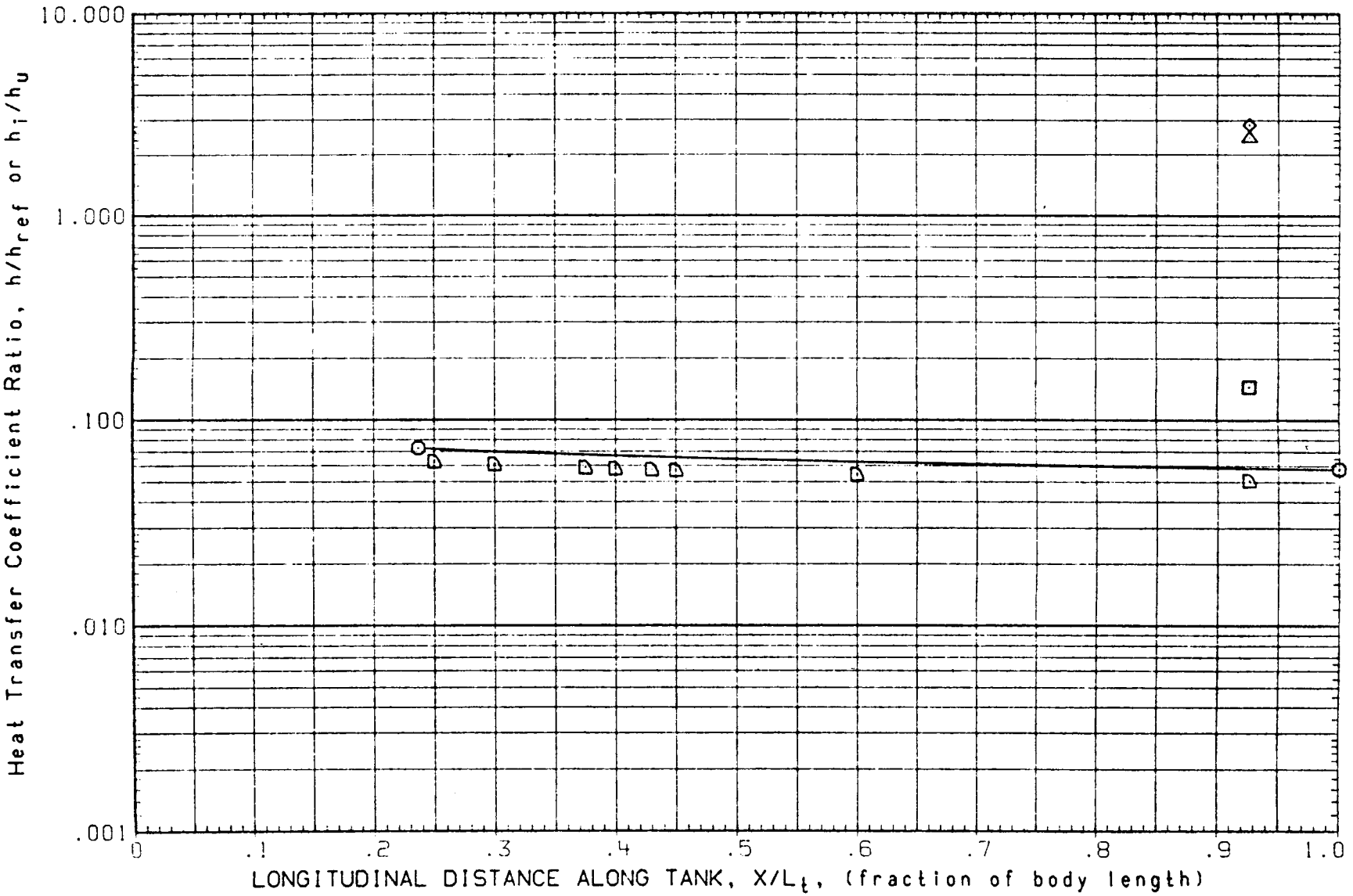

FIG. 4-6 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 33.750

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT38)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	.000
(C9NT38)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	.000
(V4LT32)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) 5		4.020	.000	.000
(X4LT32)	◇	IH85 (W.L. TEST) OTS/ET = V4LT32/C9NT38=	HI/HU	4.020	.000	.000
(Y4LT32)	△	IH85 (W.L. THEORY) OTS/ET = V4LT32/A9NT38=	HI/HU	4.020	.000	.000

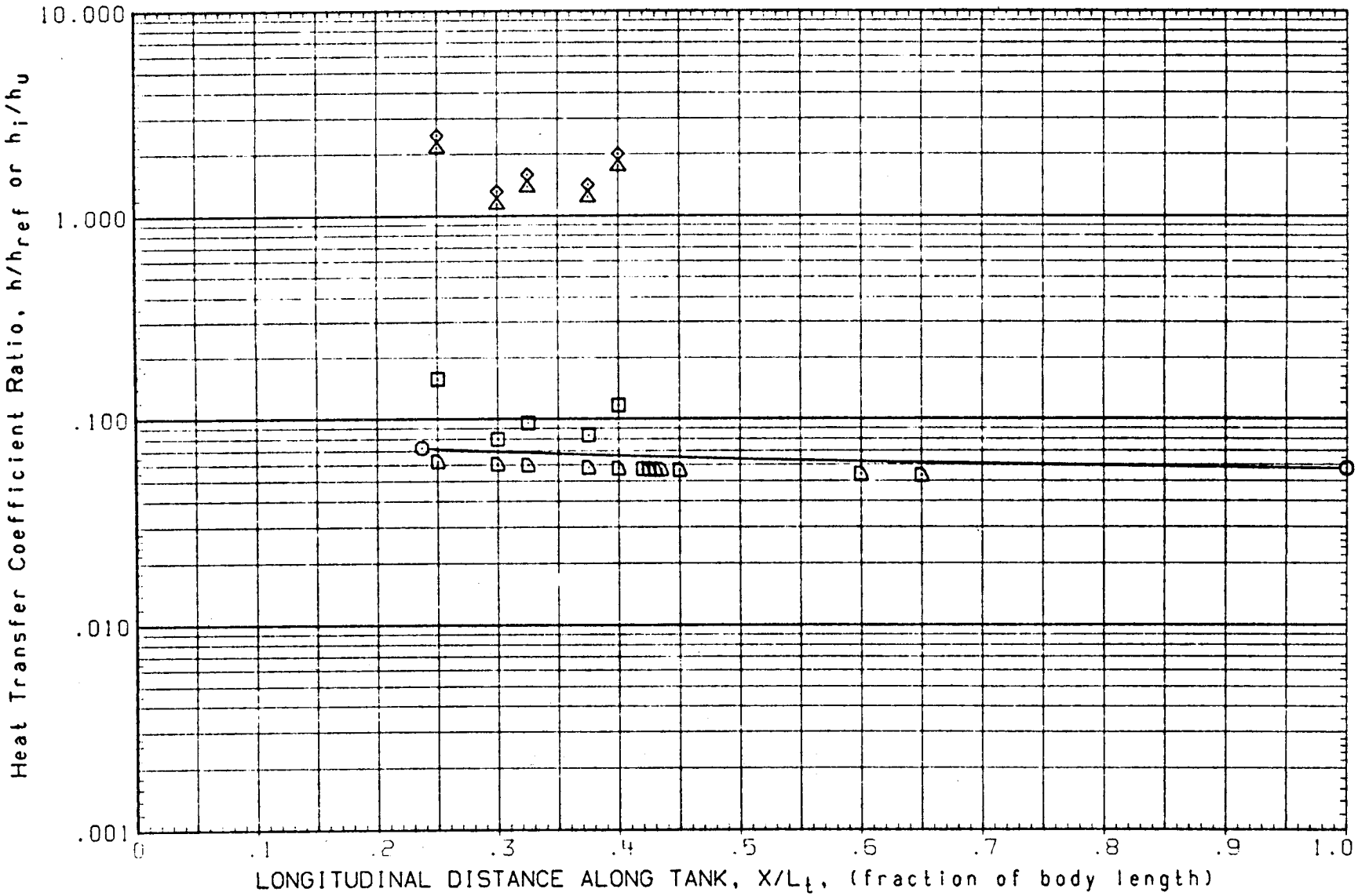

FIG. 4-6 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 36.320

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT38)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	.000
(C9NT39)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	.000
(V4LT32)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	.000
(X4LT32)	◇	IH85 (W.L. TEST) OTS/ET = V4LT32/C9NT38=	HI/HU	4.020	.000	.000
(Y4LT32)	△	IH85 (W.L. THEORY) OTS/ET = V4LT32/A9NT39=	HI/HU	4.020	.000	.000

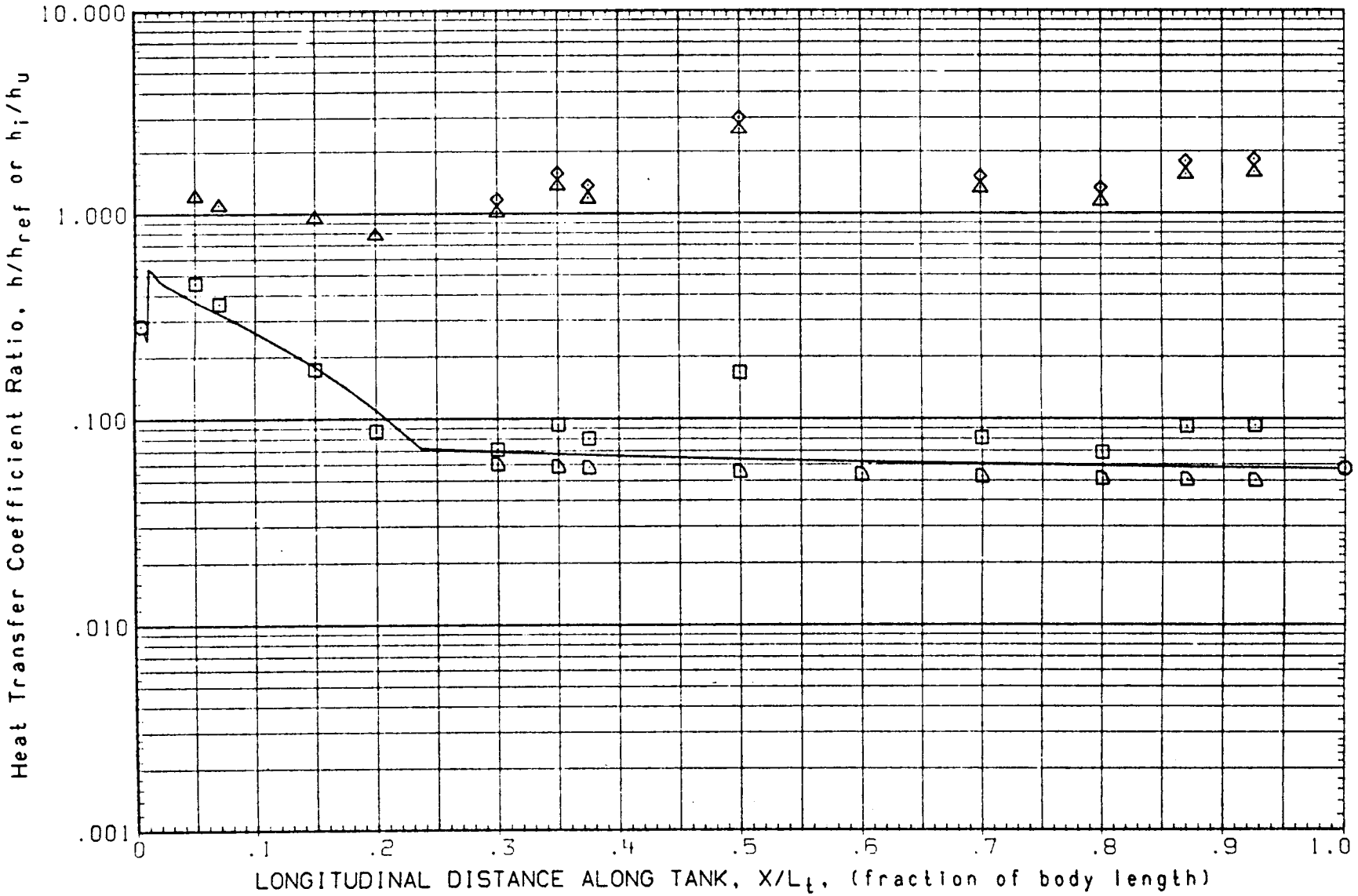

FIG. 4-6 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 37.700

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT38)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	.000
(C9NT38)	⬠	DATA NOT AVAILABLE		4.020	.000	.000
(V4LT32)	□	DATA NOT AVAILABLE		4.020	.000	.000
(X4LT32)	◇	DATA NOT AVAILABLE		4.020	.000	.000
(Y4LT32)	△	DATA NOT AVAILABLE		4.020	.000	.000

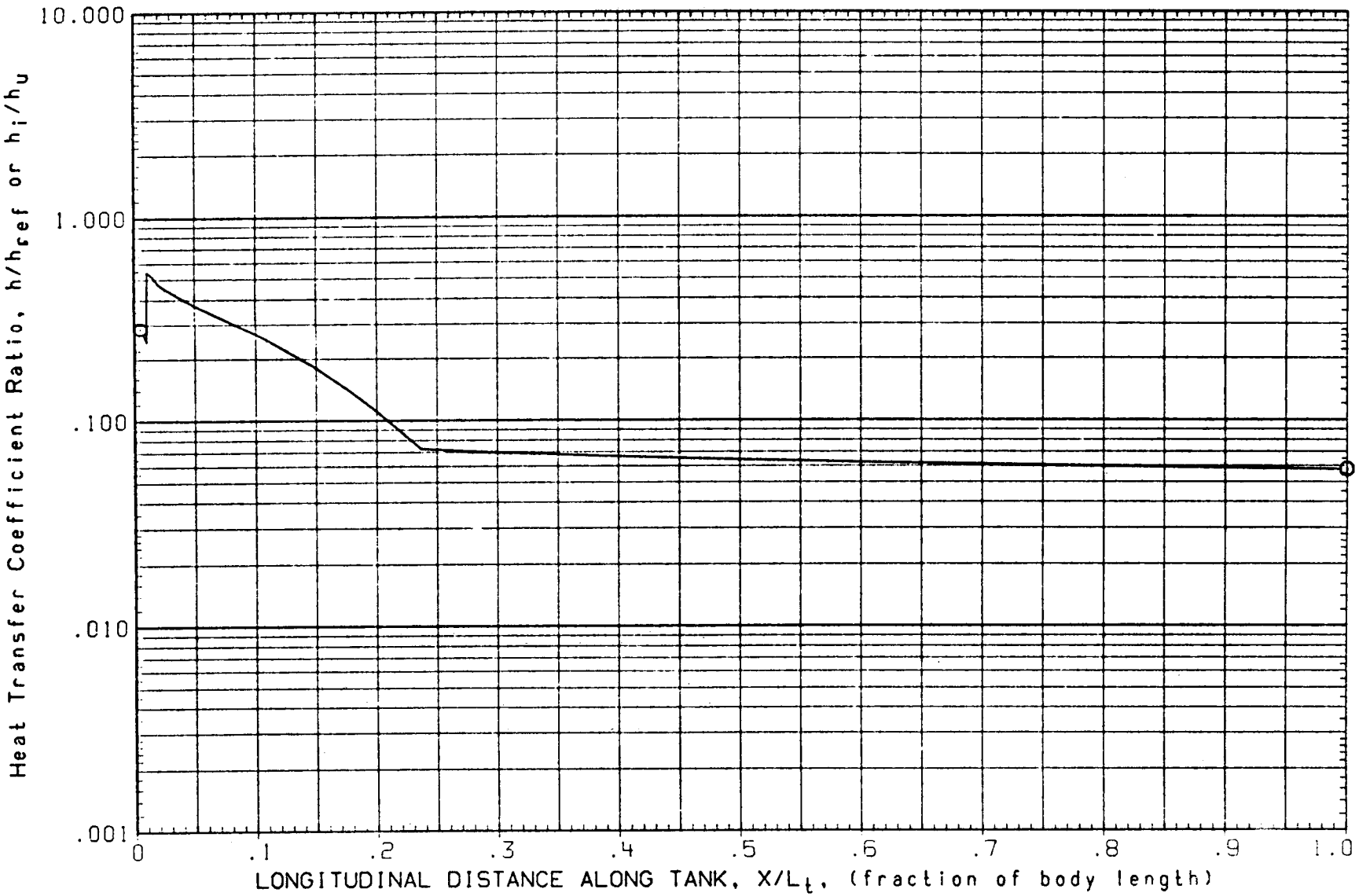

FIG. 4-6 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 39.000

OF POOR QUALITY

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT38)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	.000
(C9NT38)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	.000
(V4LT32)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	.000
(X4LT32)	◇	IH85 (W.L. TEST) OTS/ET = V4LT32/C9NT38=	HI/HU	4.020	.000	.000
(Y4LT32)	△	IH85 (W.L. THEORY) OTS/ET = V4LT32/A9NT38=	HI/HU	4.020	.000	.000

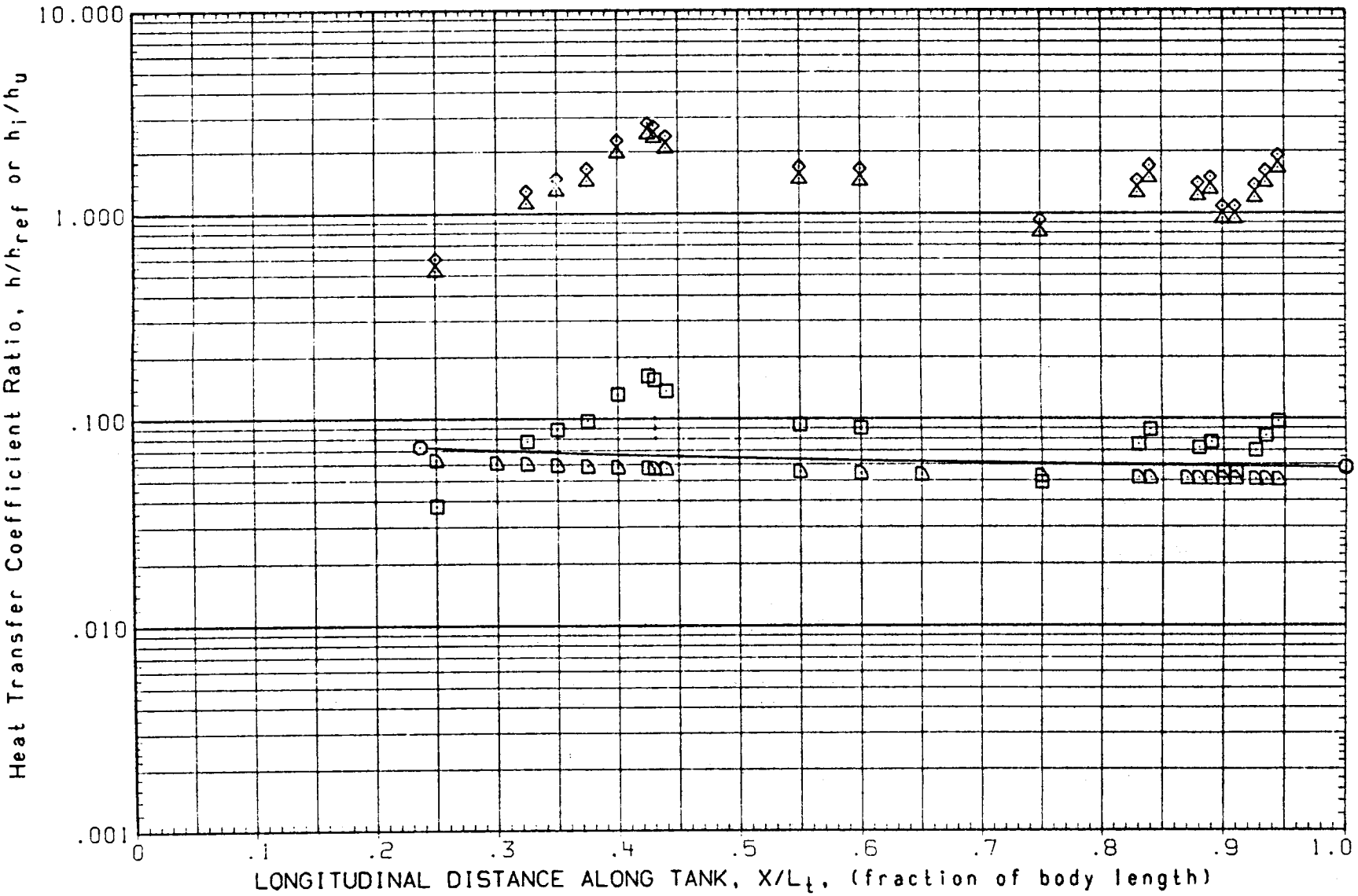

FIG. 4-6 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 45.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT38)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	4.020	.000	.000
(C9NT38)	⌂	DATA NOT AVAILABLE	4.020	.000	.000
(V4LT32)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	.000	.000
(X4LT32)	◇	DATA NOT AVAILABLE	4.020	.000	.000
(Y4LT32)	△	IH85 (W.L. THEORY) OTS/ET = V4LT32/A9NT38= HI/HU	4.020	.000	.000

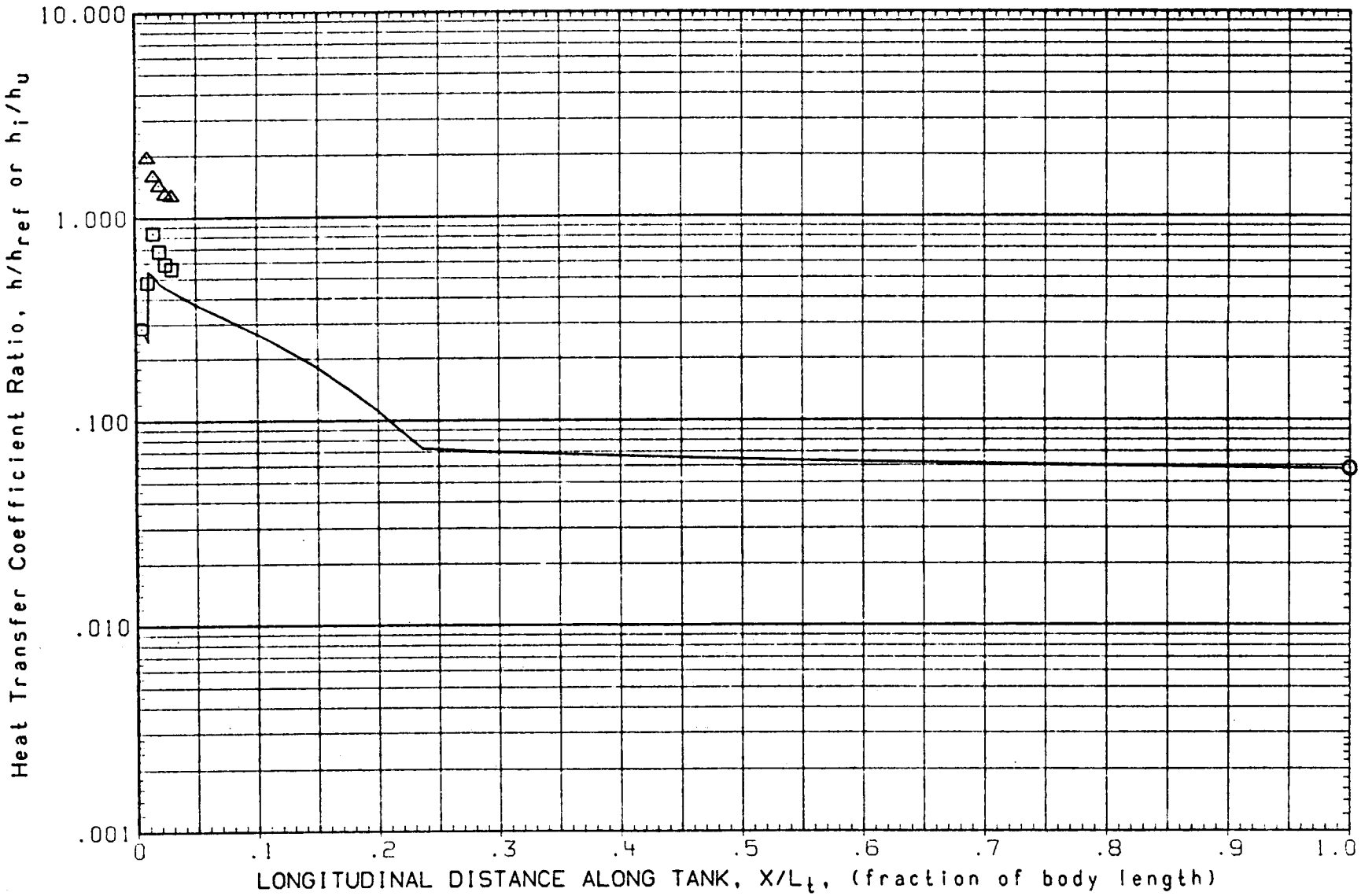

FIG. 4-6 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 180.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT38)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	.000
(C9NT38)	D	DATA NOT AVAILABLE		4.020	.000	.000
(V4LT32)	□	DATA NOT AVAILABLE		4.020	.000	.000
(X4LT32)	◇	DATA NOT AVAILABLE		4.020	.000	.000
(Y4LT32)	△	DATA NOT AVAILABLE		4.020	.000	.000

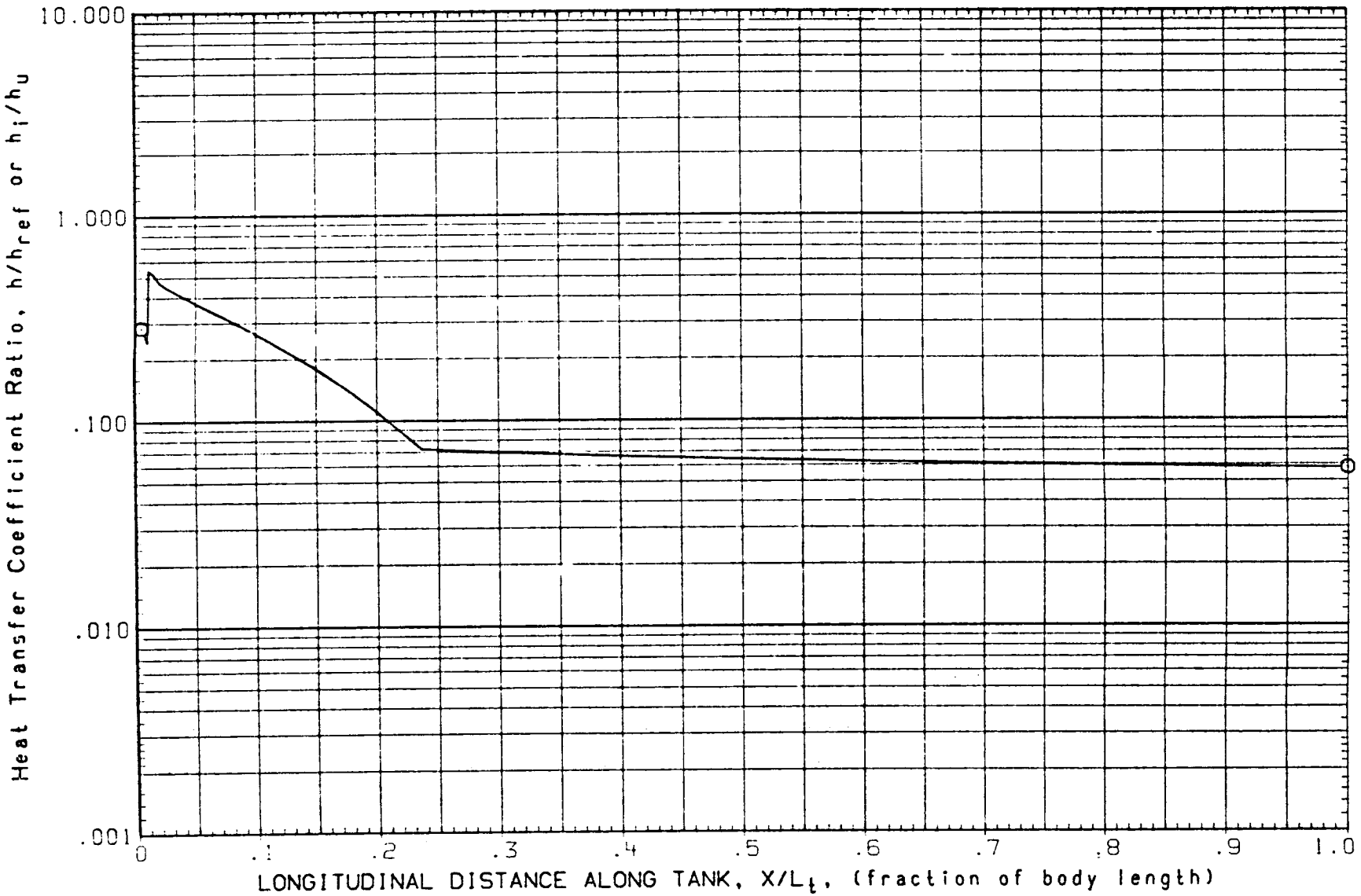

FIG. 4-6 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 235.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT38)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	.000
(C9NT38)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	.000
(V4LT32)	□	IH65, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	.000
(X4LT32)	◇	IH65 (W.L. TEST) OTS/ET = V4LT32/C9NT38=	HI/HU	4.020	.000	.000
(Y4LT32)	△	IH65 (W.L. THEORY) OTS/ET = V4LT32/A9NT38=	HI/HU	4.020	.000	.000

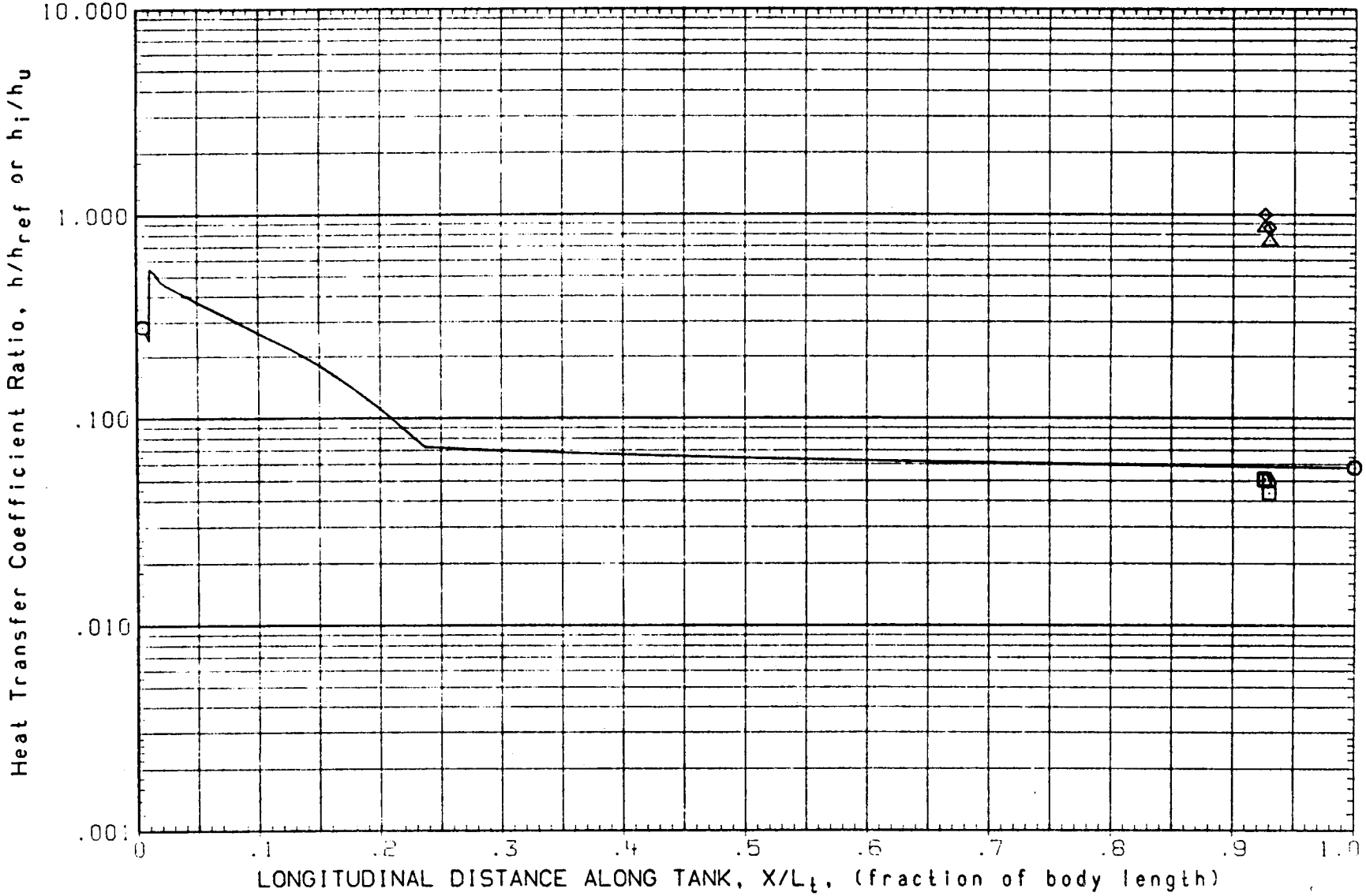

FIG. 4-6 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 247.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(C9NT38)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	.000
(C9NT38)	⬠	DATA NOT AVAILABLE		4.020	.000	.000
(V4LT32)	□	DATA NOT AVAILABLE		4.020	.000	.000
(X4LT32)	◇	DATA NOT AVAILABLE		4.020	.000	.000
(Y4LT32)	△	DATA NOT AVAILABLE		4.020	.000	.000

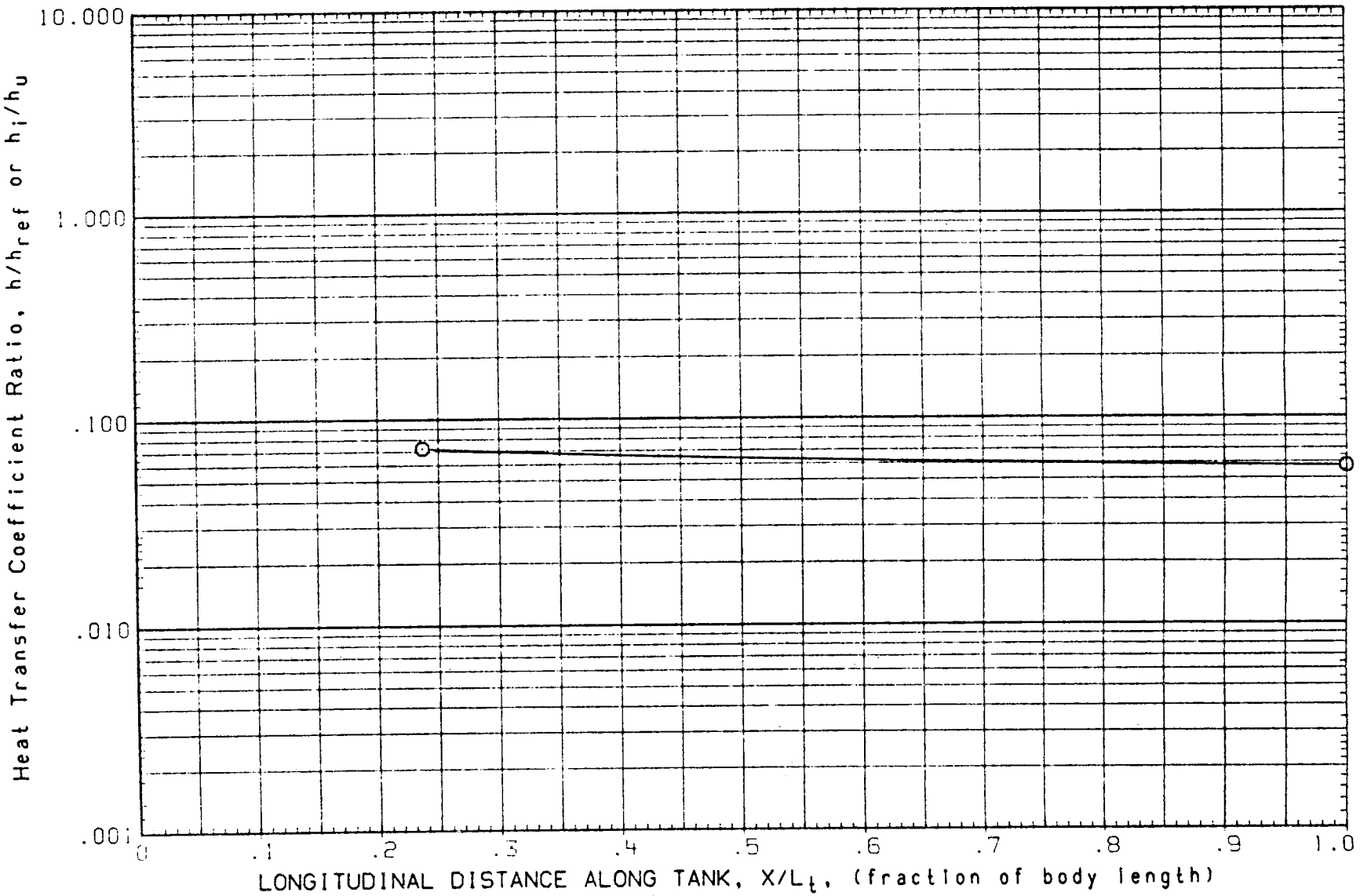

FIG. 4-6 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 247.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT38)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	.000
(C9NT38)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	.000
(V4LT32)	□	IH85, AEDC V4TA-W5, CONFIGURATION 0 (T) S		4.020	.000	.000
(X4LT32)	◇	IH85 (W.L. TEST) OTS/ET = V4LT32/C9NT38=	HI/HU	4.020	.000	.000
(Y4LT32)	△	IH85 (W.L. THEORY) OTS/ET = V4LT32/A9NT38=	HI/HU	4.020	.000	.000

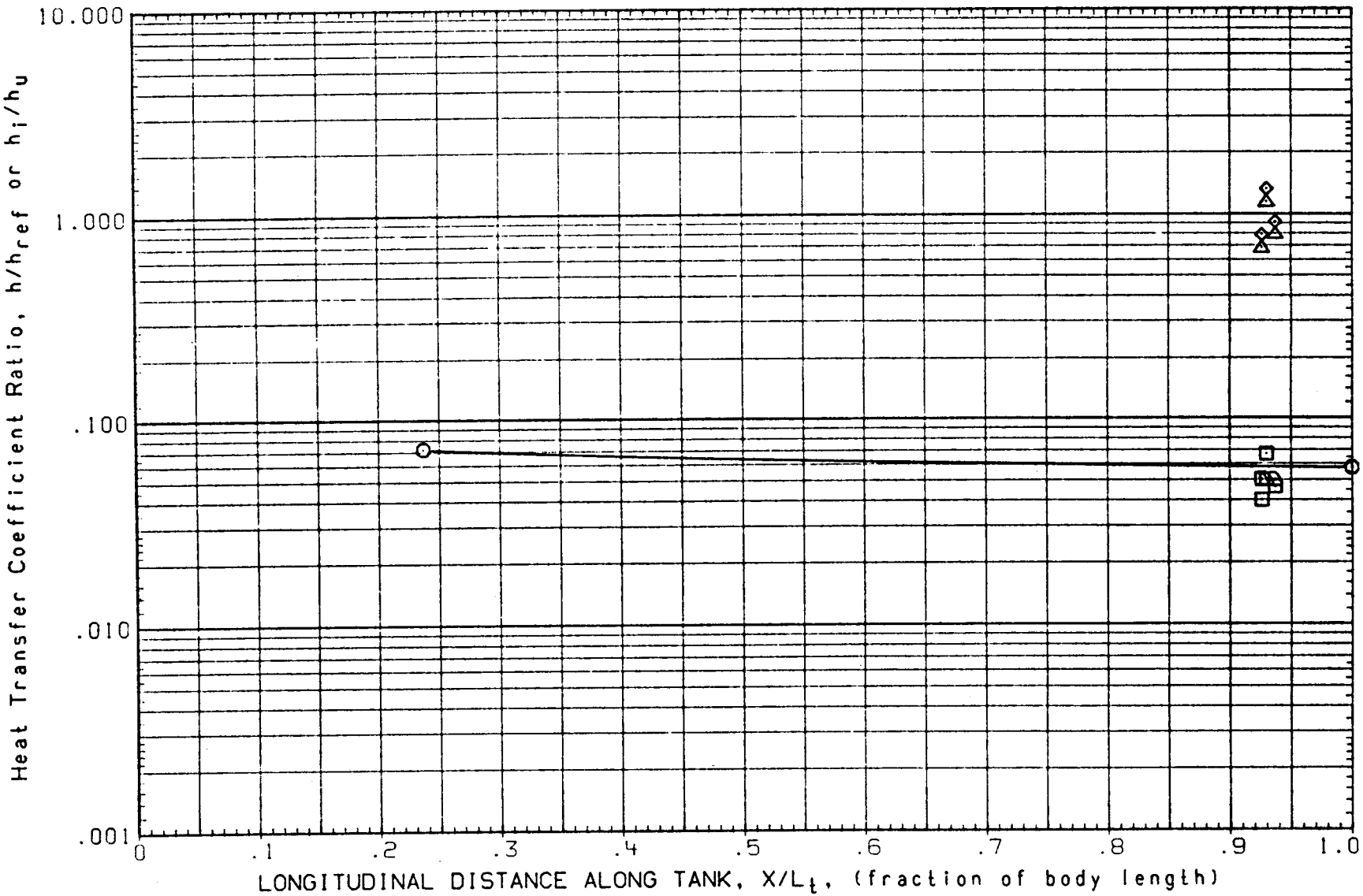

FIG. 4-6 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 250.570

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT38)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	.000
(C9NT38)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	.000
(V4LT32)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	.000
(X4LT32)	◇	IH85 (W.L. TEST) OTS/ET = V4LT32/C9NT38=	HI/HU	4.020	.000	.000
(Y4LT32)	△	IH85 (W.L. THEORY) OTS/ET = V4LT32/A9NT38=	HI/HU	4.020	.000	.000

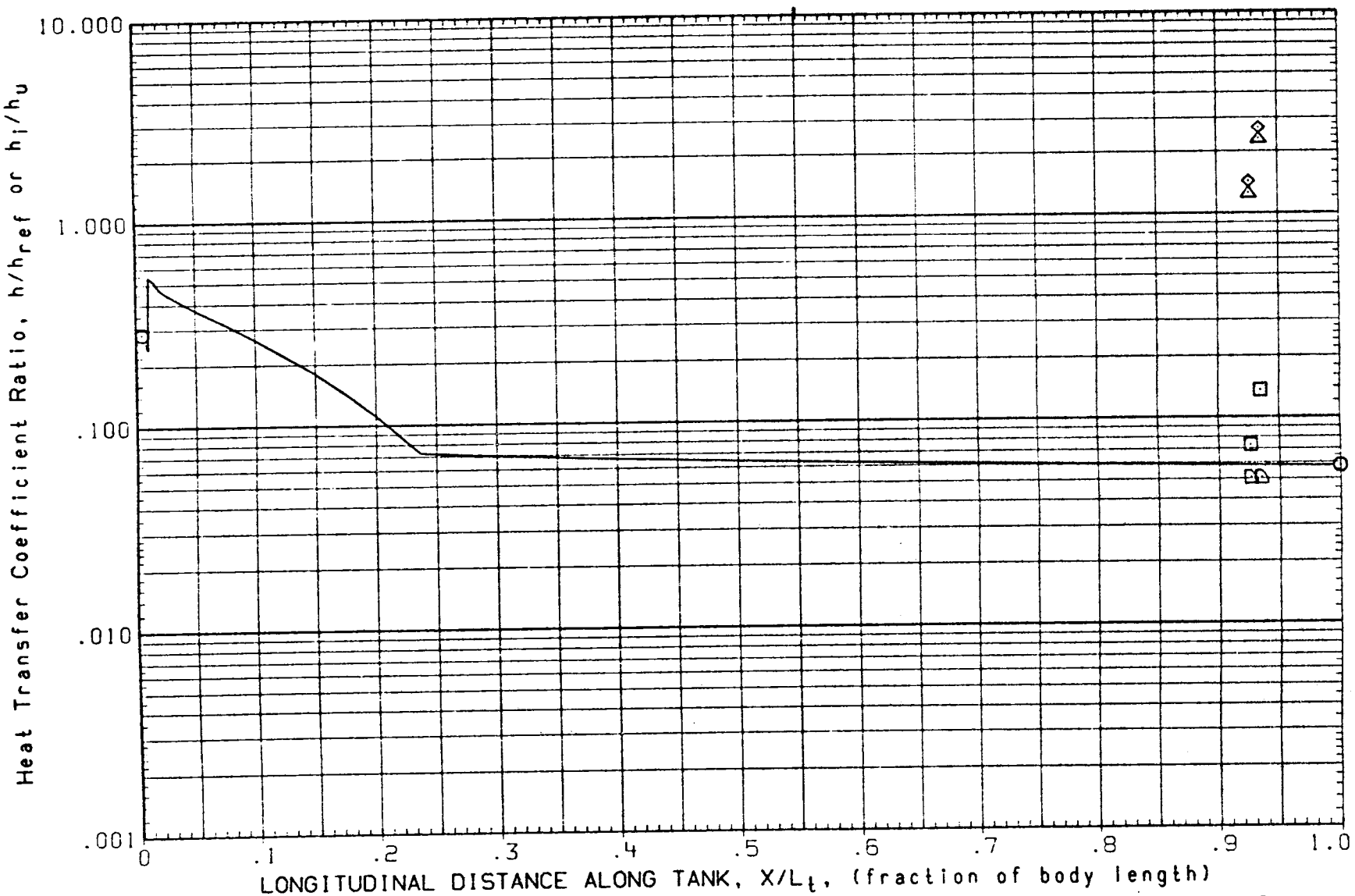

FIG. 4-6 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 258.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT38)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	.000
(C9NT38)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	.000
(V4LT32)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	.000
(X4LT32)	◇	IH85 (W.L. TEST) OTS/ET = V4LT32/C9NT38=	HI/HU	4.020	.000	.000
(Y4LT32)	△	IH85 (W.L. THEORY) OTS/ET = V4LT32/A9NT38=	HI/HU	4.020	.000	.000

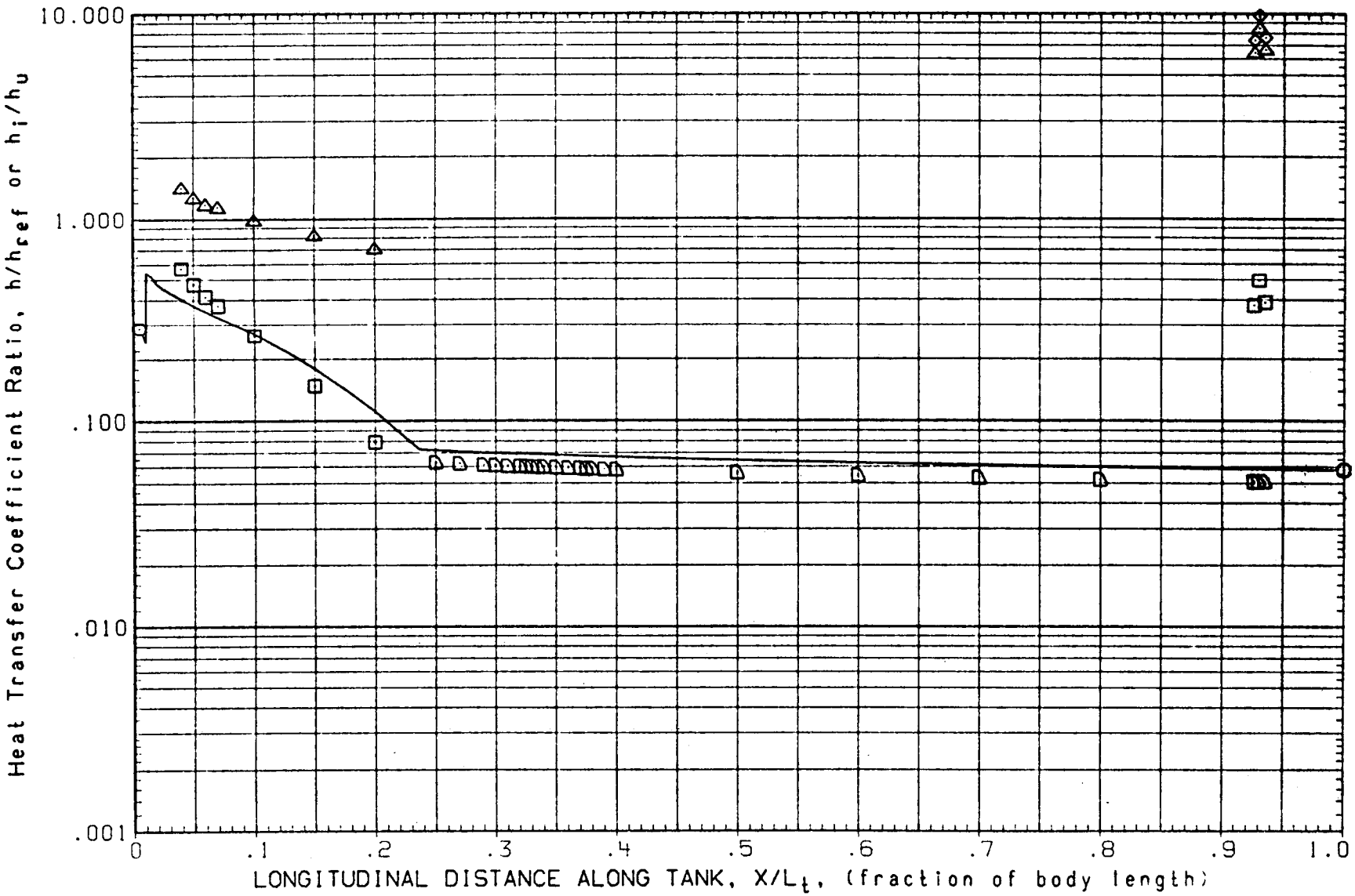

FIG. 4-6 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 270.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT38)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	.000
(C9NT38)	□	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	.000
(V4LT32)	□	IH85, AEDC V41A-N5, CONFIGURATION 0 (T) S		4.020	.000	.000
(X4LT32)	◇	IH85 (W.L. TEST) OTS/ET = V4LT32/C9NT38=	HI/HU	4.020	.000	.000
(Y4LT32)	△	IH85 (W.L. THEORY) OTS/ET = V4LT32/A9NT38=	HI/HU	4.020	.000	.000

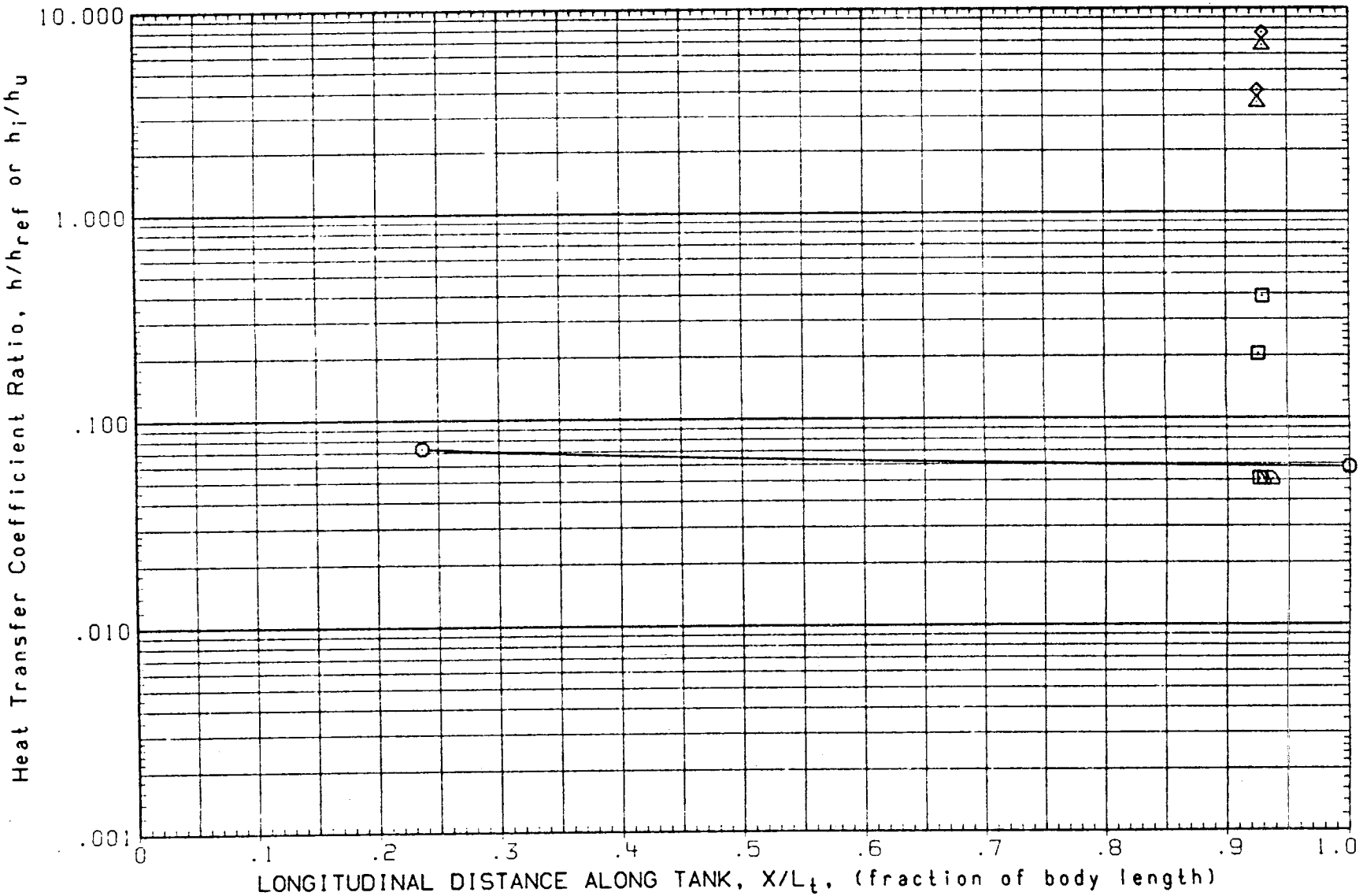

FIG. 4-6 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 289.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT38)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	.000
(C9NT38)	⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	.000
(V4LT32)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	.000
(X4LT32)	◇	IH85 (W.L. TEST) OTS/ET = V4LT32/C9NT38= HI/HU		4.020	.000	.000
(Y4LT32)	△	IH85 (W.L. THEORY) OTS/ET = V4LT32/A9NT38= HI/HU		4.020	.000	.000

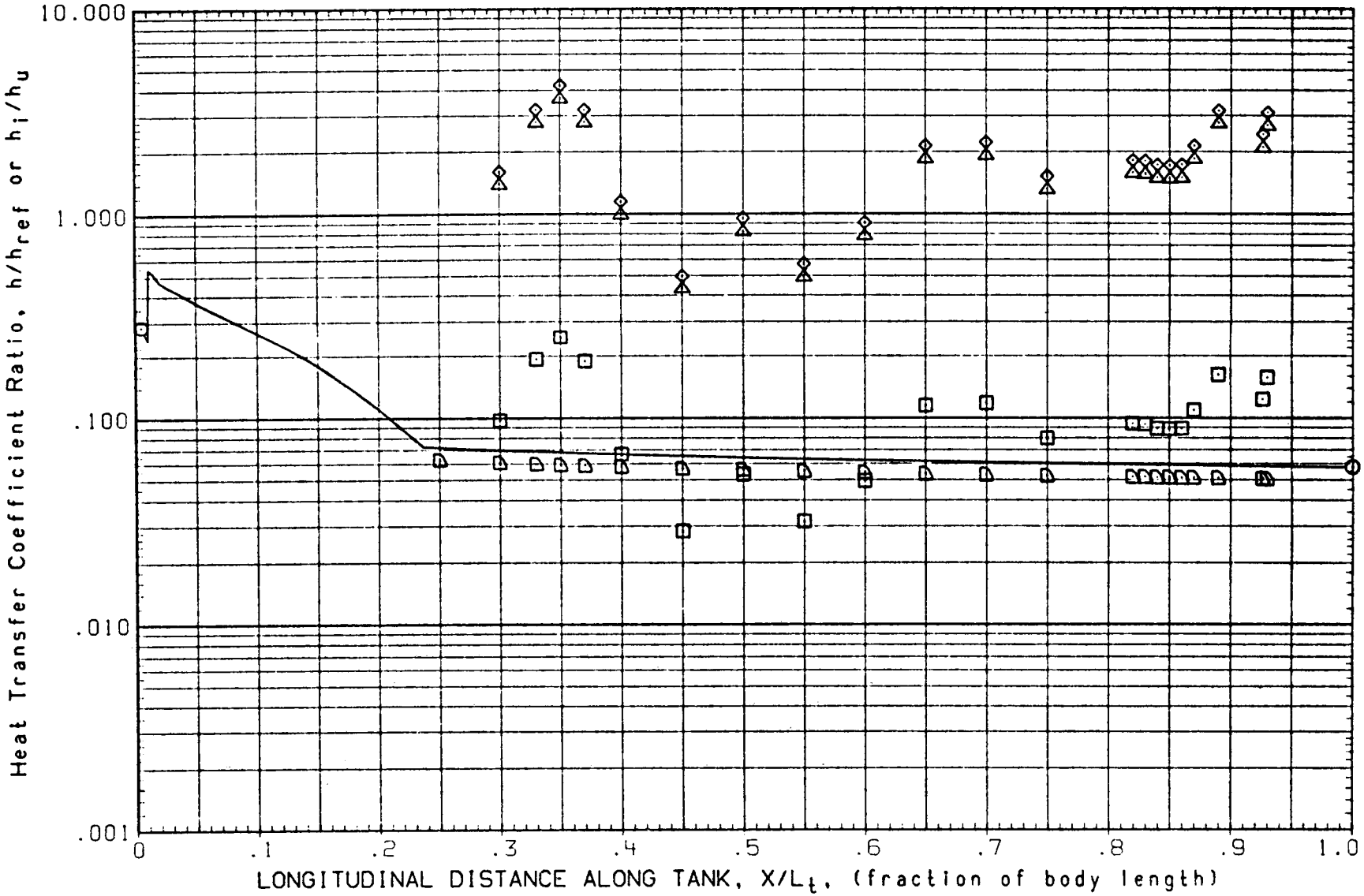

FIG. 4-6 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 HI = 292.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT38)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	.000
(C9NT38)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	.000
(V4LT32)	□	IH85, AEDC V41A-W5, CONFIGURATION C (T) S		4.020	.000	.000
(X4LT32)	◇	IH85 (W.L. TEST) OTS/ET = V4LT32/C9NT39=	HI/HU	4.020	.000	.000
(Y4LT32)	△	IH85 (W.L. THEORY) OTS/ET = V4LT32/A9NT38=	HI/HU	4.020	.000	.000

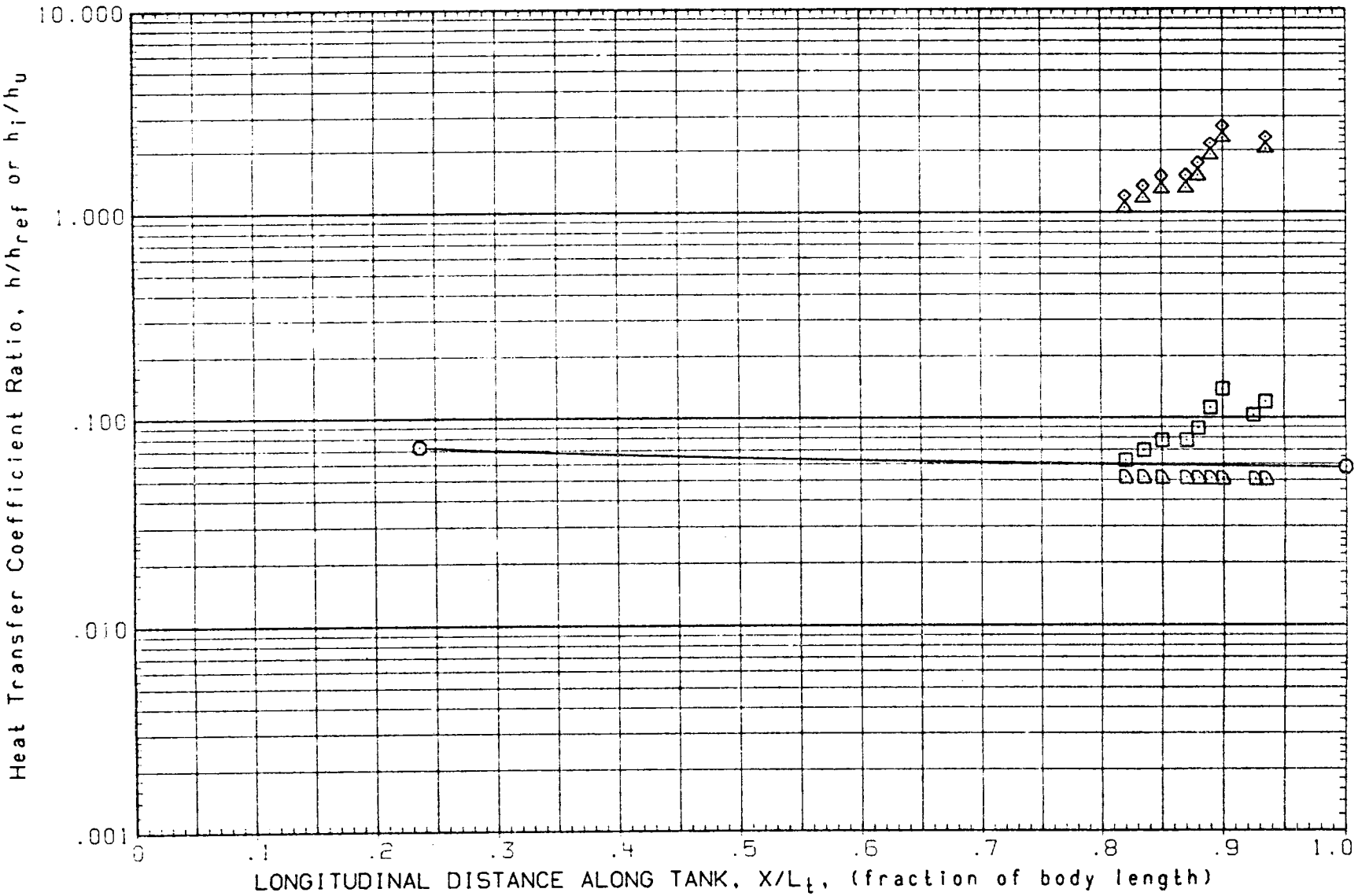

FIG. 4-6 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 301.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT38)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	.000
(C9NT38)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	.000
(V4LT32)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	.000
(X4LT32)	◇	IH85 (W.L. TEST) OTS/ET = V4LT32/C9NT38=	HI/HU	4.020	.000	.000
(Y4LT32)	△	IH85 (W.L. THEORY) OTS/ET = V4LT32/A9NT38=	HI/HU	4.020	.000	.000

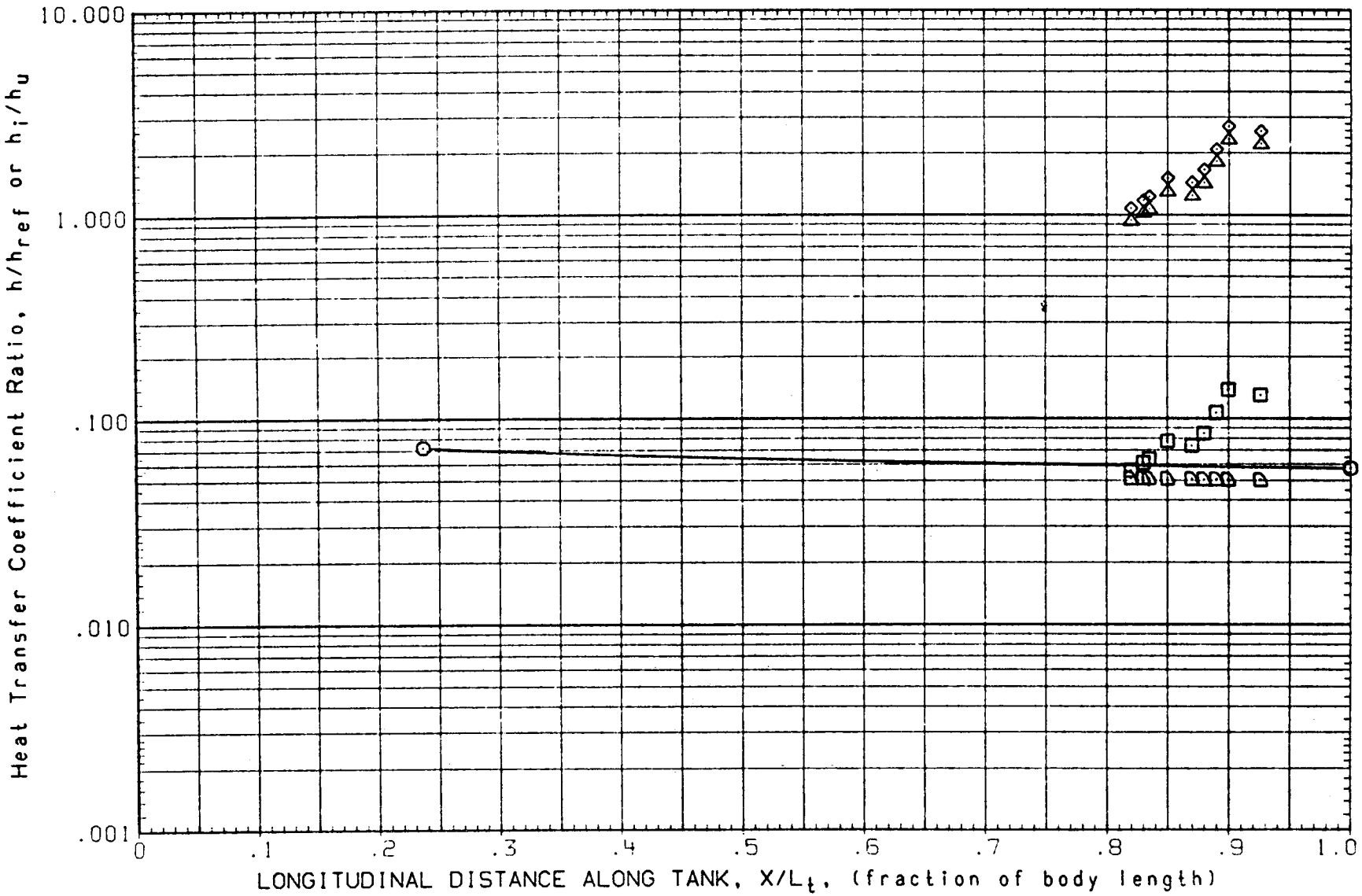

FIG. 4-6 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 305.400

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT38)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	.000
(C9NT39)	□	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	.000
(V4LT32)	◇	(H85, AEDC V4TA-W5, CONFIGURATION 0 (T) S		4.020	.000	.000
(V4LT32)	◇	(H85 (W.L. TEST) DTS/ET = V4LT32/C9NT38=	HI/HU	4.020	.000	.000
(V4LT32)	△	(H85 (W.L. THEORY) DTS/ET = V4LT32/A9NT38=	HI/HU	4.020	.000	.000

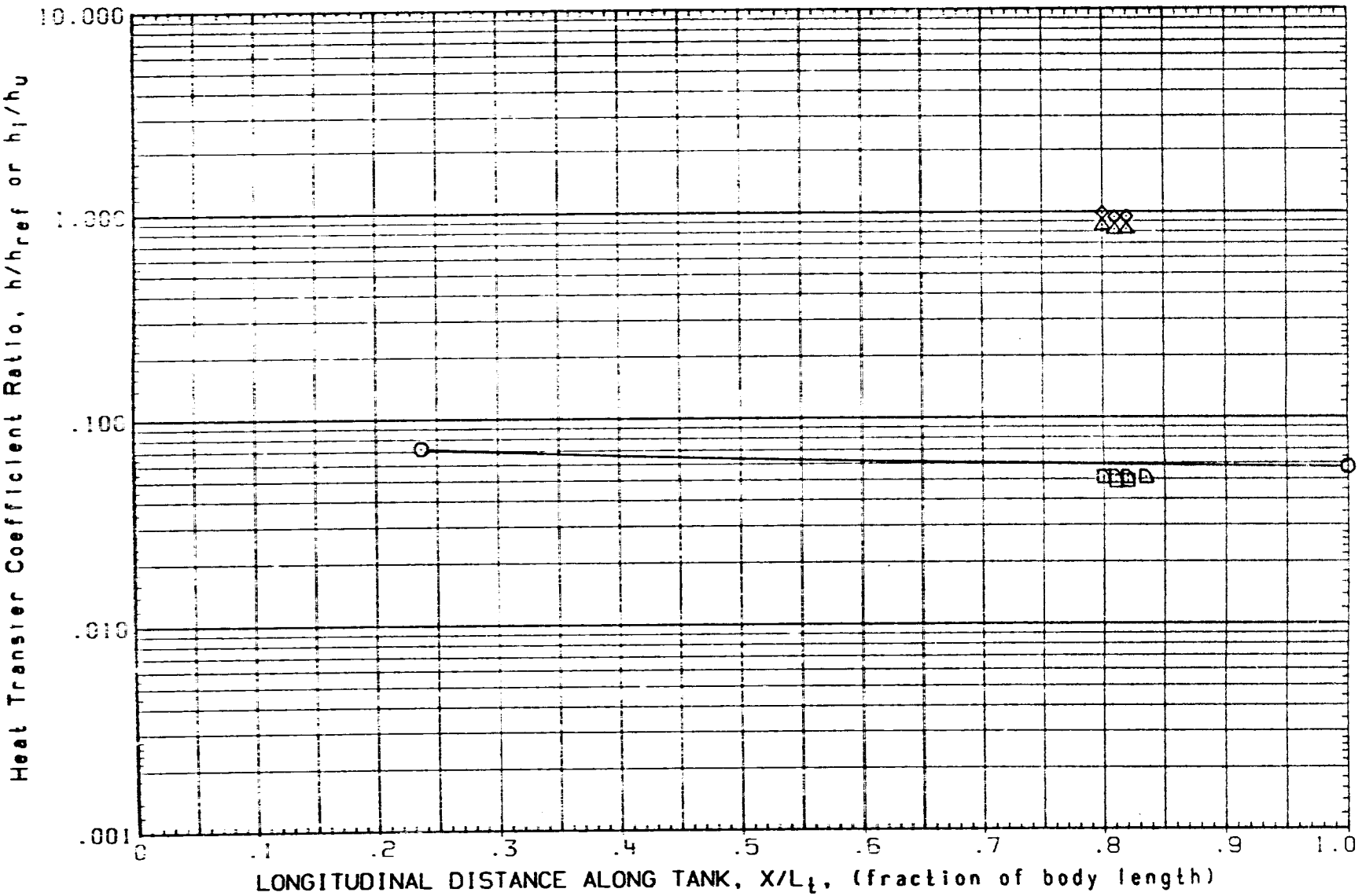

FIG. 4-6 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 309.300

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT38)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	.000
(C9NT38)	⊿	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	.000
(V4LT32)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	.000
(X4LT32)	◇	IH85 (W.L. TEST) OTS/ET = V4LT32/C9NT38=	HI/HU	4.020	.000	.000
(Y4LT32)	△	IH85 (W.L. THEORY) OTS/ET = V4LT32/A9NT38=	HI/HU	4.020	.000	.000

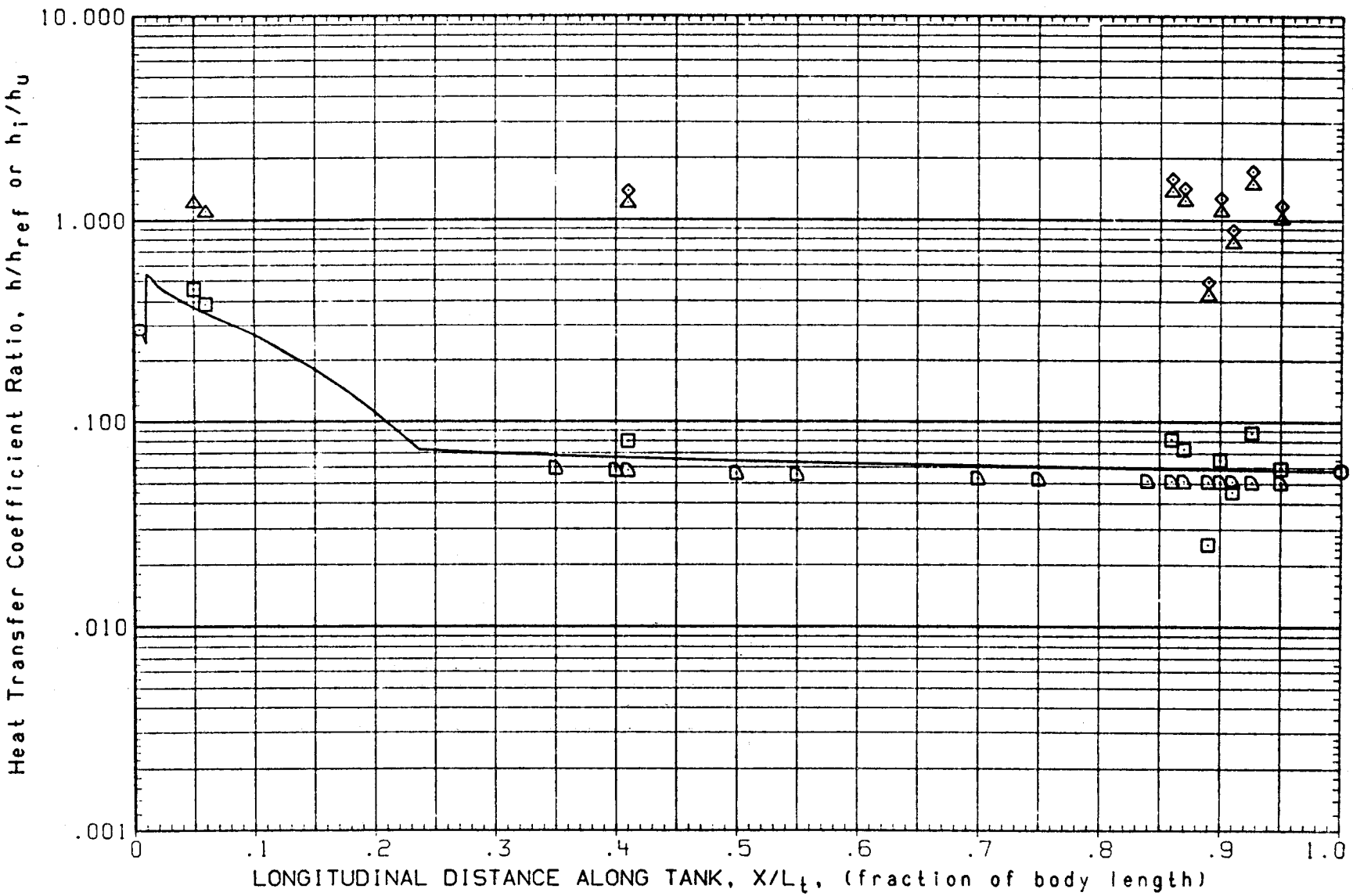

FIG. 4-6 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 315.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT38)	○	EXTERNAL TANK THEORY, N.S..TURBULENT	HU/HREF	4.020	.000	.000
(C9NT38)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	.000
(V4LT32)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	.000
(X4LT32)	◇	IH85 (W.L. TEST) OTS/ET = V4LT32/C9NT38=	HI/HU	4.020	.000	.000
(Y4LT32)	△	IH85 (W.L. THEORY) OTS/ET = V4LT32/A9NT38=	HI/HU	4.020	.000	.000

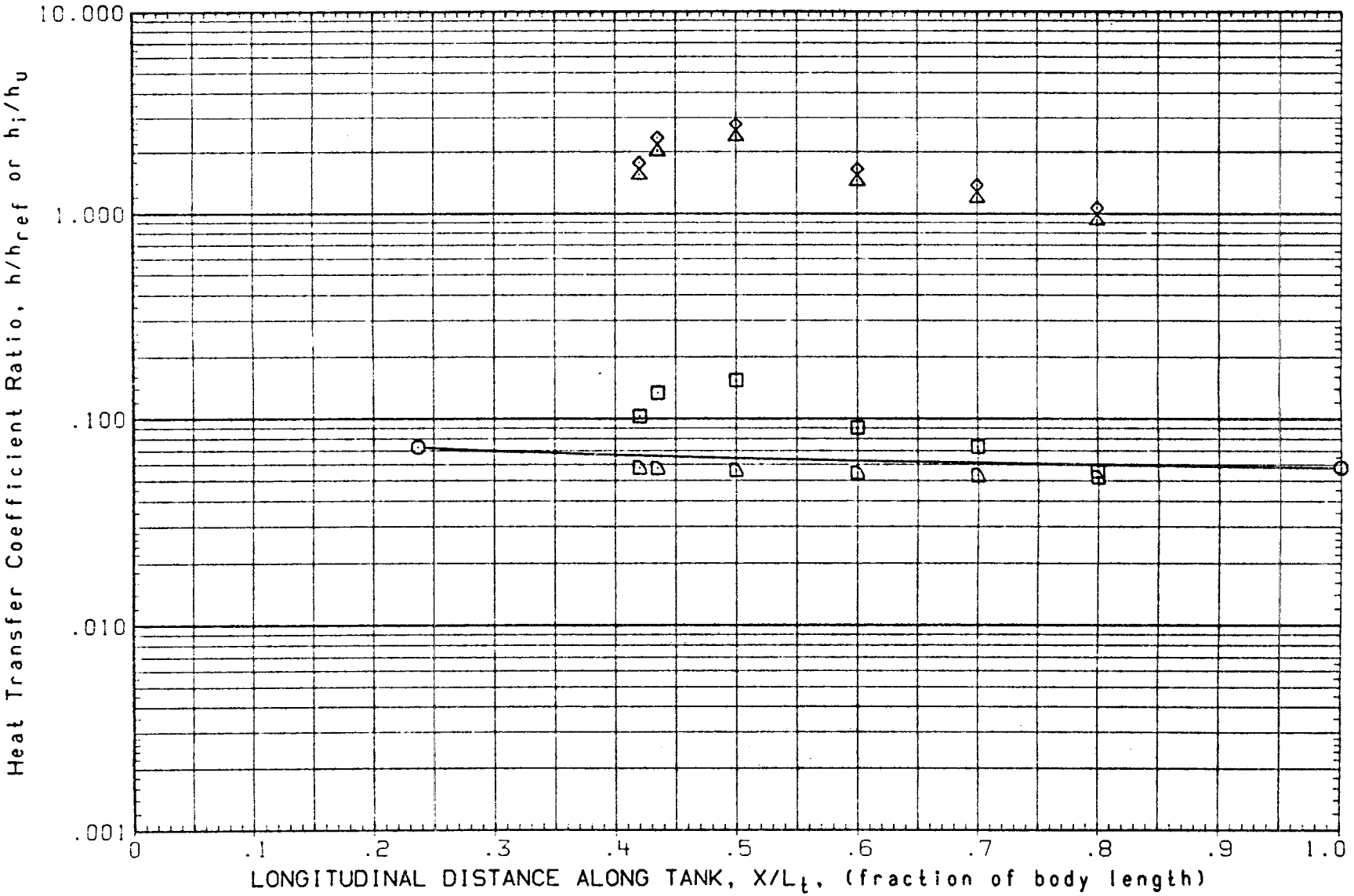

FIG. 4-6 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 322.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT38)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	.000
(C9NT38)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	.000
(V4LT32)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	.000
(X4LT32)	◇	IH85 (W.L. TEST) OTS/ET = V4LT32/C9NT38=	HI/HU	4.020	.000	.000
(Y4LT32)	△	IH85 (W.L. THEORY) OTS/ET = V4LT32/A9NT38=	HI/HU	4.020	.000	.000

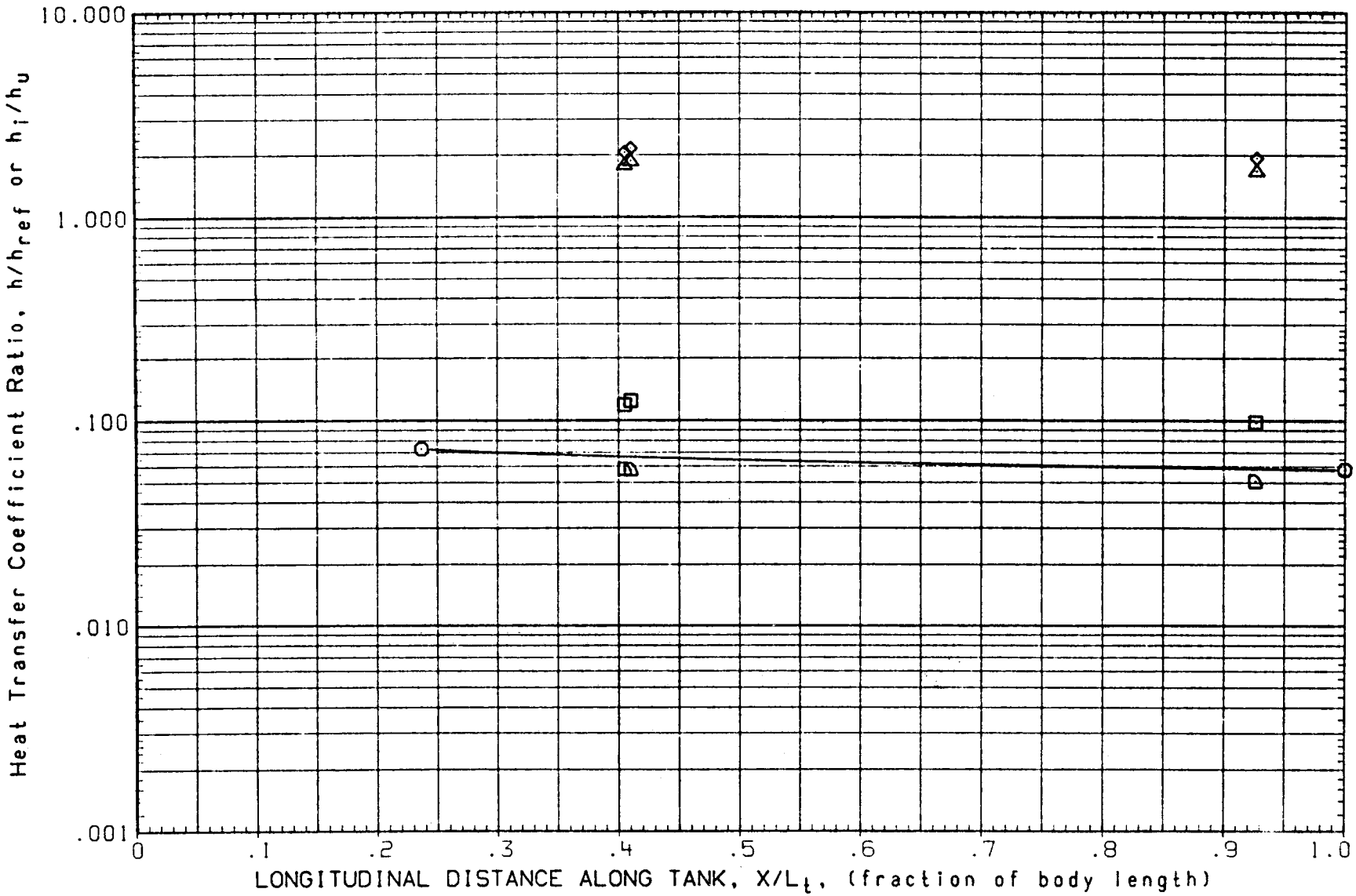

FIG. 4-6 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 324.450

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT38)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	.000
(C9NT38)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	.000
(V4LT32)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	.000
(X4LT32)	◇	IH85 (W.L. TEST) OTS/ET = V4LT32/C9NT38=	HI/HU	4.020	.000	.000
(Y4LT32)	△	IH85 (W.L. THEORY) OTS/ET = V4LT32/A9NT38=	HI/HU	4.020	.000	.000

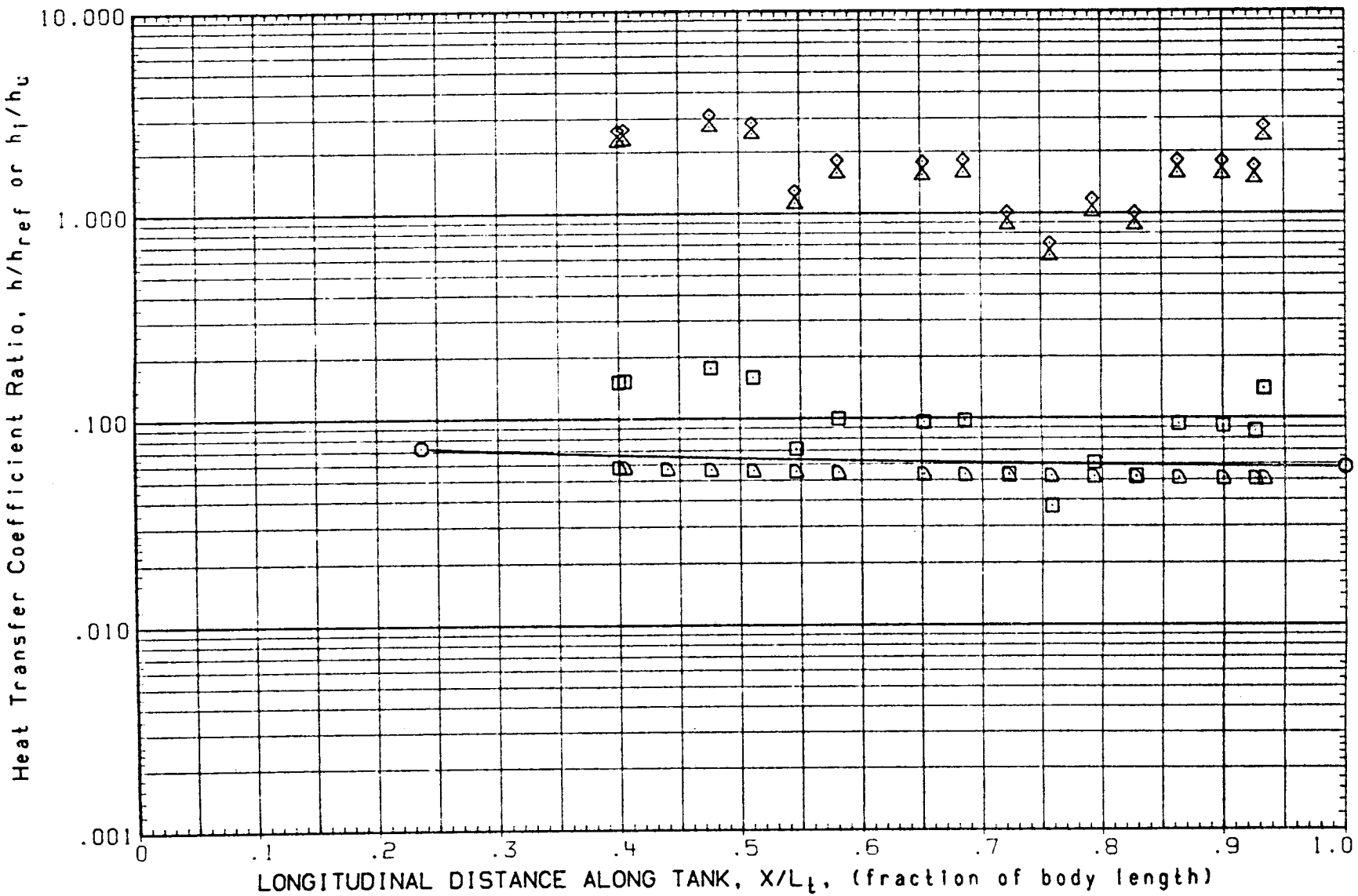

FIG. 4-6 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 326.850

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT38)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	.000
(C9NT38)	⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	.000
(V4LT32)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	.000
(X4LT32)	◇	IH85 (W.L. TEST) OTS/ET = V4LT32/C9NT38=	HI/HU	4.020	.000	.000
(Y4LT32)	△	IH85 (W.L. THEORY) OTS/ET = V4LT32/A9NT38=	HI/HU	4.020	.000	.000

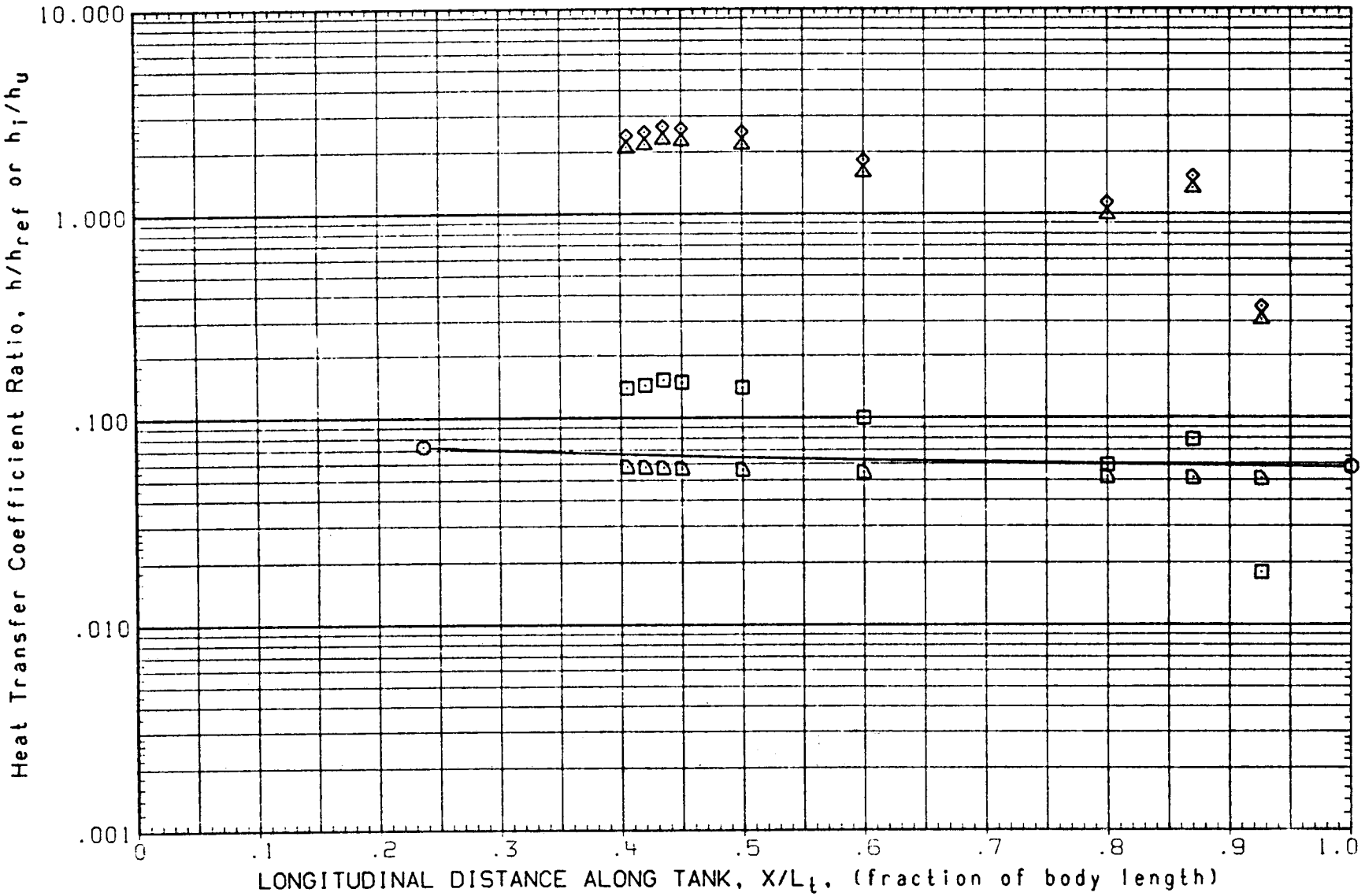

FIG. 4-6 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 330.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT38)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	.000
(C9NT38)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	.000
(V4LT32)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	.000
(X4LT32)	◇	IH85 (W.L. TEST) OTS/ET = V4LT32/C9NT38= HI/HU		4.020	.000	.000
(Y4LT32)	△	IH85 (W.L. THEORY) OTS/ET = V4LT32/A9NT38= HI/HU		4.020	.000	.000

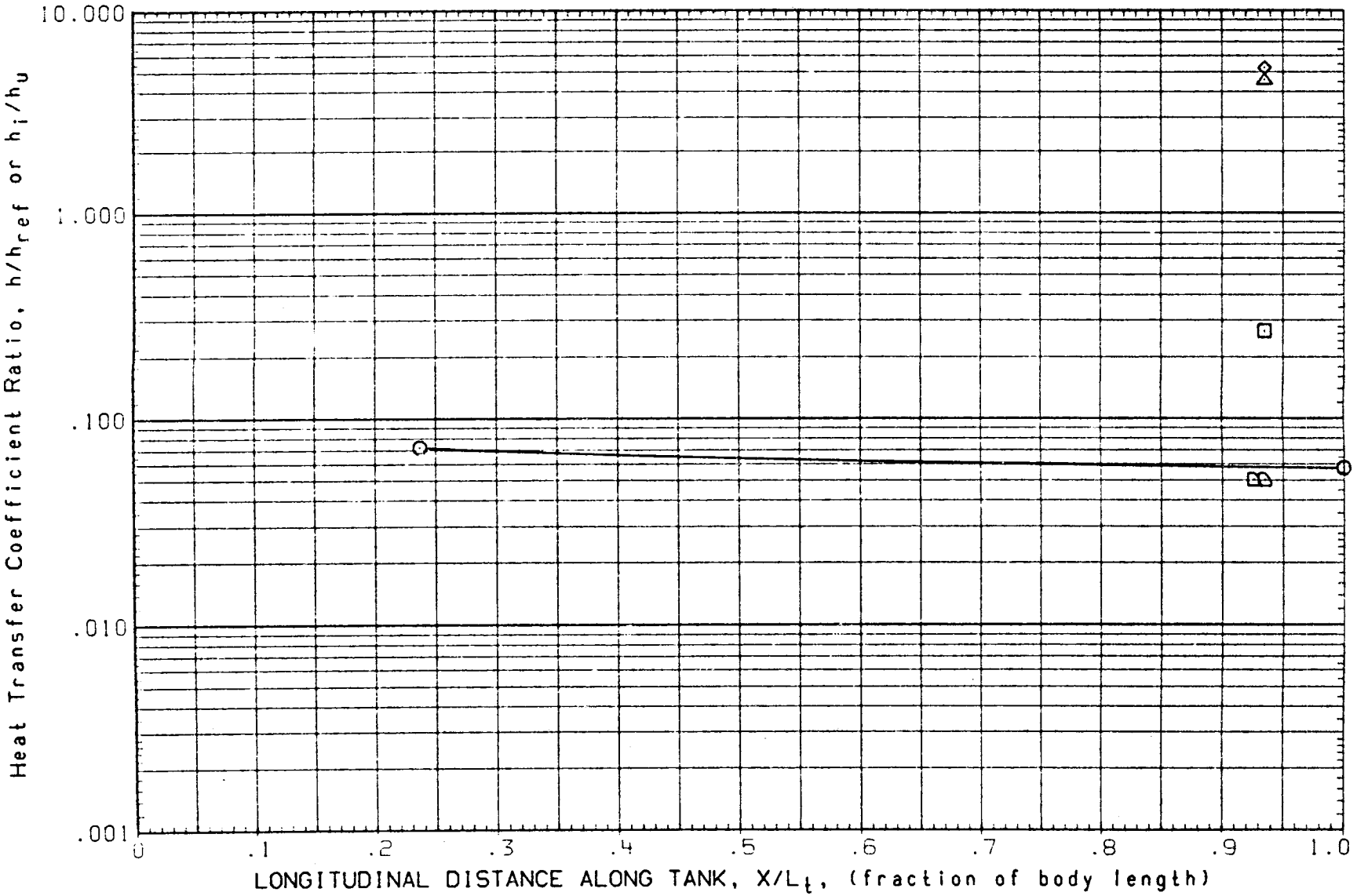

FIG. 4-6 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 334.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT38)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	.000
(C9NT38)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	.000
(V4LT32)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	.000
(X4LT32)	◇	IH85 (W.L. TEST) OTS/ET = V4LT32/C9NT38= HI/HU		4.020	.000	.000
(Y4LT32)	△	IH85 (W.L. THEORY) OTS/ET = V4LT32/A9NT38= HI/HU		4.020	.000	.000

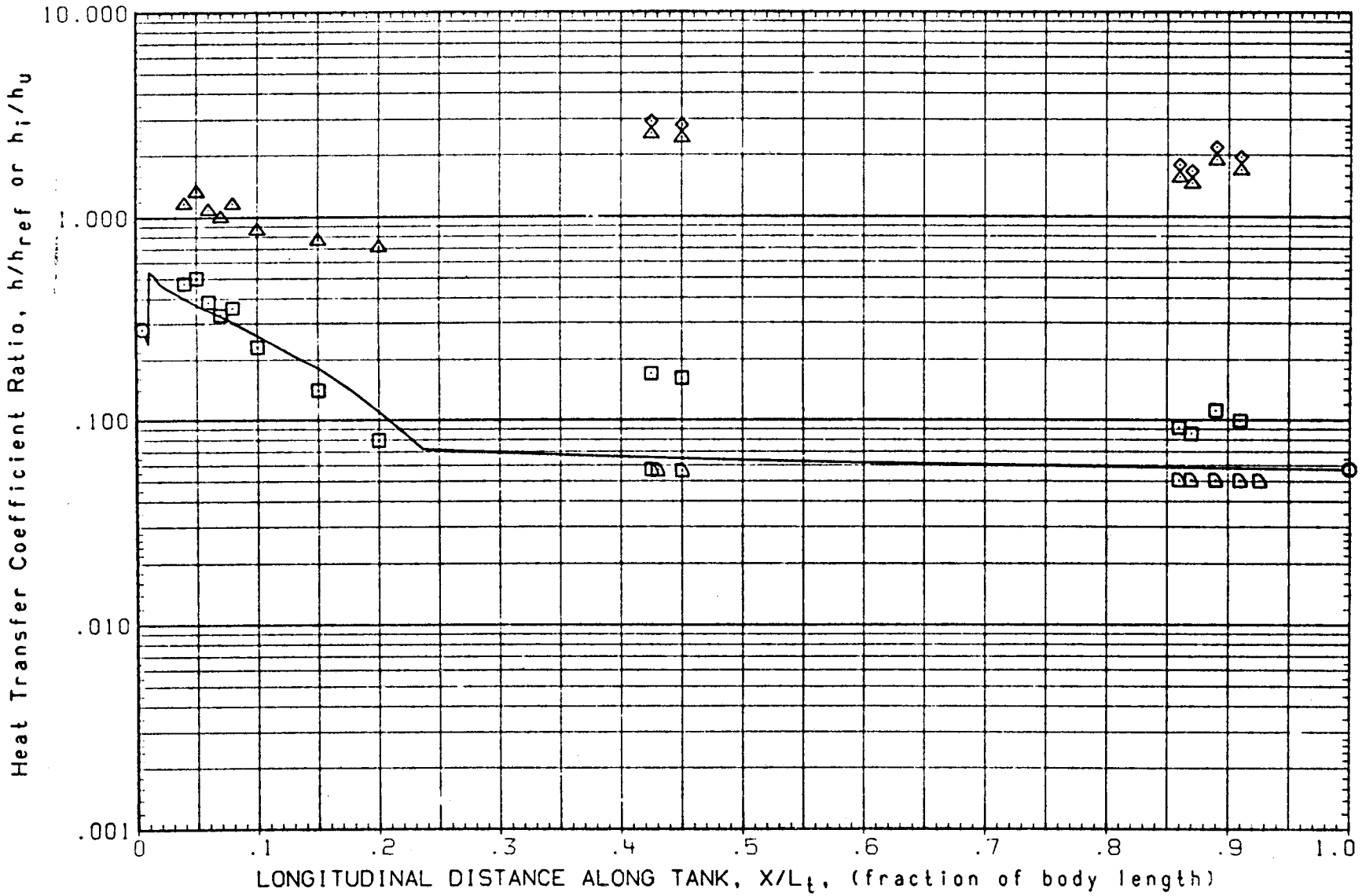

FIG. 4-6 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 337.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT38)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	.000
(C9NT38)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	.000
(Y4LT32)	□	DATA NOT AVAILABLE		4.020	.000	.000
(X4LT32)	◇	DATA NOT AVAILABLE		4.020	.000	.000
(Y4LT32)	△	DATA NOT AVAILABLE		4.020	.000	.000

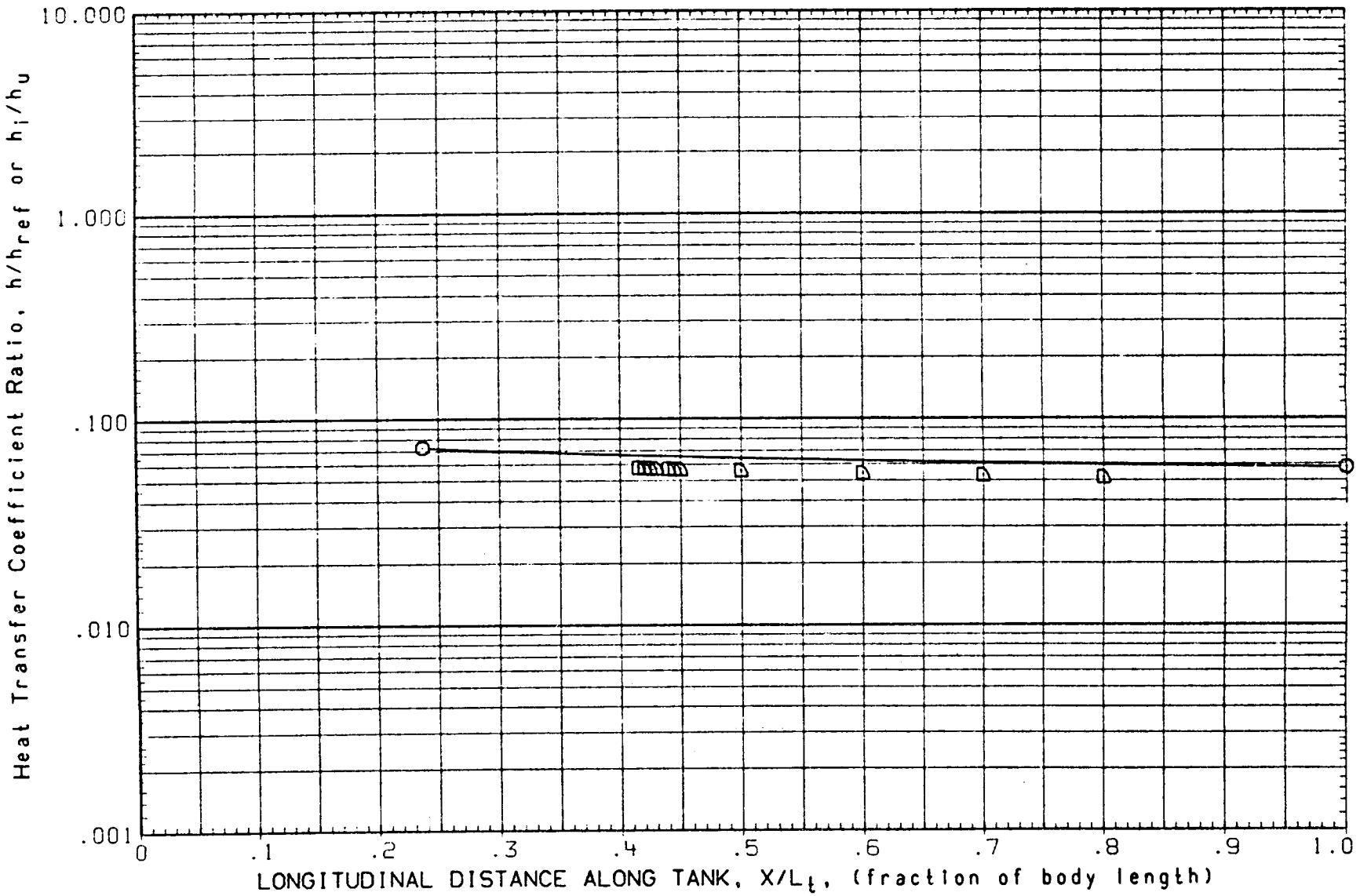

FIG. 4-6 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 343.120

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT38)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	.000
(C9NT38)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	.000
(V4LT32)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	.000
(X4LT32)	◇	IH85 (W.L. TEST) OTS/ET = V4LT32/C9NT38=	HI/HU	4.020	.000	.000
(Y4LT32)	△	IH85 (W.L. THEORY) OTS/ET = V4LT32/A9NT38=	HI/HU	4.020	.000	.000

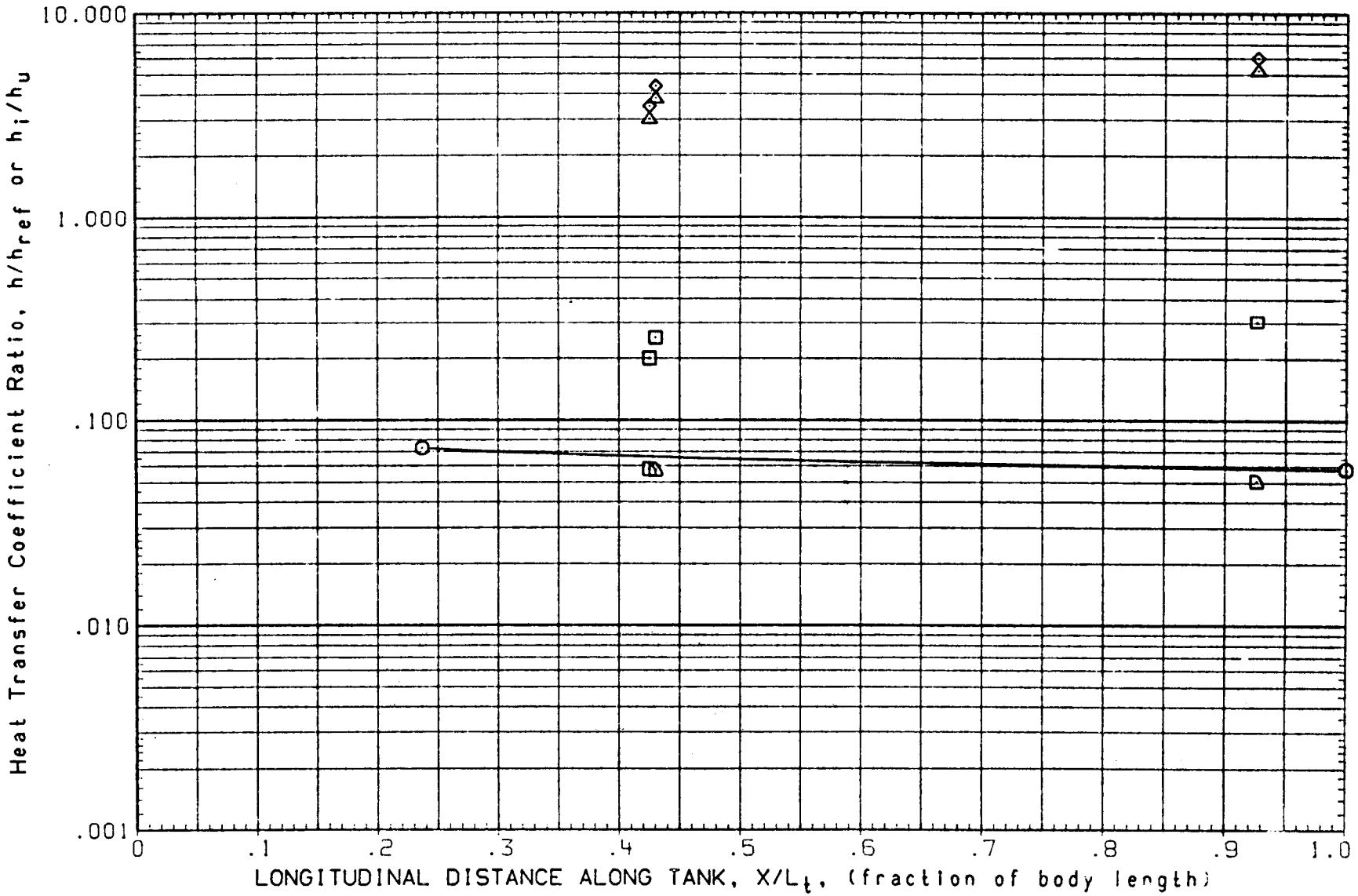

FIG. 4-6 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 345.560

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT38)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	.000
(C9NT38)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	.000
(V4LT32)	□	IH95, AEDC V41A-N5, CONFIGURATION 0 (T) S		4.020	.000	.000
(X4LT32)	◇	IH85 (W.L. TEST) OTS/ET = V4LT32/C9NT38=	HI/HU	4.020	.000	.000
(Y4LT32)	△	IH85 (W.L. THEORY) OTS/ET = V4LT32/A9NT38=	HI/HU	4.020	.000	.000

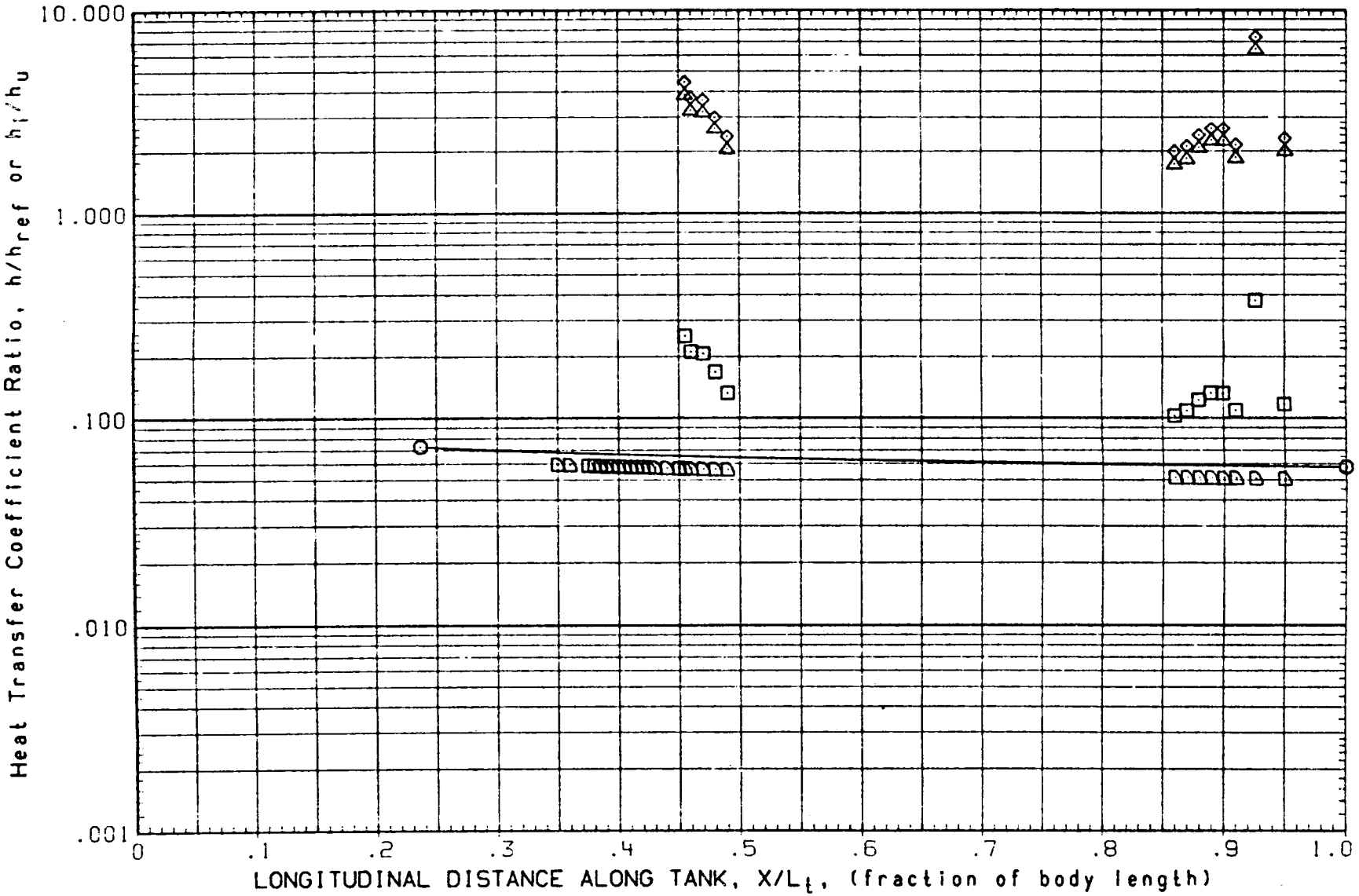

FIG. 4-6 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 348.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT38)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	.000
(C9NT38)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	.000
(V4LT32)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	.000
(X4LT32)	◇	IH85 (W.L. TEST) OTS/ET = V4LT32/C9NT38=	HI/HU	4.020	.000	.000
(Y4LT32)	△	IH85 (W.L. THEORY) OTS/ET = V4LT32/A9NT38=	HI/HU	4.020	.000	.000

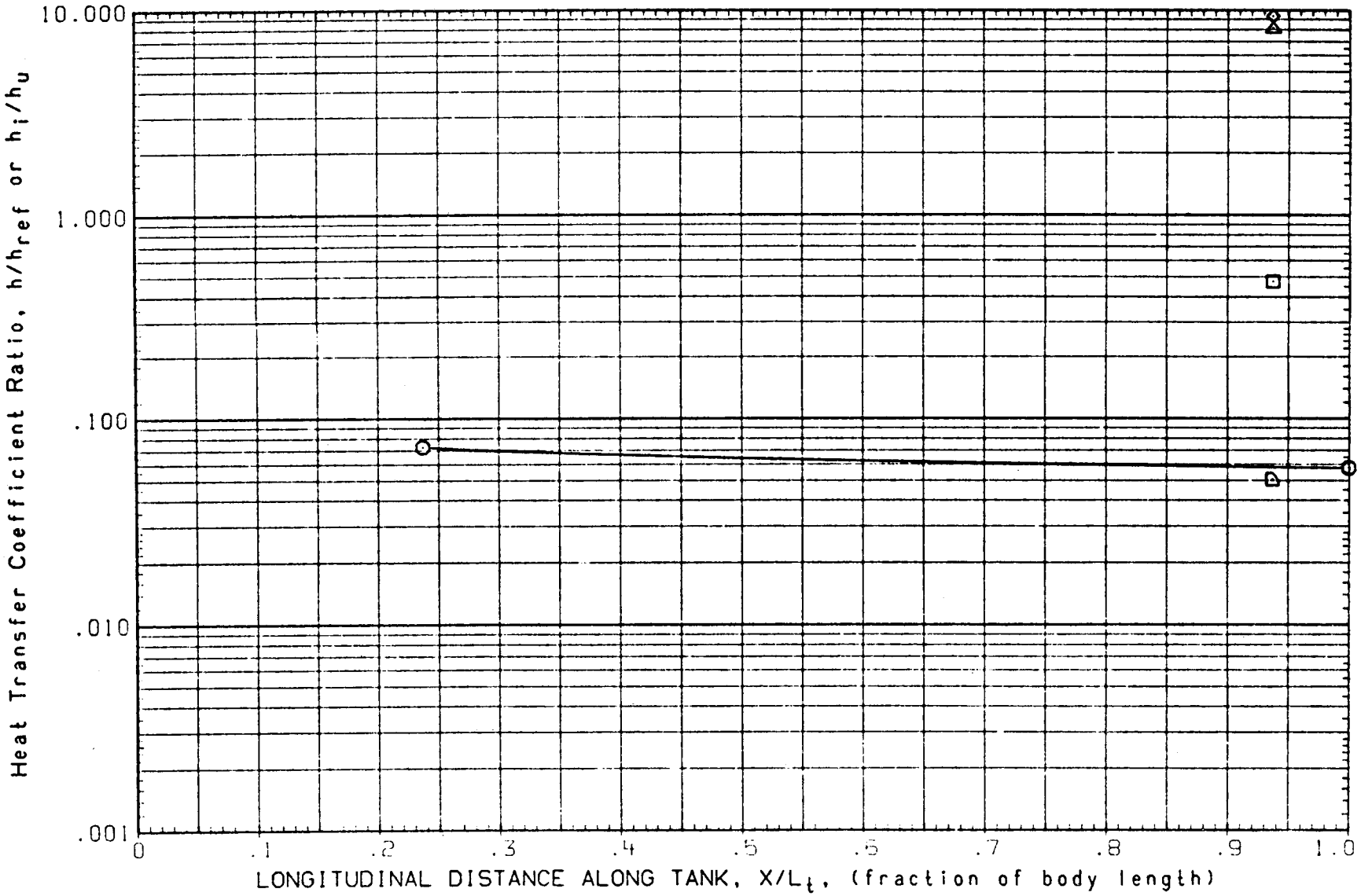

FIG. 4-6 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 452.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(C9NT38)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	.000
(C9NT32)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	.000
(V4LT32)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	.000
(X4LT32)	◇	IH85 (W.T., TEST) OTS/ET = V4LT32/C9NT38- HI/HU		4.020	.000	.000
(Y4LT32)	△	IH85 (W.T., THEORY) OTS/ET = V4LT32/A9NT39- HI/HU		4.020	.000	.000

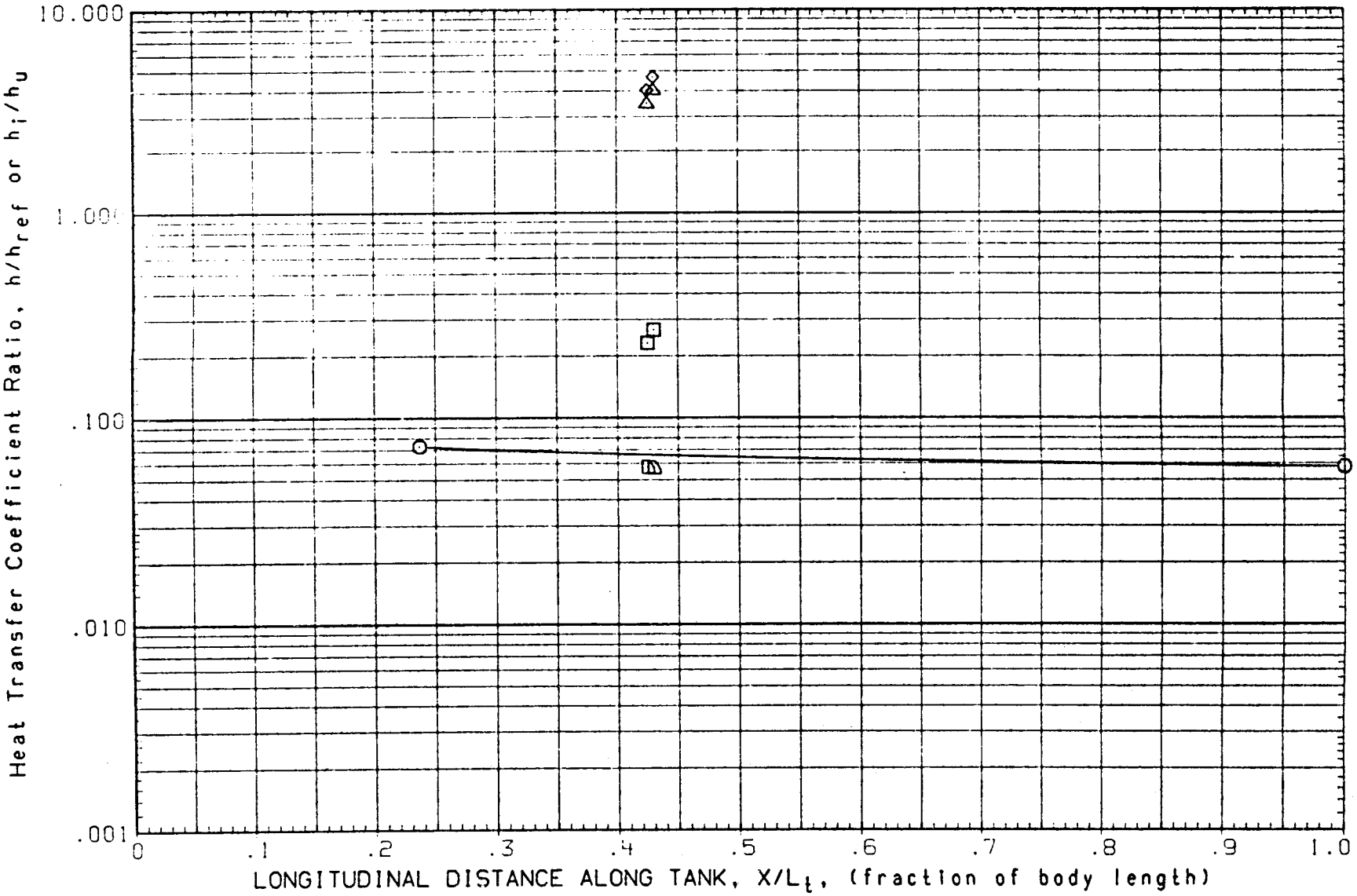

FIG. 4-6 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 354.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT38)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	.000
(C9NT38)	◪	DATA NOT AVAILABLE		4.020	.000	.000
(Y4LT32)	□	DATA NOT AVAILABLE		4.020	.000	.000
(X4LT32)	◇	DATA NOT AVAILABLE		4.020	.000	.000
(Y4LT32)	△	DATA NOT AVAILABLE		4.020	.000	.000

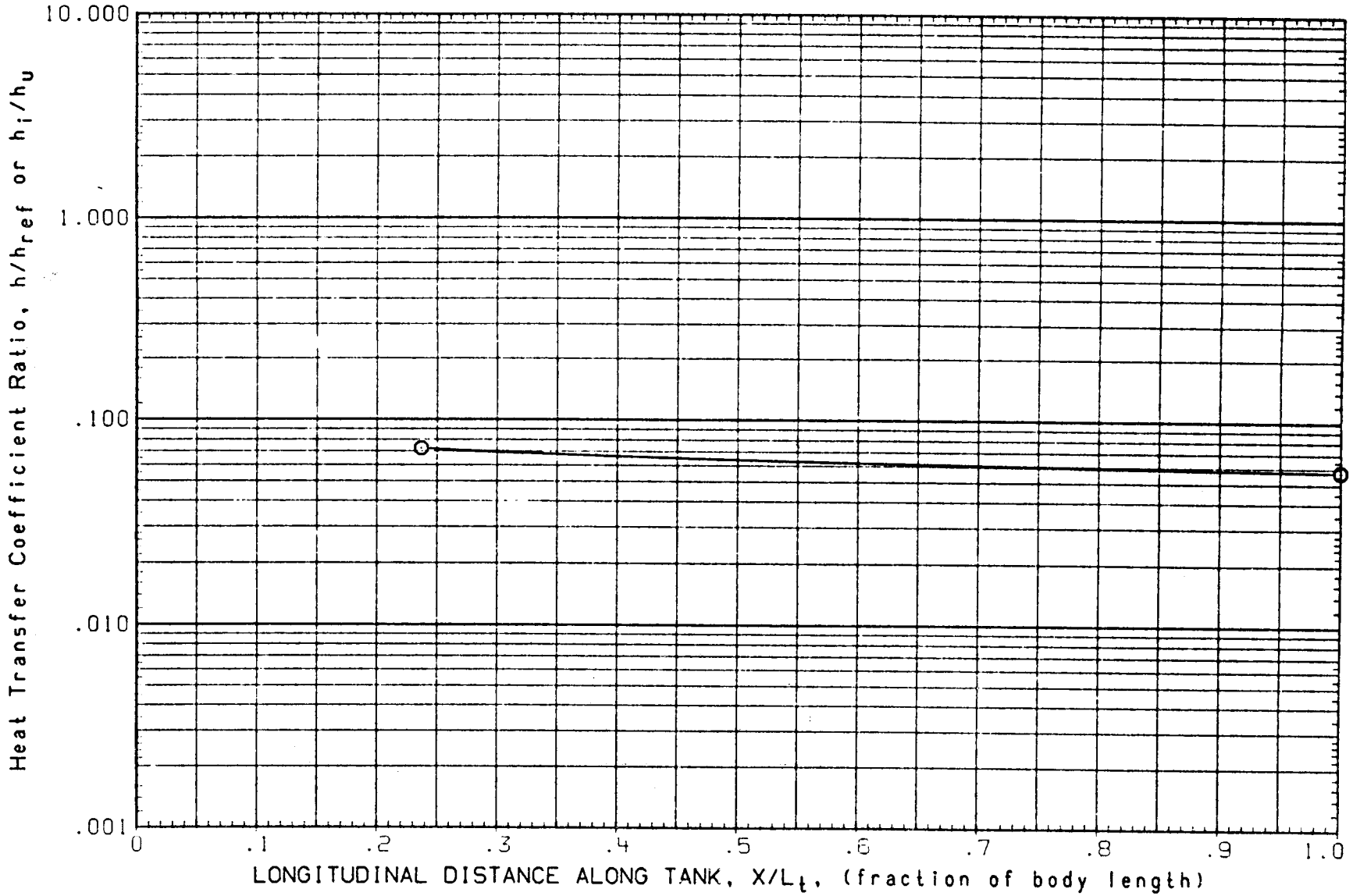

FIG. 4-6 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 355.160

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT38)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	.000
(C9NT38)	⬠	DATA NOT AVAILABLE		4.020	.000	.000
(V4LT32)	□	DATA NOT AVAILABLE		4.020	.000	.000
(X4LT32)	◇	DATA NOT AVAILABLE		4.020	.000	.000
(Y4LT32)	△	DATA NOT AVAILABLE		4.020	.000	.000

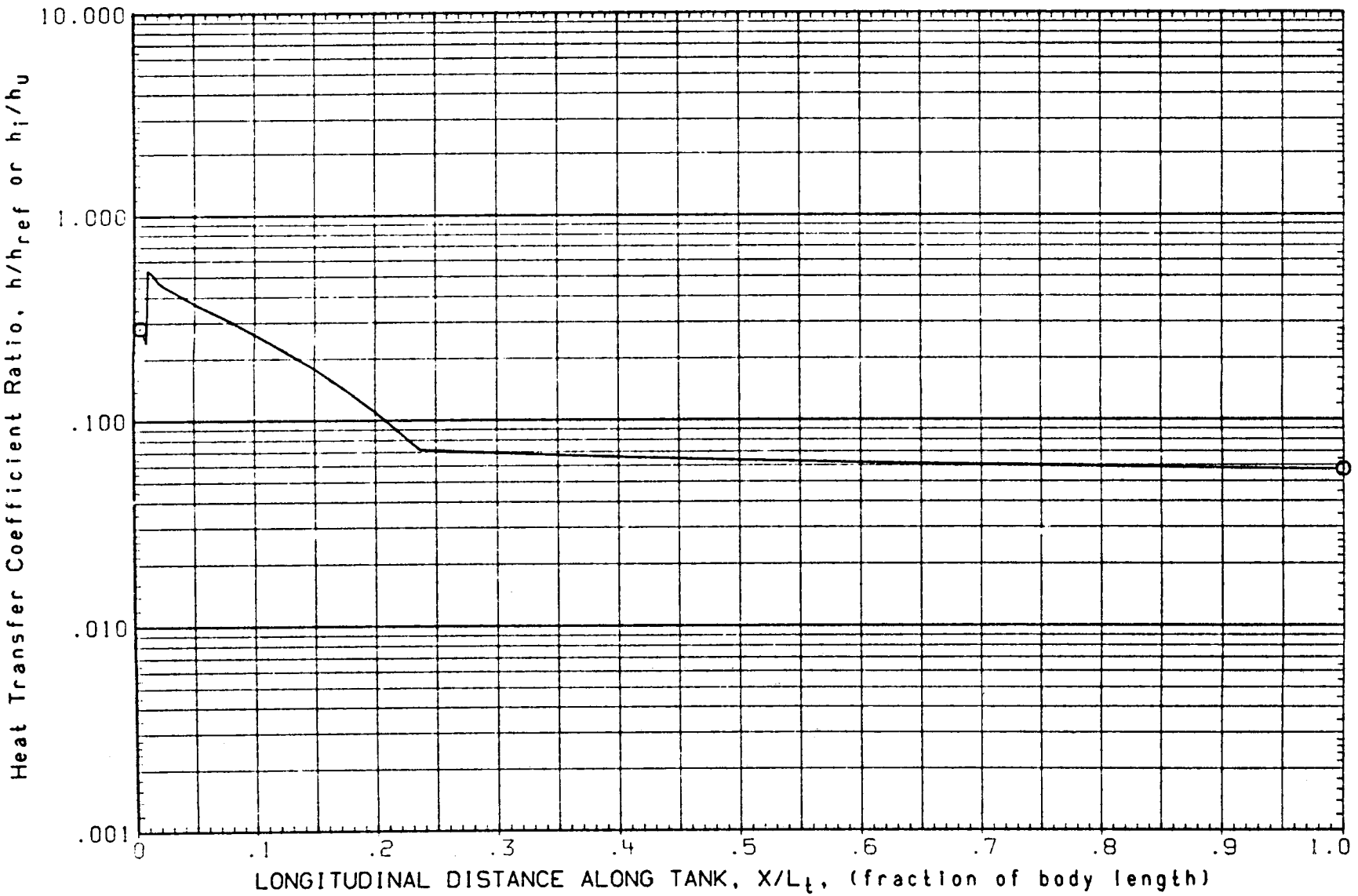

FIG. 4-6 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 360.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT39)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	3.000
(C9NT39)	⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	3.000
(V4LT33)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) 5		4.020	.000	3.000
(X4LT33)	◇	IH85 (W.L. TEST) OTS/ET = V4LT33/C9NT39=	HI/HU	4.020	.000	3.000
(Y4LT33)	△	IH85 (W.L. THEORY) OTS/ET = V4LT33/A9NT39=	HI/HU	4.020	.000	3.000

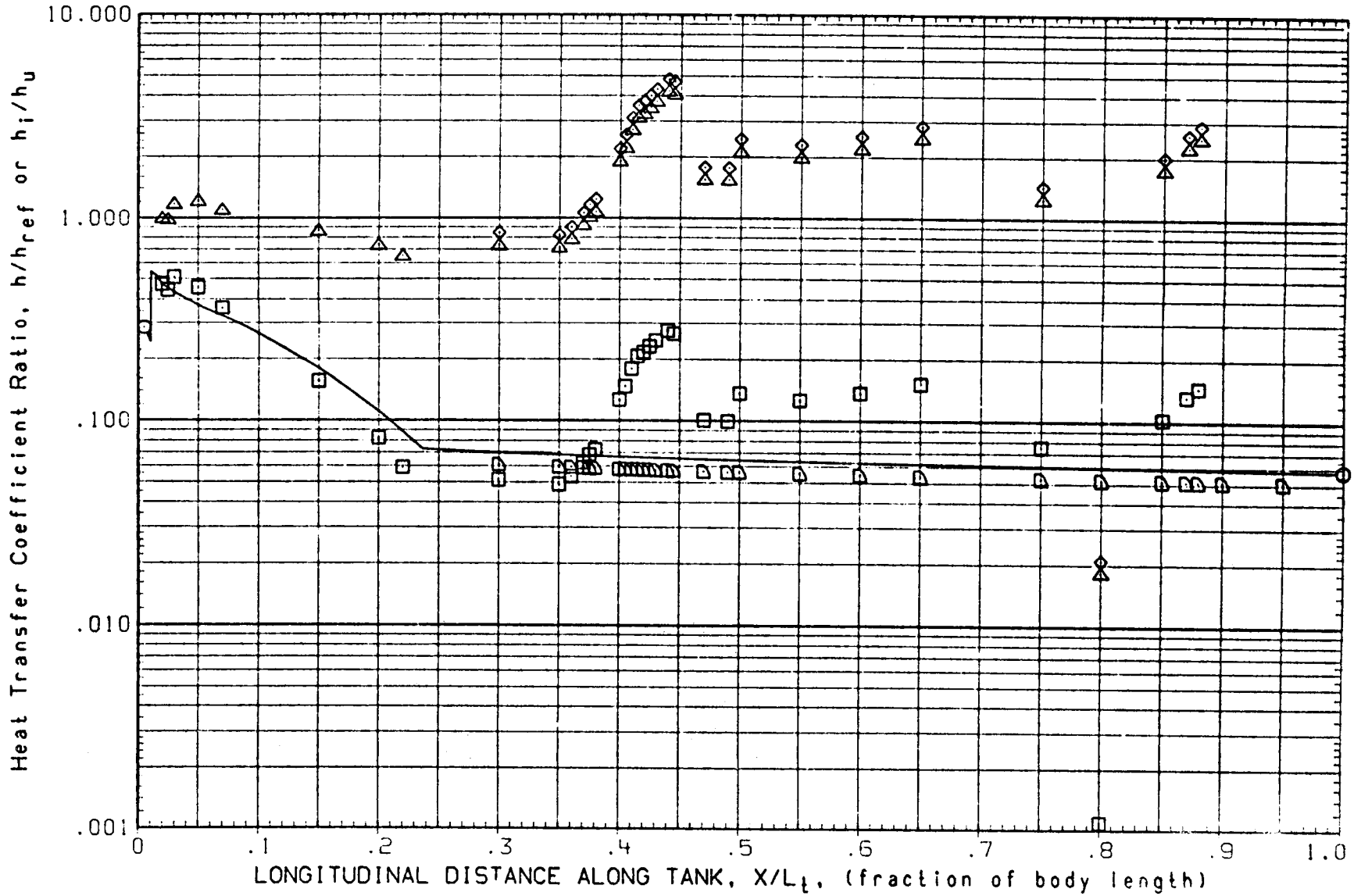

FIG. 4-7 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = .000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT39)	○	DATA NOT AVAILABLE	4.020	.000	3.000
(C9NT39)	⬠	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	4.020	.000	3.000
(V4LT33)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	.000	3.000
(X4LT33)	◇	IH85 (W.L. TEST) OTS/ET = V4LT33/C9NT39= HI/HU	4.020	.000	3.000
(Y4LT33)	△	IH85 (W.L. THEORY) OTS/ET = V4LT33/A9NT39= HI/HU	4.020	.000	3.000

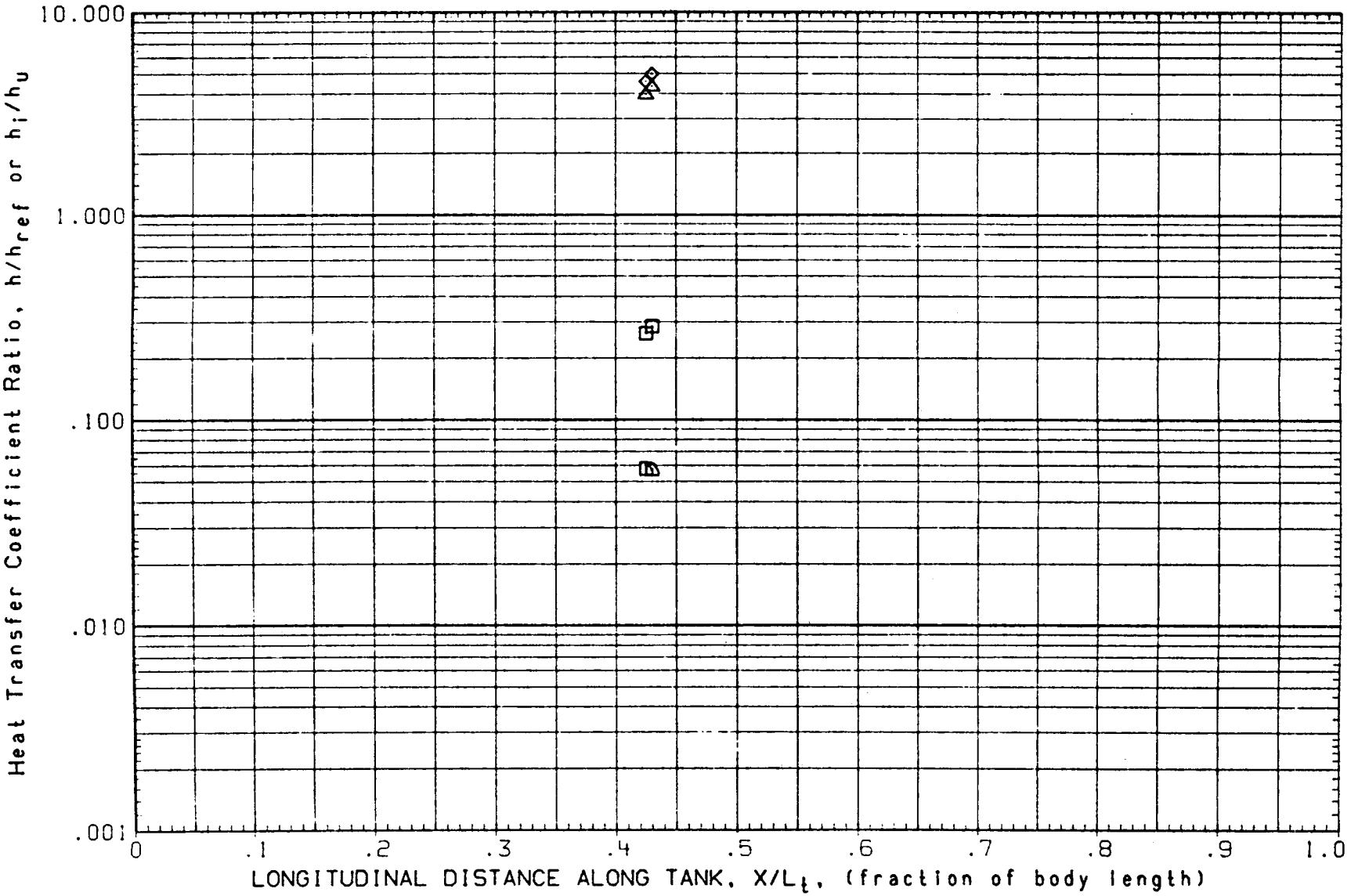

FIG. 4-7 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 5.625

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT39)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	3.000
(C9NT39)	⬠	DATA NOT AVAILABLE		4.020	.000	3.000
(V4LT33)	□	DATA NOT AVAILABLE		4.020	.000	3.000
(X4LT33)	◇	DATA NOT AVAILABLE		4.020	.000	3.000
(Y4LT33)	△	DATA NOT AVAILABLE		4.020	.000	3.000

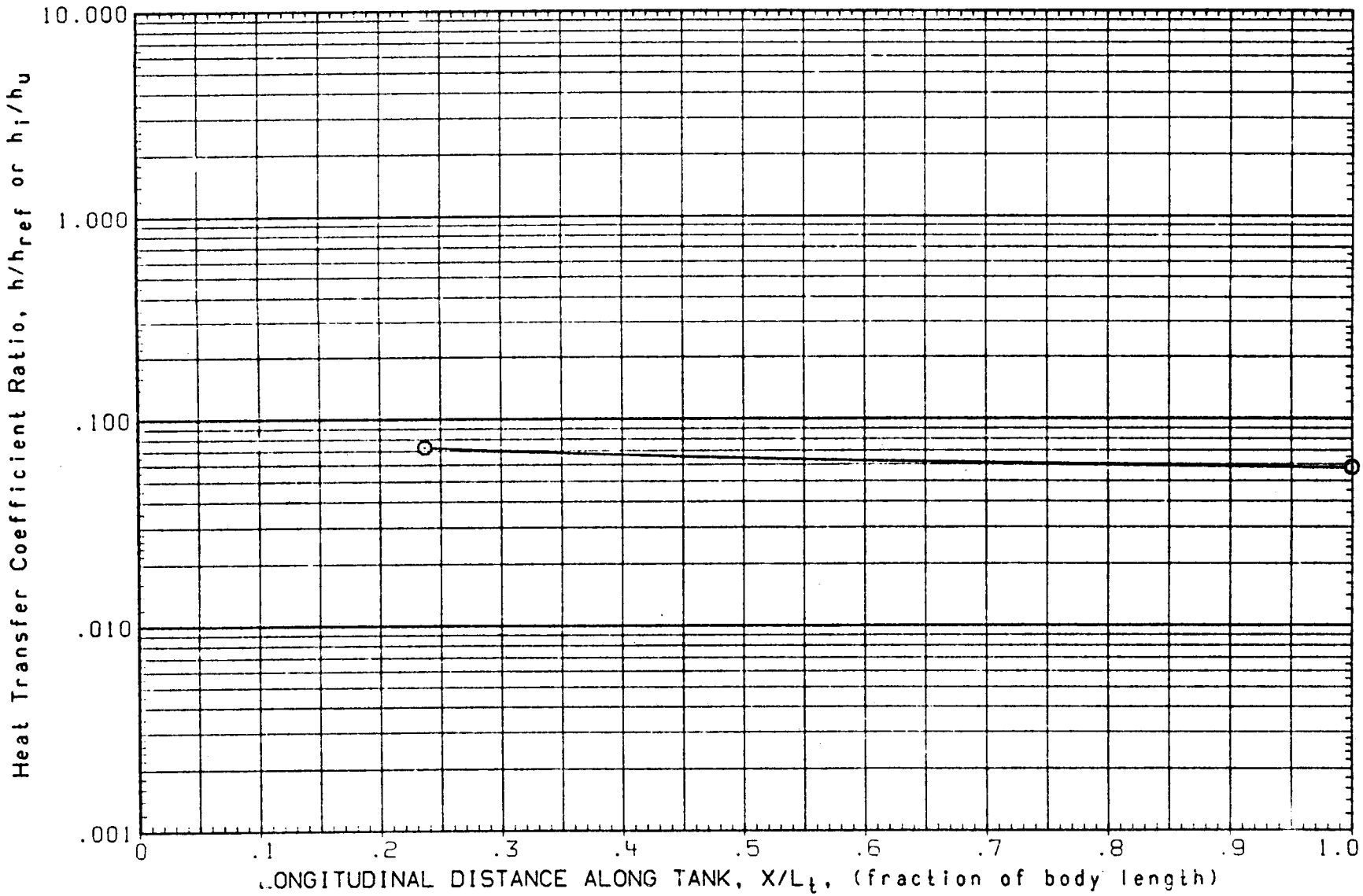

FIG. 4-7 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 5.630

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(A9NT39)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	3.000
(C9NT39)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	3.000
(V4LT33)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	3.000
(X4LT33)	◇	IH85 (W.L. TEST) OTS/ET = V4LT33/C9NT39=	HI/HU	4.020	.000	3.000
(Y4LT33)	△	IH85 (W.L. THEORY) OTS/ET = V4LT33/A9NT39=	HI/HU	4.020	.000	3.000

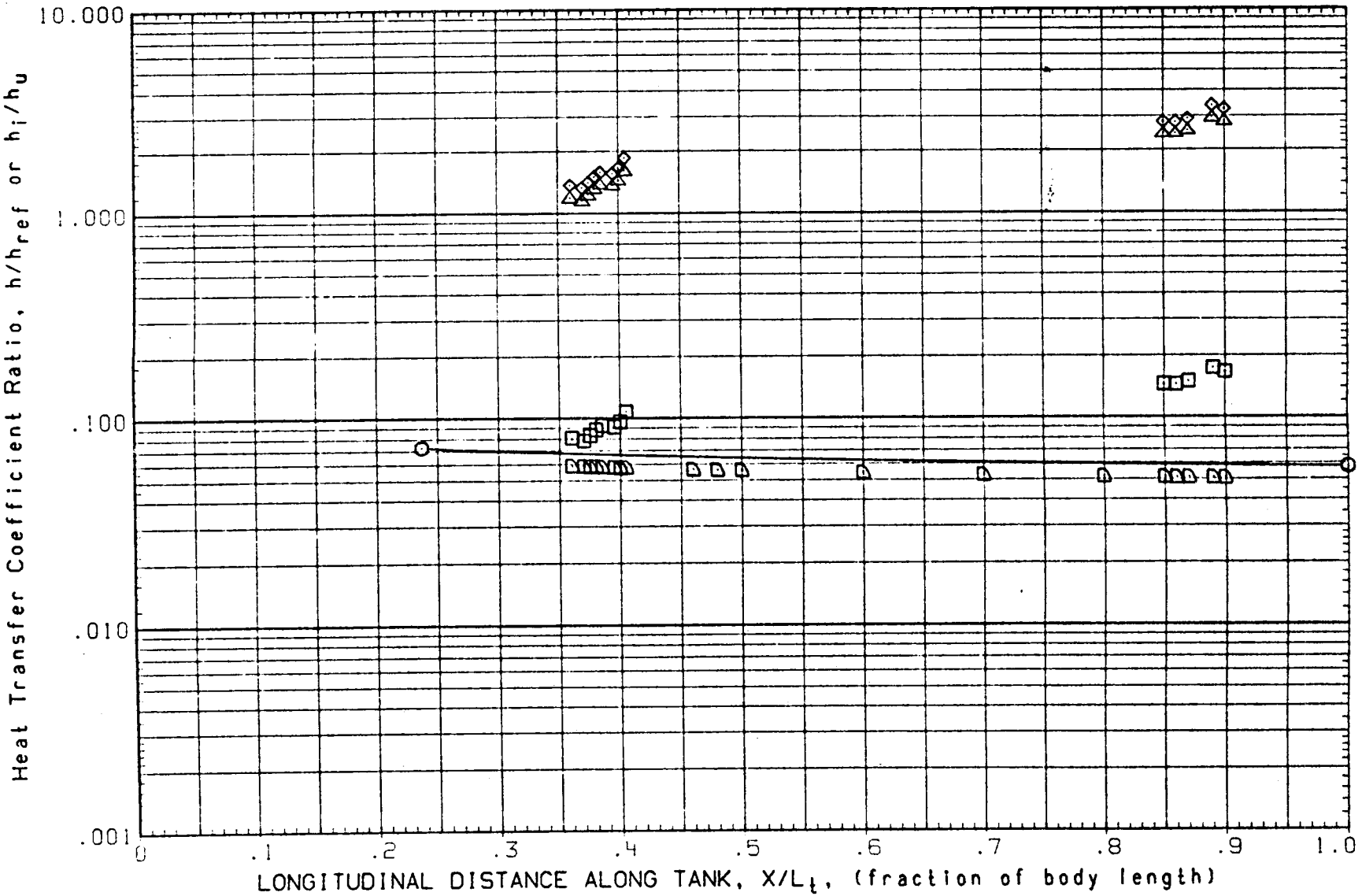

FIG. 4-7 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 11.250

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT39)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	4.020	.000	3.000
(C9NT39)	⌂	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	4.020	.000	3.000
(V4LT33)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	.000	3.000
(X4LT33)	◇	IH85 (W.L. TEST) OTS/ET = V4LT33/C9NT39= HI/HU	4.020	.000	3.000
(Y4LT33)	△	IH85 (W.L. THEORY) OTS/ET = V4LT33/A9NT39= HI/HU	4.020	.000	3.000

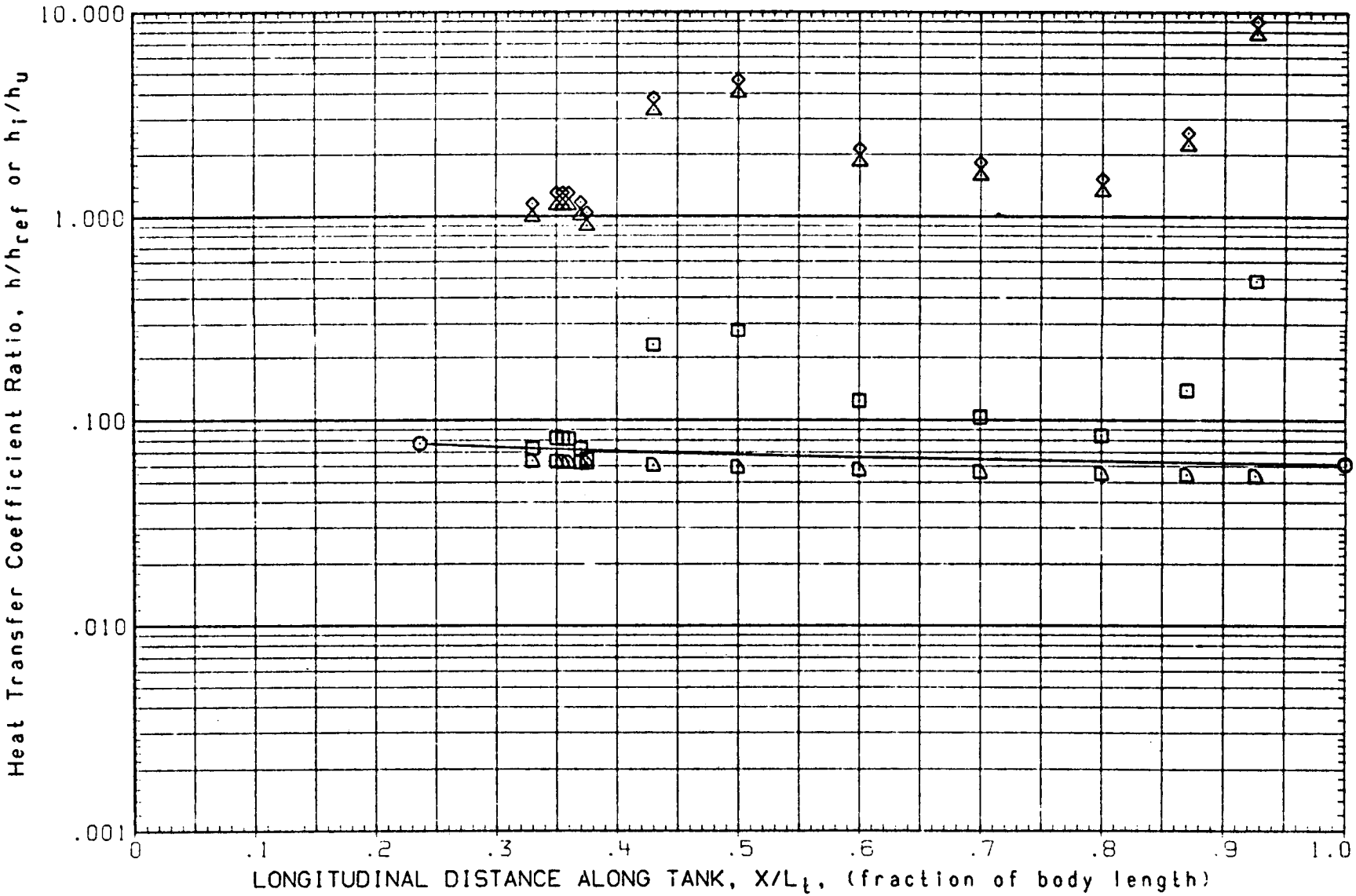

FIG. 4-7 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 17.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT39)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	3.000
(C9NT39)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	3.000
(V4LT33)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	3.000
(X4LT33)	◇	IH85 (W.L. TEST) OTS/ET = V4LT33/C9NT39=	HI/HU	4.020	.000	3.000
(Y4LT33)	△	IH85 (W.L. THEORY) OTS/ET = V4LT33/A9NT39=	HI/HU	4.020	.000	3.000

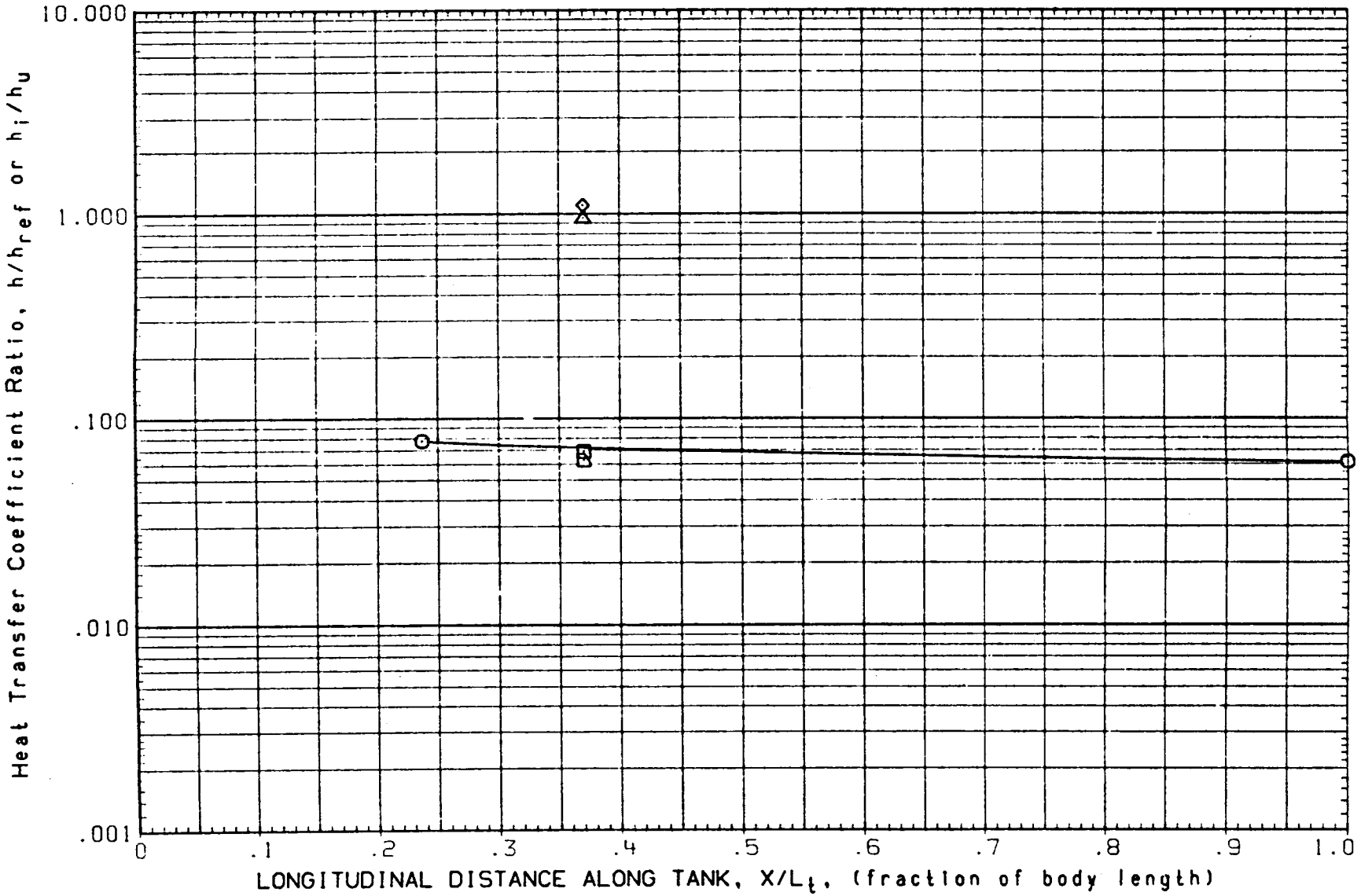

FIG. 4-7 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 20.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT39)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	3.000
(C9NT39)	⊿	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	3.000
(V4LT33)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	3.000
(X4LT33)	◇	IH85 (W.L. TEST) OTS/ET = V4LT33/C9NT39=	HI/HU	4.020	.000	3.000
(Y4LT33)	△	IH85 (W.L. THEORY) OTS/ET = V4LT33/A9NT39=	HI/HU	4.020	.000	3.000

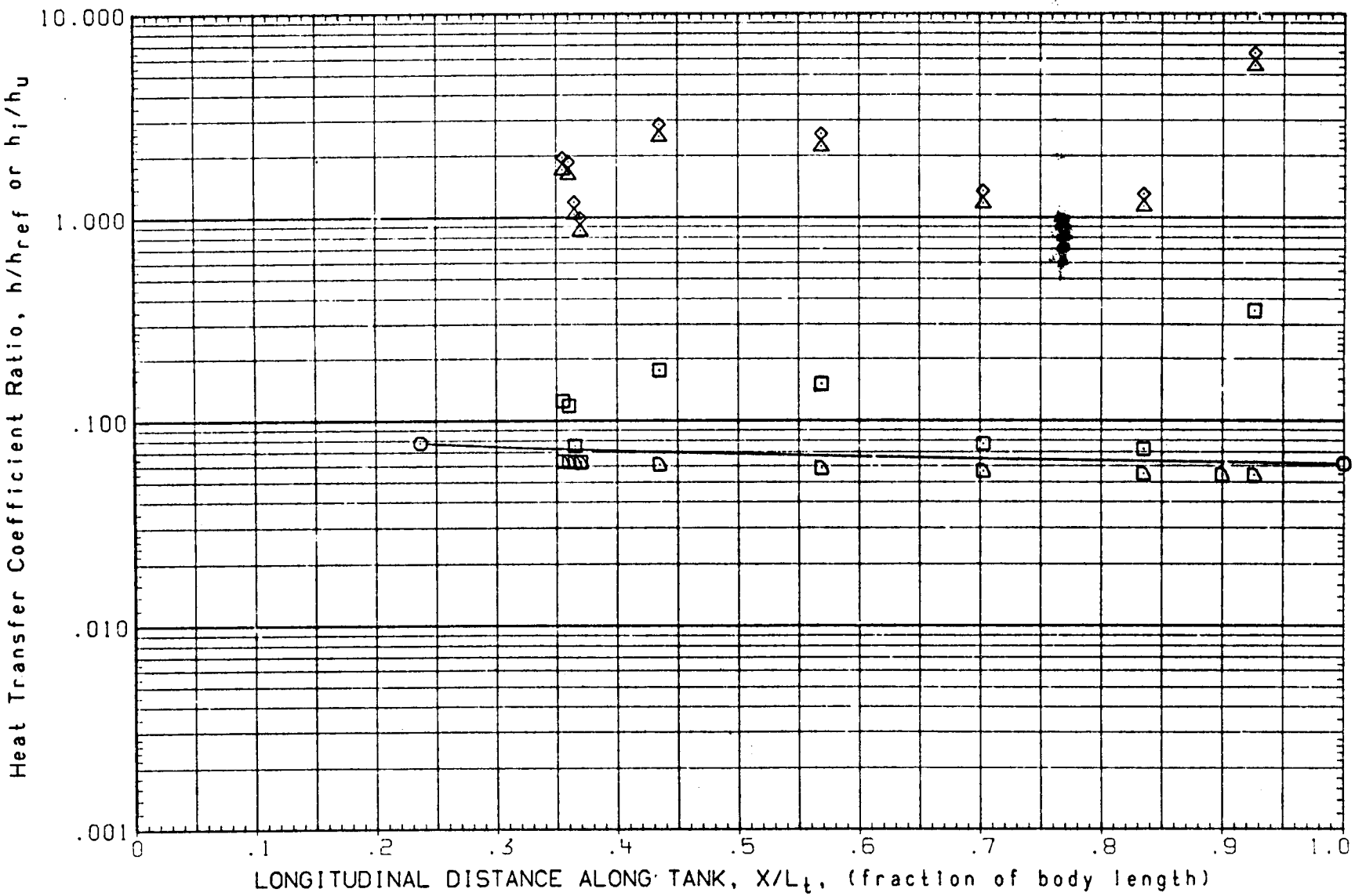

FIG. 4-7 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 23.070

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT39)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	3.000
(C9NT39)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	3.000
(V4LT33)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	3.000
(X4LT33)	◇	IH85 (W.L. TEST) OTS/ET = V4LT33/C9NT39=	HI/HU	4.020	.000	3.000
(Y4LT33)	△	IH85 (W.L. THEORY) OTS/ET = V4LT33/A9NT39=	HI/HU	4.020	.000	3.000

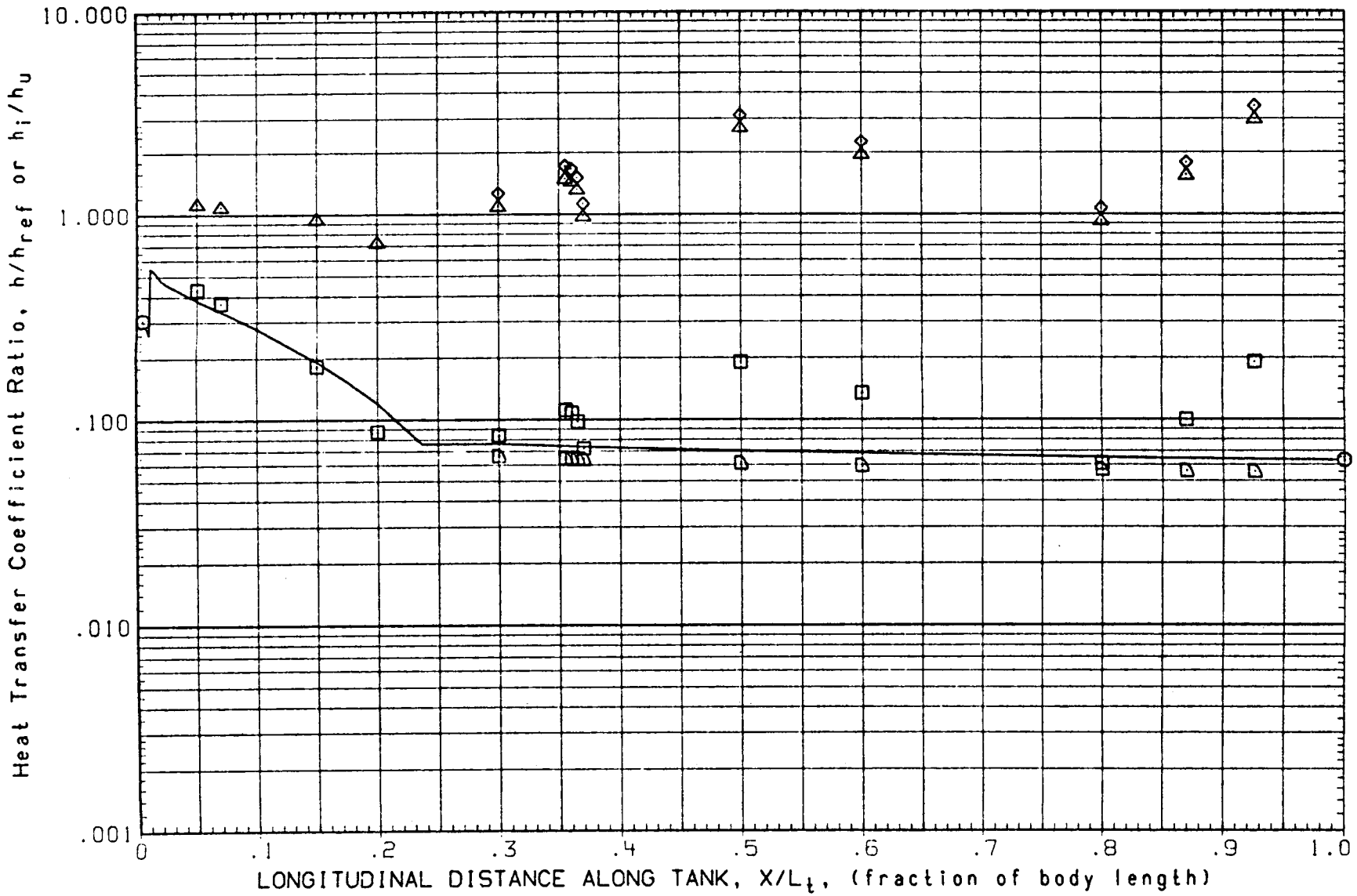

FIG. 4-7 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 29.800

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT39)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	3.000
(C9NT39)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	3.000
(V4LT33)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	3.000
(X4LT33)	◇	IH85 (W.L. TEST) OTS/ET = V4LT33/C9NT39=	HI/HU	4.020	.000	3.000
(Y4LT33)	△	IH85 (W.L. THEORY) OTS/ET = V4LT33/A9NT39=	HI/HU	4.020	.000	3.000

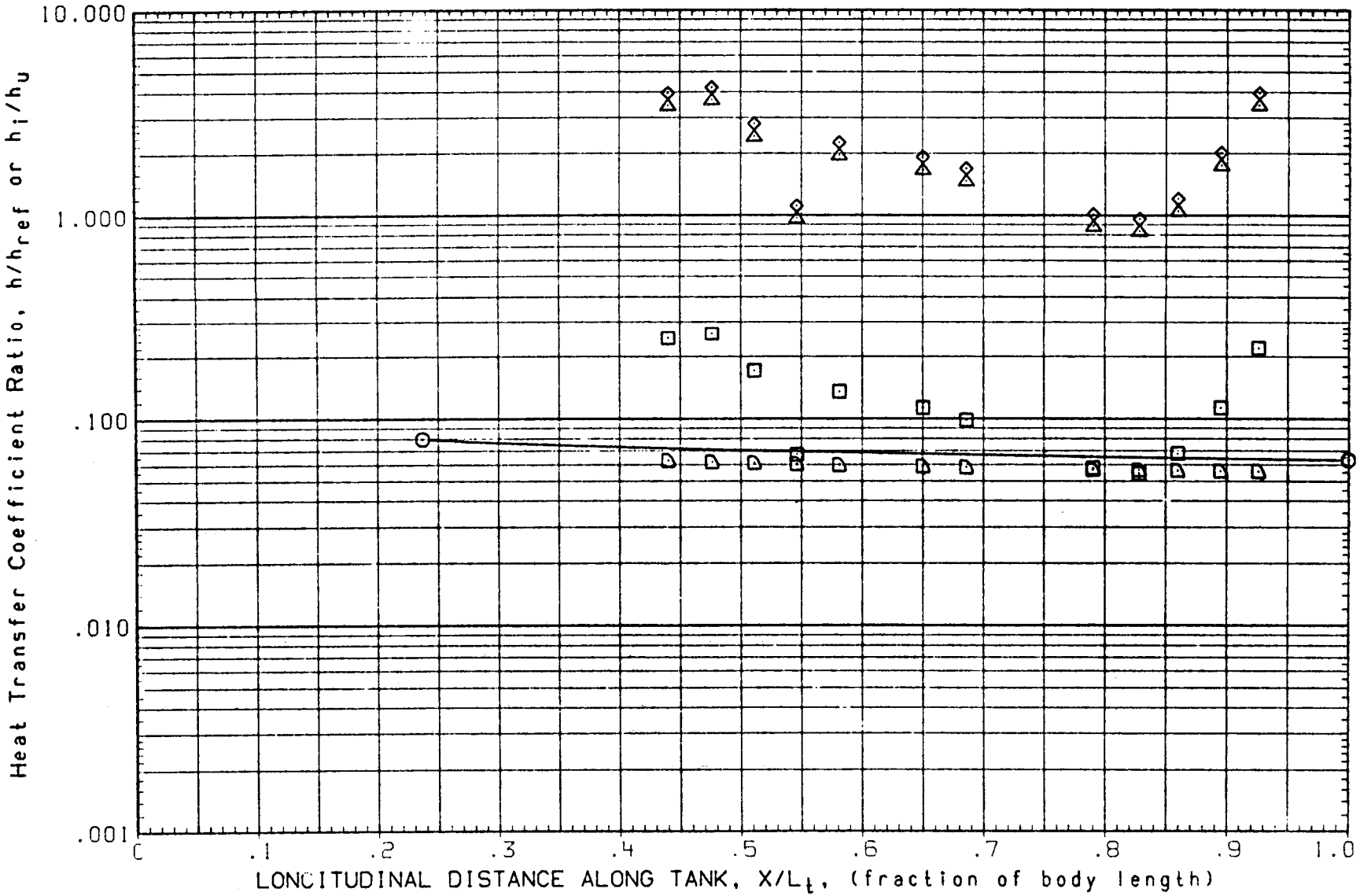

FIG. 4-7 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 31.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT39)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	3.000
(C9NT39)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	3.000
(V4LT33)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	3.000
(X4LT33)	◇	IH85 (W.L. TEST) OTS/ET = V4LT33/C9NT39=	HI/HU	4.020	.000	3.000
(Y4LT33)	△	IH85 (W.L. THEORY) OTS/ET = V4LT33/A9NT39=	HI/HU	4.020	.000	3.000

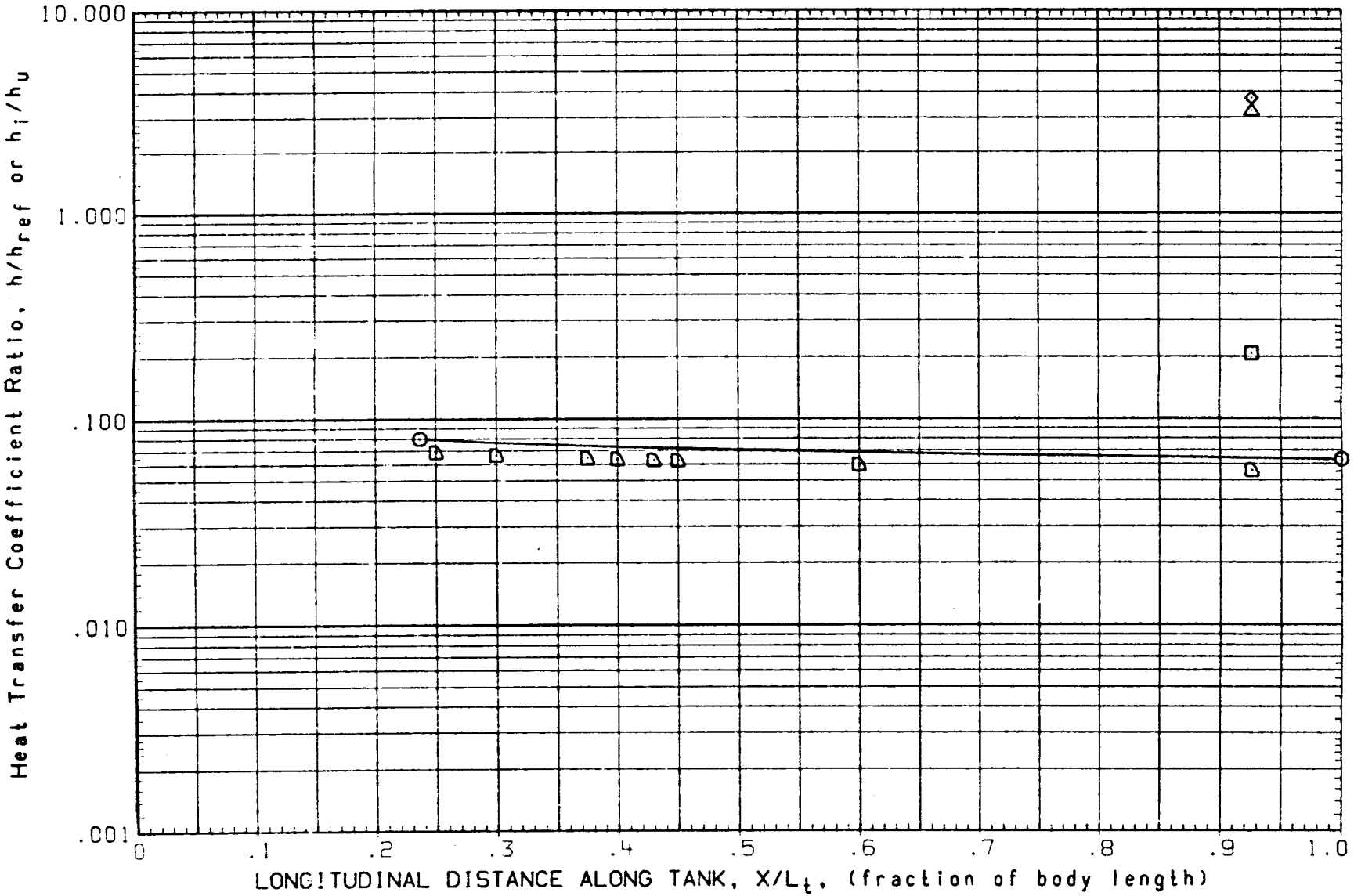

FIG. 4-7 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 33.750

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT39)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	3.000
(C9NT39)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	3.000
(V4LT33)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	3.000
(X4LT33)	◇	IH85 (W.L. TEST) OTS/ET = V4LT33/C9NT39=	HI/HU	4.020	.000	3.000
(Y4LT33)	△	IH85 (W.L. THEORY) OTS/ET = V4LT33/A9NT39=	HI/HU	4.020	.000	3.000

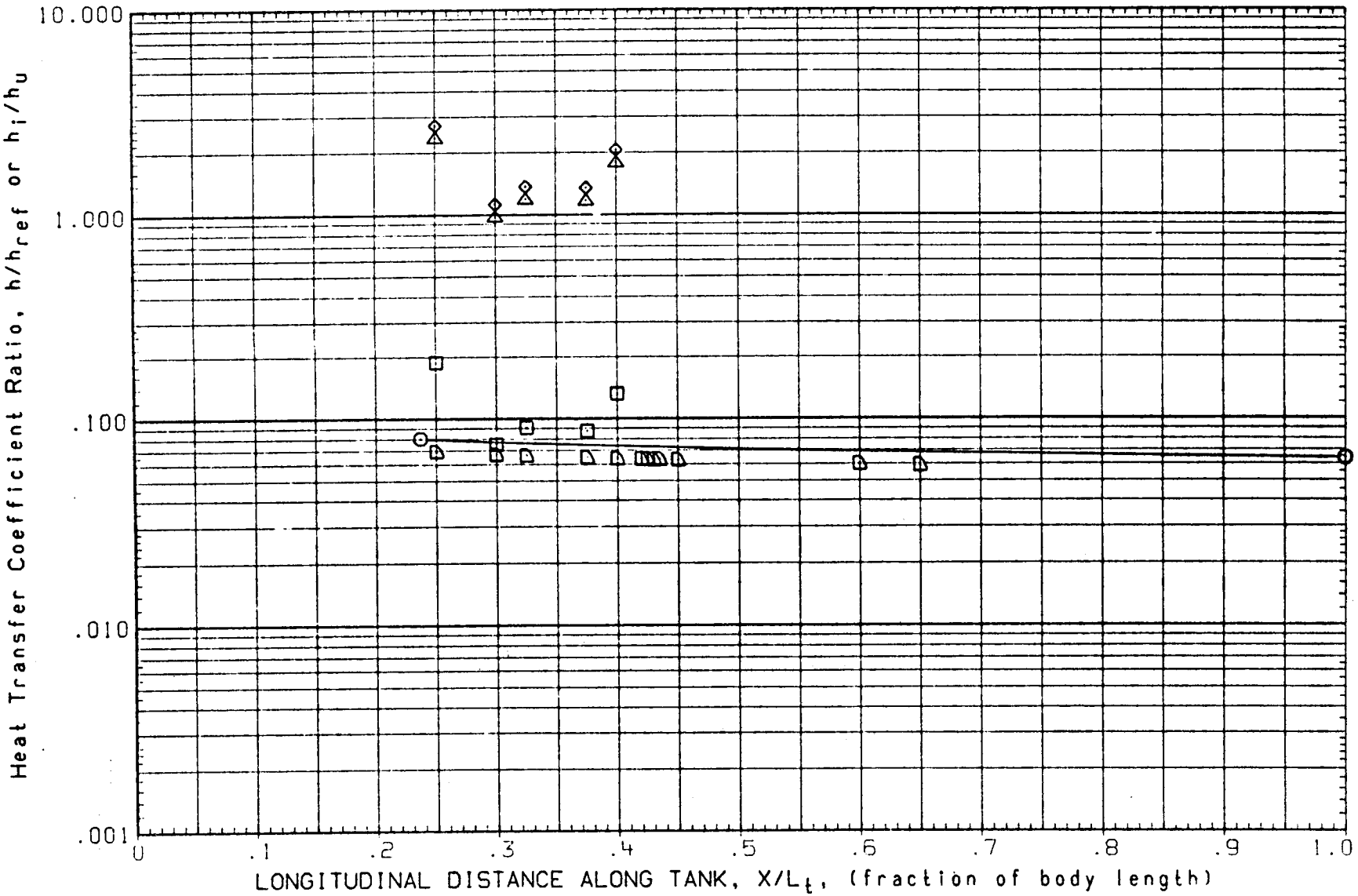

FIG. 4-7 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 36.320

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT39)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	3.000
(C9NT39)	◺	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	3.000
(V4LT33)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	3.000
(X4LT33)	◇	IH85 (W.L. TEST) OTS/ET = V4LT33/C9NT39=	HI/HU	4.020	.000	3.000
(Y4LT33)	△	IH85 (W.L. THEORY) OTS/ET = V4LT33/A9NT39=	HI/HU	4.020	.000	3.000

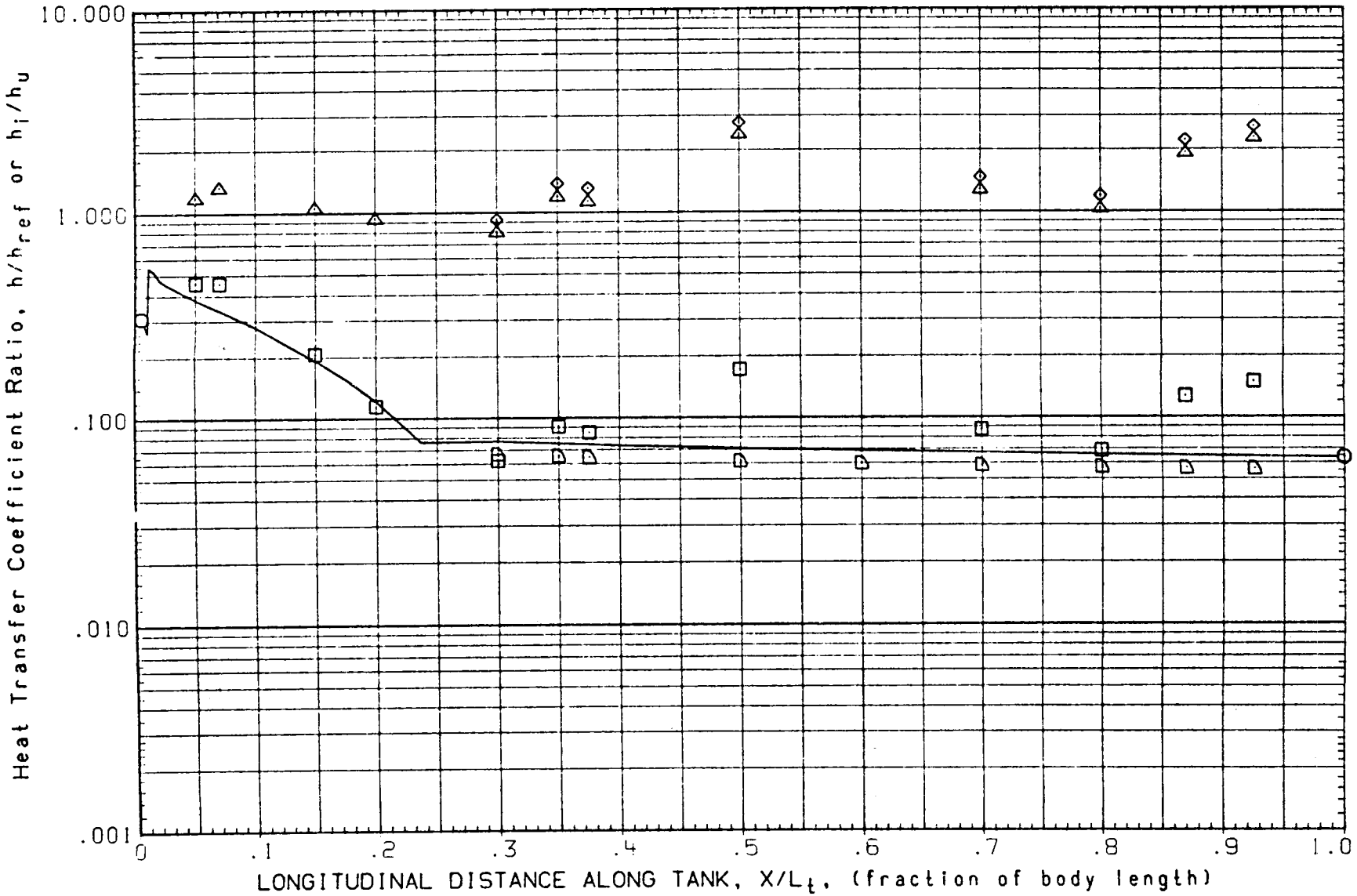

FIG. 4-7 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 37.700

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT39)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	3.000
(C9NT39)	⬠	DATA NOT AVAILABLE		4.020	.000	3.000
(V4LT33)	□	DATA NOT AVAILABLE		4.020	.000	3.000
(X4LT33)	◇	DATA NOT AVAILABLE		4.020	.000	3.000
(Y4LT33)	△	DATA NOT AVAILABLE		4.020	.000	3.000

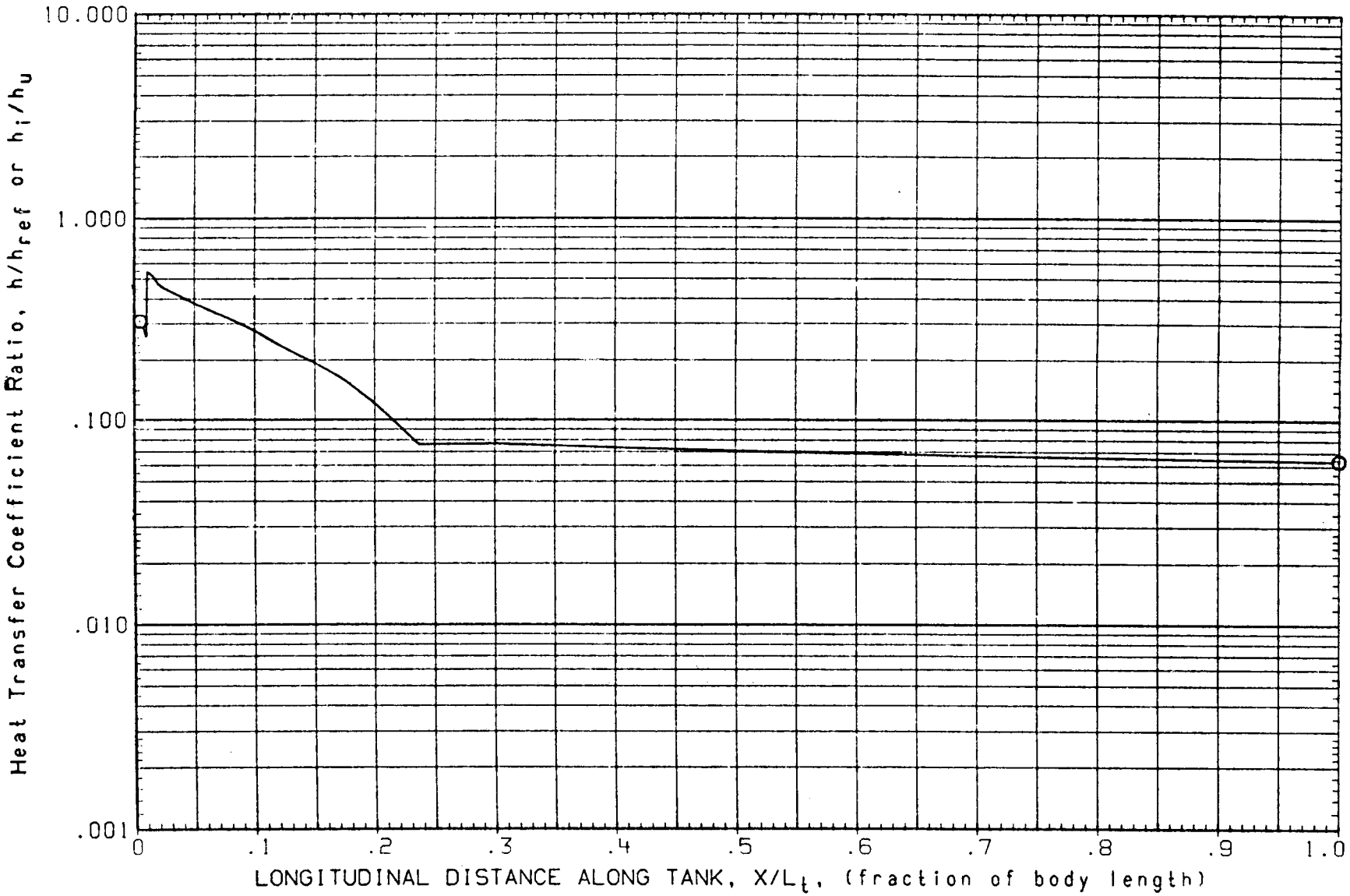

FIG. 4-7 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 39.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT39)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	3.000
(C9NT39)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	3.000
(V4LT33)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	3.000
(X4LT33)	◇	IH85 (W.L. TEST) OTS/ET = V4LT33/C9NT39=	HI/HU	4.020	.000	3.000
(Y4LT33)	△	IH85 (W.L. THEORY) OTS/ET = V4LT33/A9NT39=	HI/HU	4.020	.000	3.000

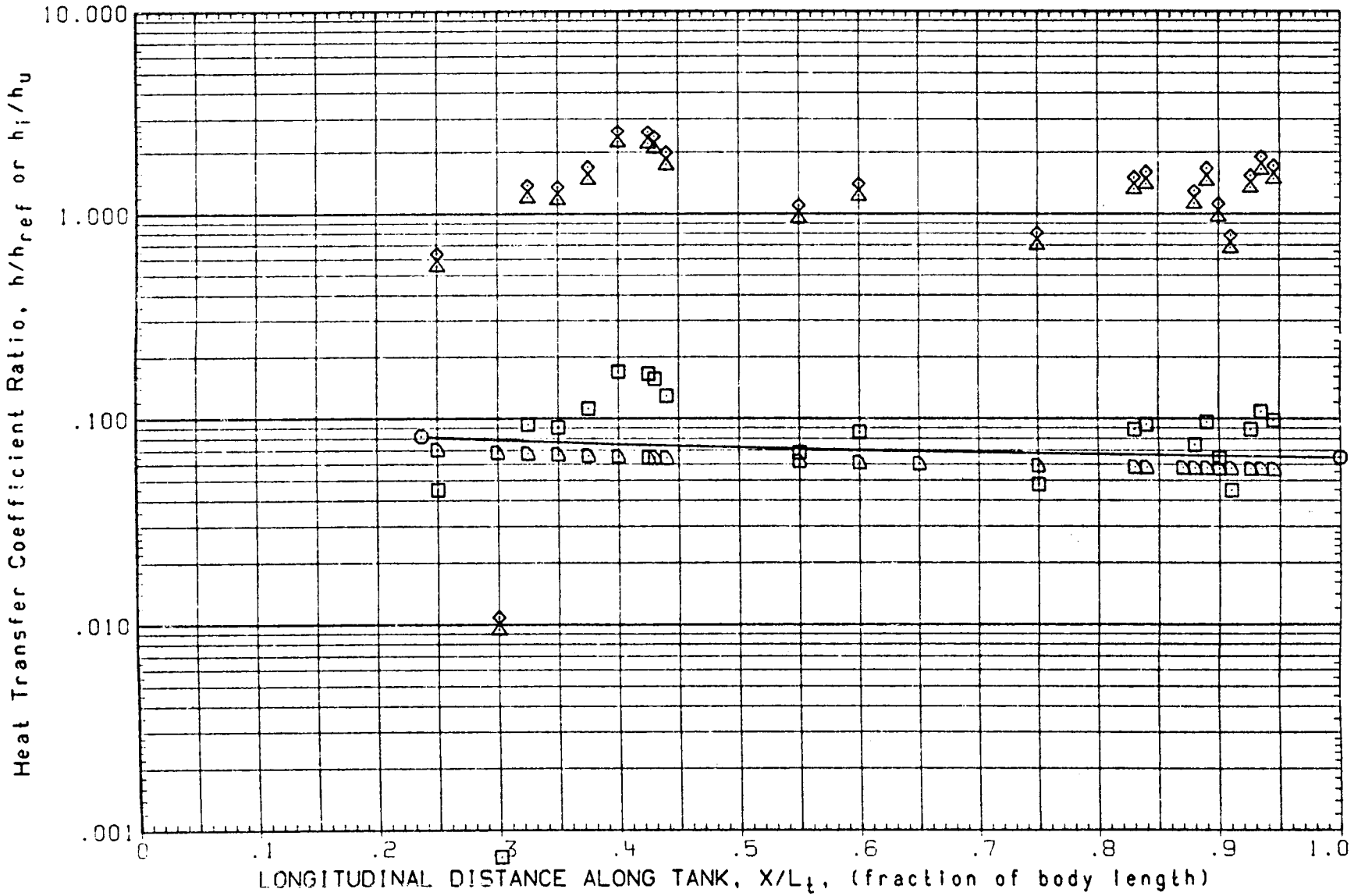

FIG. 4.7 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 45.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT39)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	4.020	.000	3.000
(C9NT39)	◗	DATA NOT AVAILABLE	4.020	.000	3.000
(V4LT33)	□	IH85, AEDC V41A-W5, CONFIGURATION O (T) S	4.020	.000	3.000
(X4LT33)	◇	DATA NOT AVAILABLE	4.020	.000	3.000
(Y4LT33)	△	IH85 (W.L. THEORY) OTS/ET = V4LT33/A9NT39= HI/HU	4.020	.000	3.000

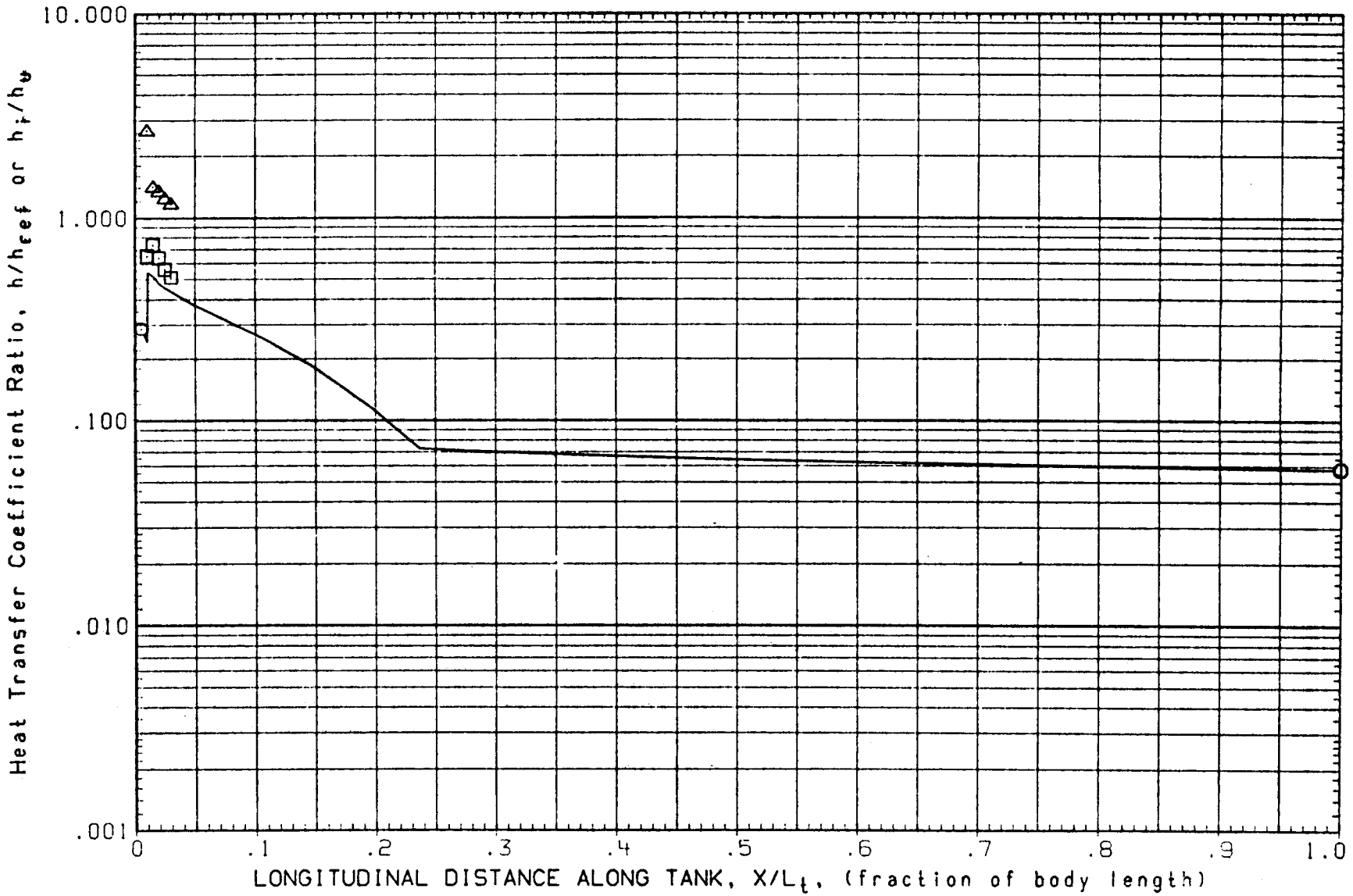

FIG. 4-7 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 180.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT39)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	3.000
(C9NT39)	◫	DATA NOT AVAILABLE		4.020	.000	3.000
(V4LT33)	□	DATA NOT AVAILABLE		4.020	.000	3.000
(X4LT33)	◇	DATA NOT AVAILABLE		4.020	.000	3.000
(Y4LT33)	△	DATA NOT AVAILABLE		4.020	.000	3.000

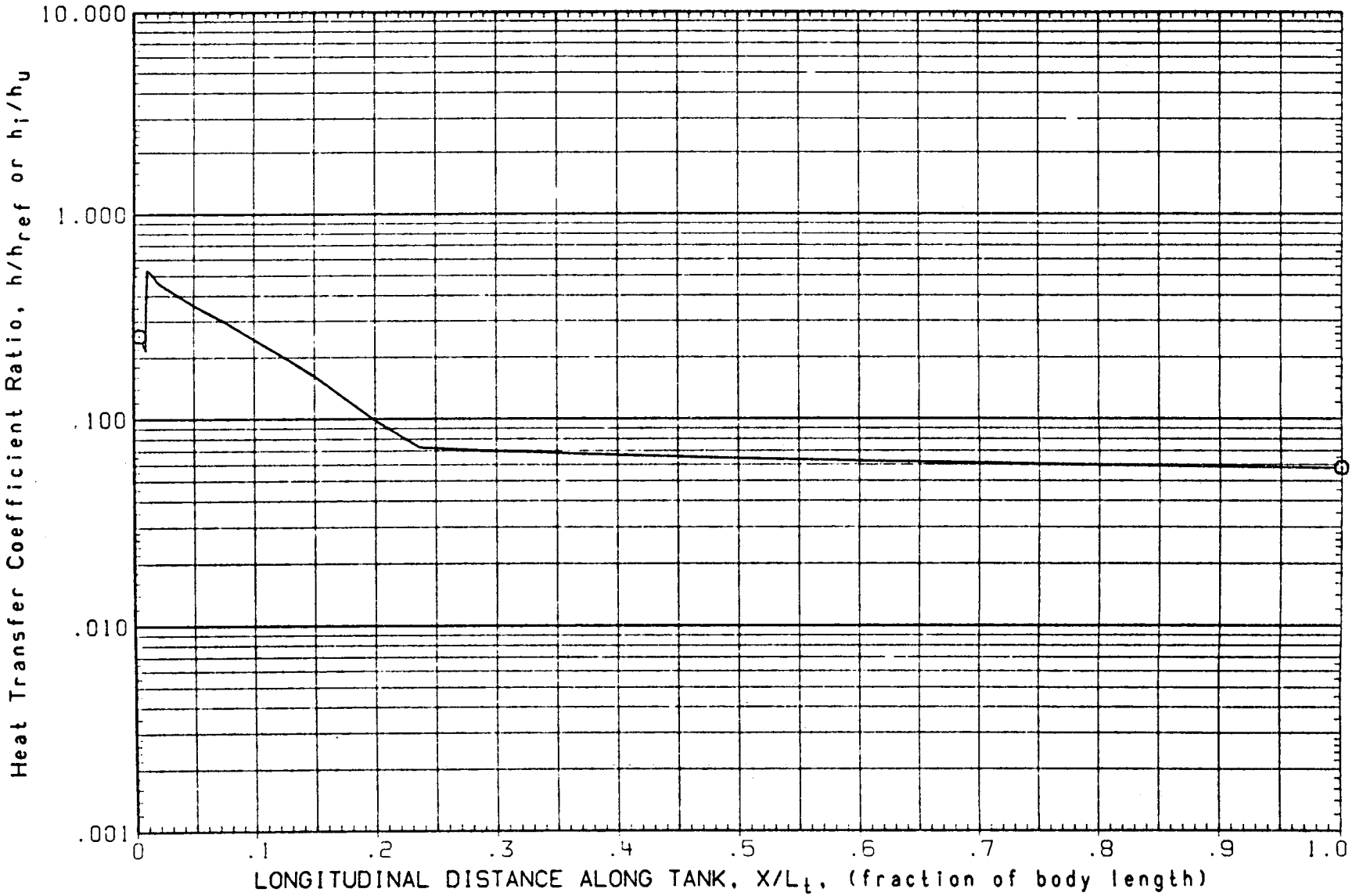

FIG. 4-7 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 235.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT39)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	3.000
(C9NT39)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	3.000
(V4LT33)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	3.000
(X4LT33)	◇	IH85 (W.L. TEST) OTS/ET = V4LT33/C9NT39= HI/HU		4.020	.000	3.000
(Y4LT33)	△	IH85 (W.L. THEORY) OTS/ET = V4LT33/A9NT39= HI/HU		4.020	.000	3.000

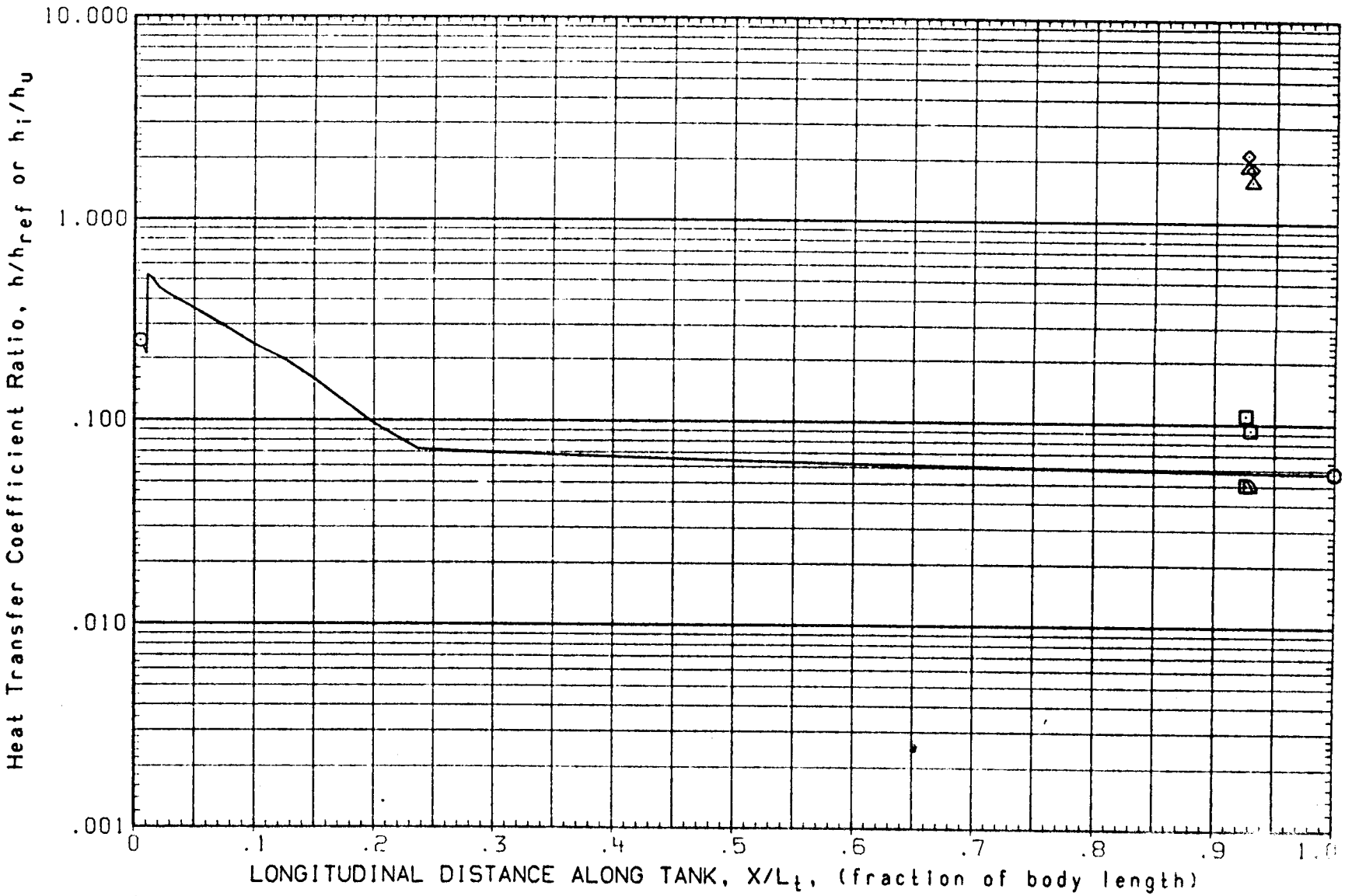

FIG. 4-7 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 247.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT39)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	3.000
(C9NT39)	D	DATA NOT AVAILABLE		4.020	.000	3.000
(V4LT33)	□	DATA NOT AVAILABLE		4.020	.000	3.000
(X4LT33)	◇	DATA NOT AVAILABLE		4.020	.000	3.000
(Y4LT33)	△	DATA NOT AVAILABLE		4.020	.000	3.000

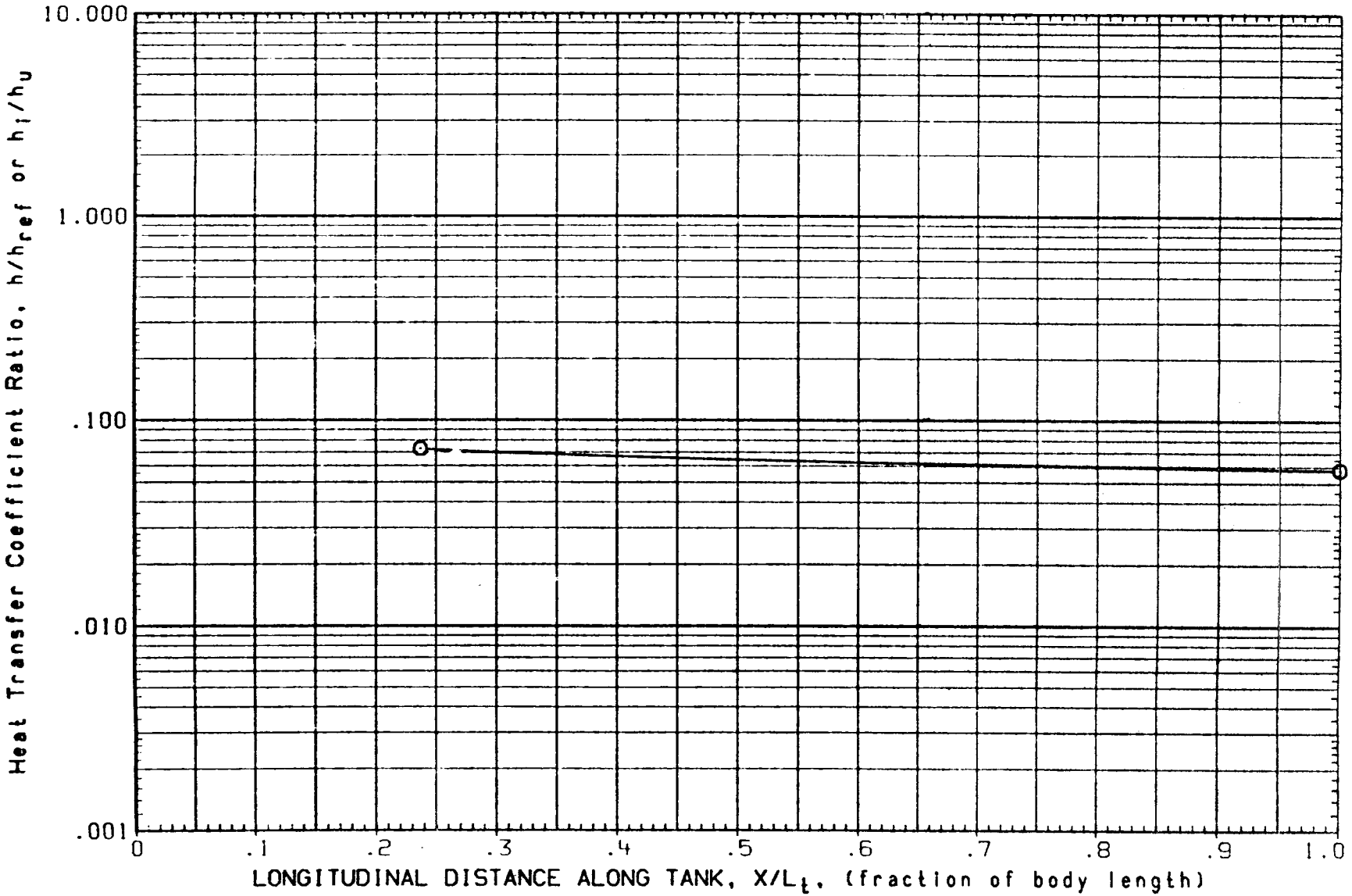

FIG. 4-7 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 247.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT39)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	3.000
(C9NT39)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	3.000
(V4LT33)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	3.000
(X4LT33)	◇	IH85 (W.L. TEST) OTS/ET = V4LT33/C9NT39=	HI/HU	4.020	.000	3.000
(Y4LT33)	△	IH85 (W.L. THEORY) OTS/ET = V4LT33/A9NT39=	HI/HU	4.020	.000	3.000

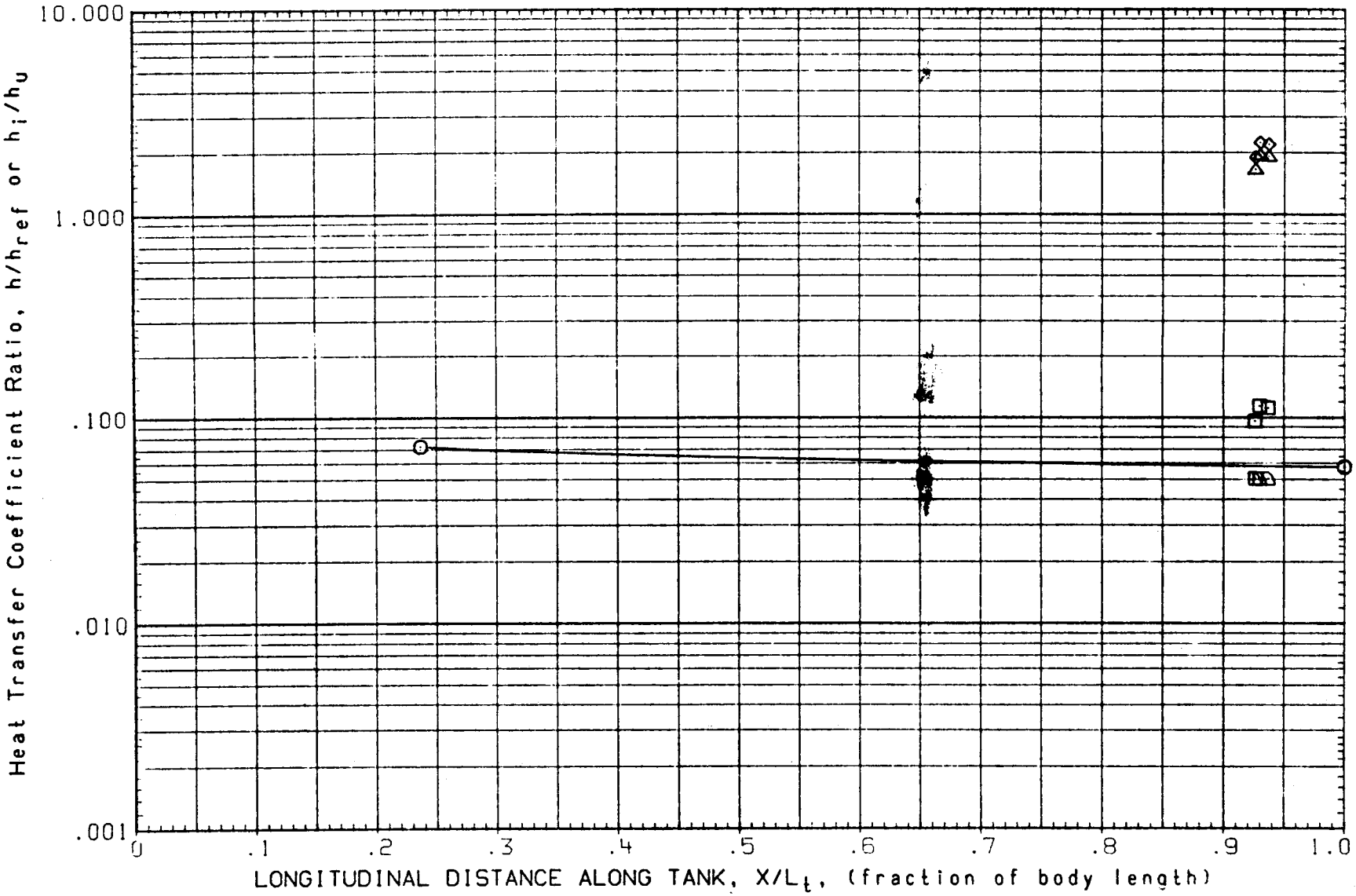

FIG. 4-7 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 250.570

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT39)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	3.000
(C9NT39)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	3.000
(V4LT33)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	3.000
(X4LT33)	◇	IH85 (W,L, TEST) OTS/ET = V4LT33/C9NT39=	HI/HU	4.020	.000	3.000
(Y4LT33)	△	IH85 (W,L, THEORY) OTS/ET = V4LT33/A9NT39=	HI/HU	4.020	.000	3.000

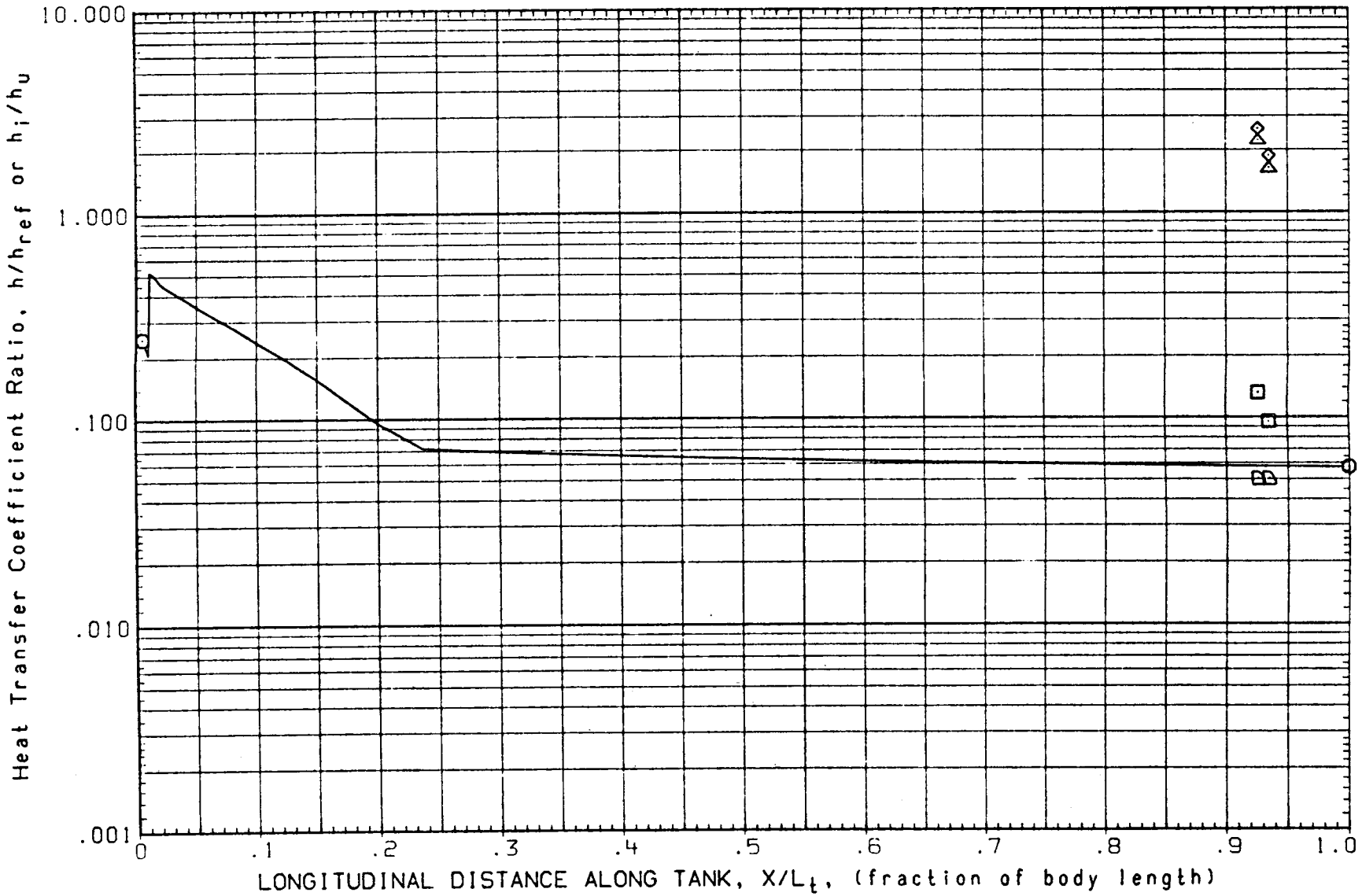

FIG. 4-7 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 258.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT39)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	4.020	.000	3.000
(C9NT39)	⊐	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	4.020	.000	3.000
(V4LT33)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	.000	3.000
(X4LT33)	◇	IH85 (W.L. TEST) OTS/ET = V4LT33/C9NT39= HI/HU	4.020	.000	3.000
(Y4LT33)	△	IH85 (W.L. THEORY) OTS/ET = V4LT33/A9NT39= HI/HU	4.020	.000	3.000

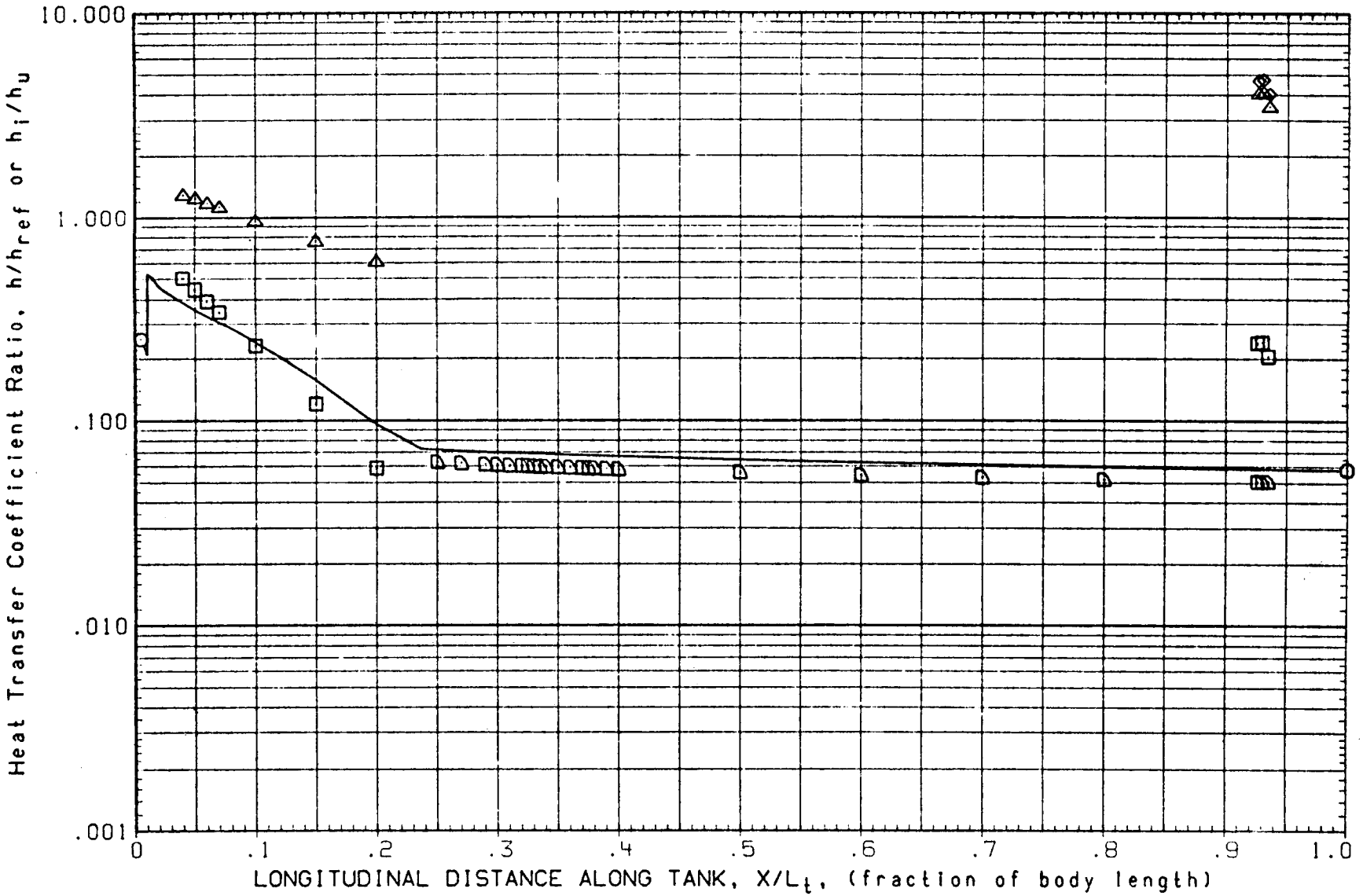

FIG. 4-7 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 270.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT39)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	3.000
(C9NT39)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	3.000
(V4LT33)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	3.000
(X4LT33)	◇	IH85 (W.L. TEST) OTS/ET = V4LT33/C9NT39=	HI/HU	4.020	.000	3.000
(Y4LT33)	△	IH85 (W.L. THEORY) OTS/ET = V4LT33/A9NT39=	HI/HU	4.020	.000	3.000

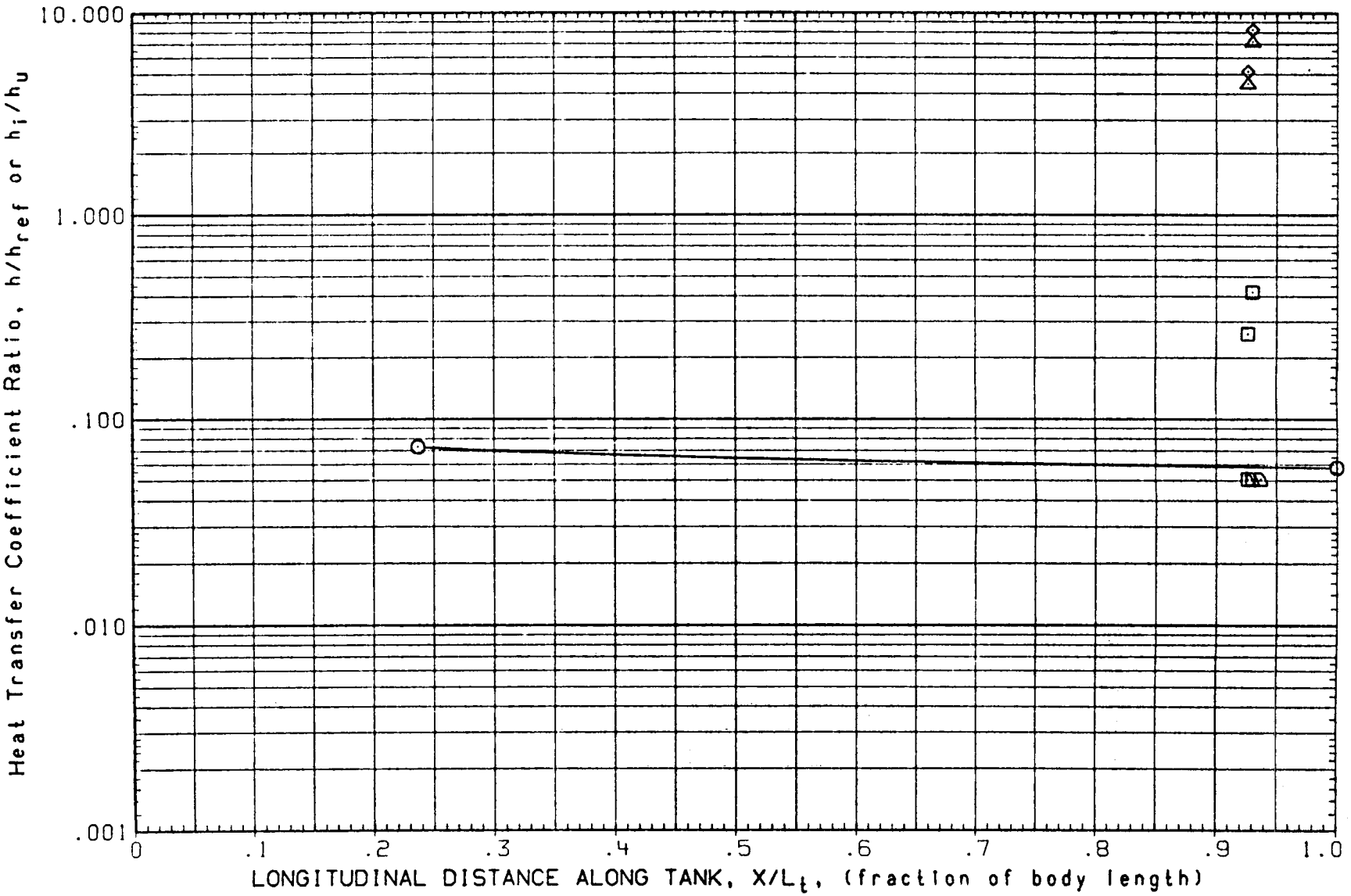

FIG. 4-7 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 289.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT39)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	3.000
(C9NT39)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	3.000
(V4LT33)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	3.000
(X4LT33)	◇	IH85 (W.L. TEST) OTS/ET = V4LT33/C9NT39=	HI/HU	4.020	.000	3.000
(Y4LT33)	△	IH85 (W.L. THEORY) OTS/ET = V4LT33/A9NT39=	HI/HU	4.020	.000	3.000

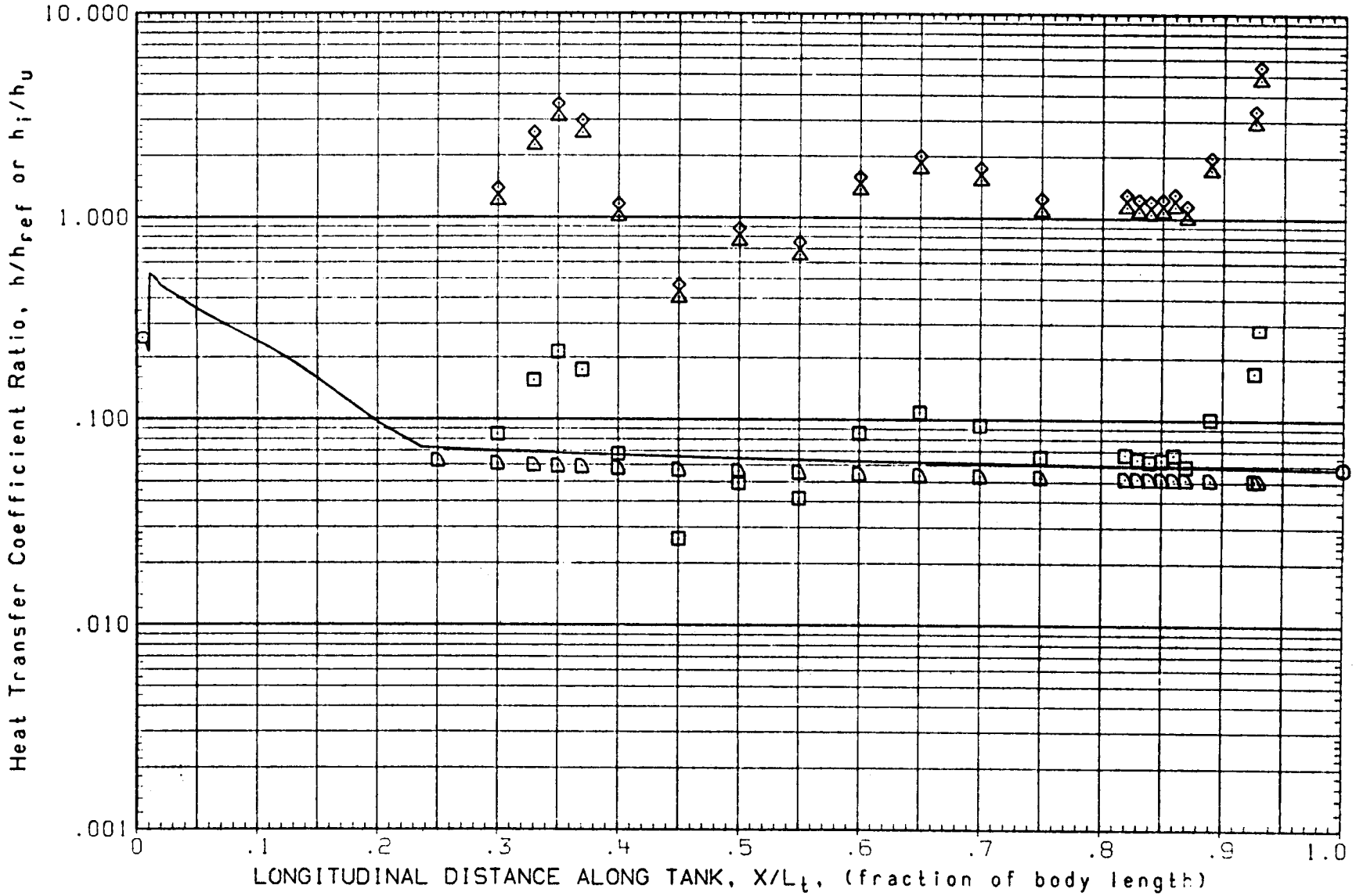

FIG. 4-7 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 292.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT39)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	3.000
(C9NT39)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	3.000
(V4LT33)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	3.000
(X4LT33)	◇	IH85 (W.L. TEST) OTS/ET = V4LT33/C9NT39=	HI/HU	4.020	.000	3.000
(Y4LT33)	△	IH85 (W.L. THEORY) OTS/ET = V4LT33/A9NT39=	HI/HU	4.020	.000	3.000

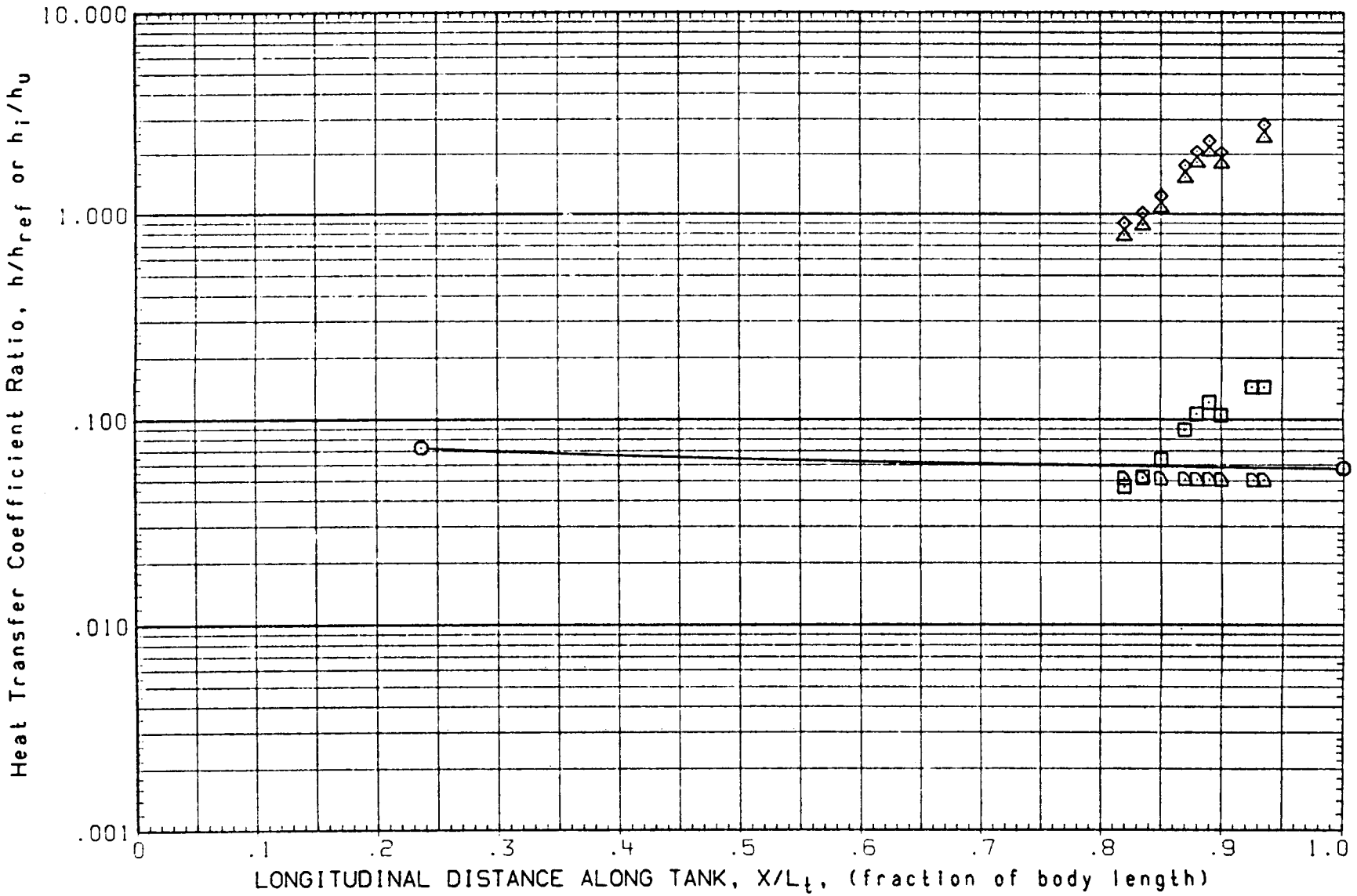

FIG. 4-7 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 301.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT39)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	3.000
(C9NT39)	⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	3.000
(V4LT33)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	3.000
(X4LT33)	◇	IH85 (W.L. TEST) OTS/ET = V4LT33/C9NT39=	HI/HU	4.020	.000	3.000
(Y4LT33)	△	IH85 (W.L. THEORY) OTS/ET = V4LT33/A9NT39=	HI/HU	4.020	.000	3.000

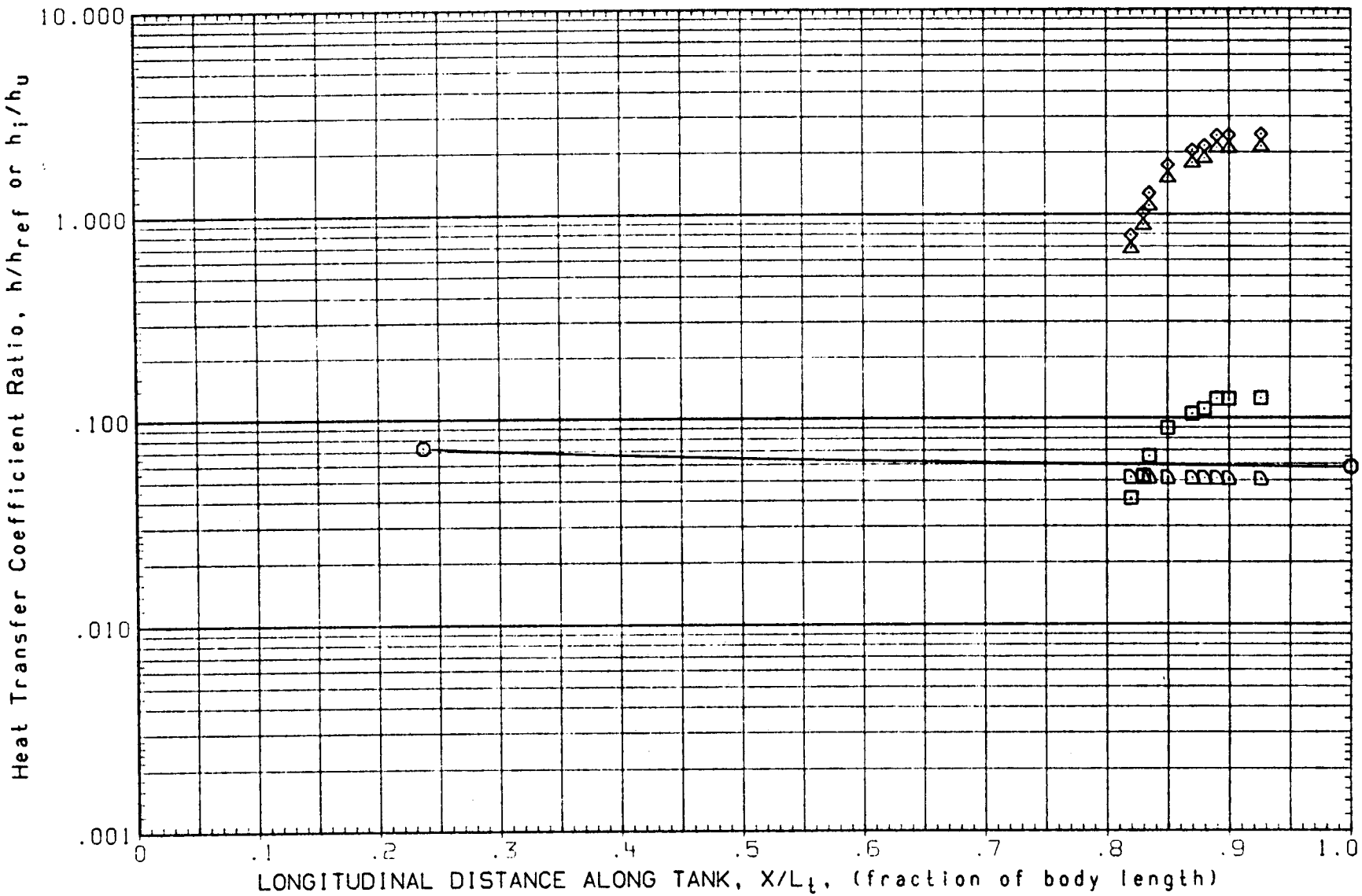

FIG. 4-7 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 305.400

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(C9NT39)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	3.000
(C9NT39)	▷	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	3.000
(V4LT33)	□	IH95, AEDC V4IA-W5, CONFIGURATION 0 (T) S		4.020	.000	3.000
(X4LT33)	◇	IH85 (W.L. TEST) OTS/ET = V4LT33/C9NT39=	HI/HU	4.020	.000	3.000
(Y4LT33)	△	IH85 (W.L. THEORY) OTS/ET = V4LT33/A9NT39=	HI/HU	4.020	.000	3.000

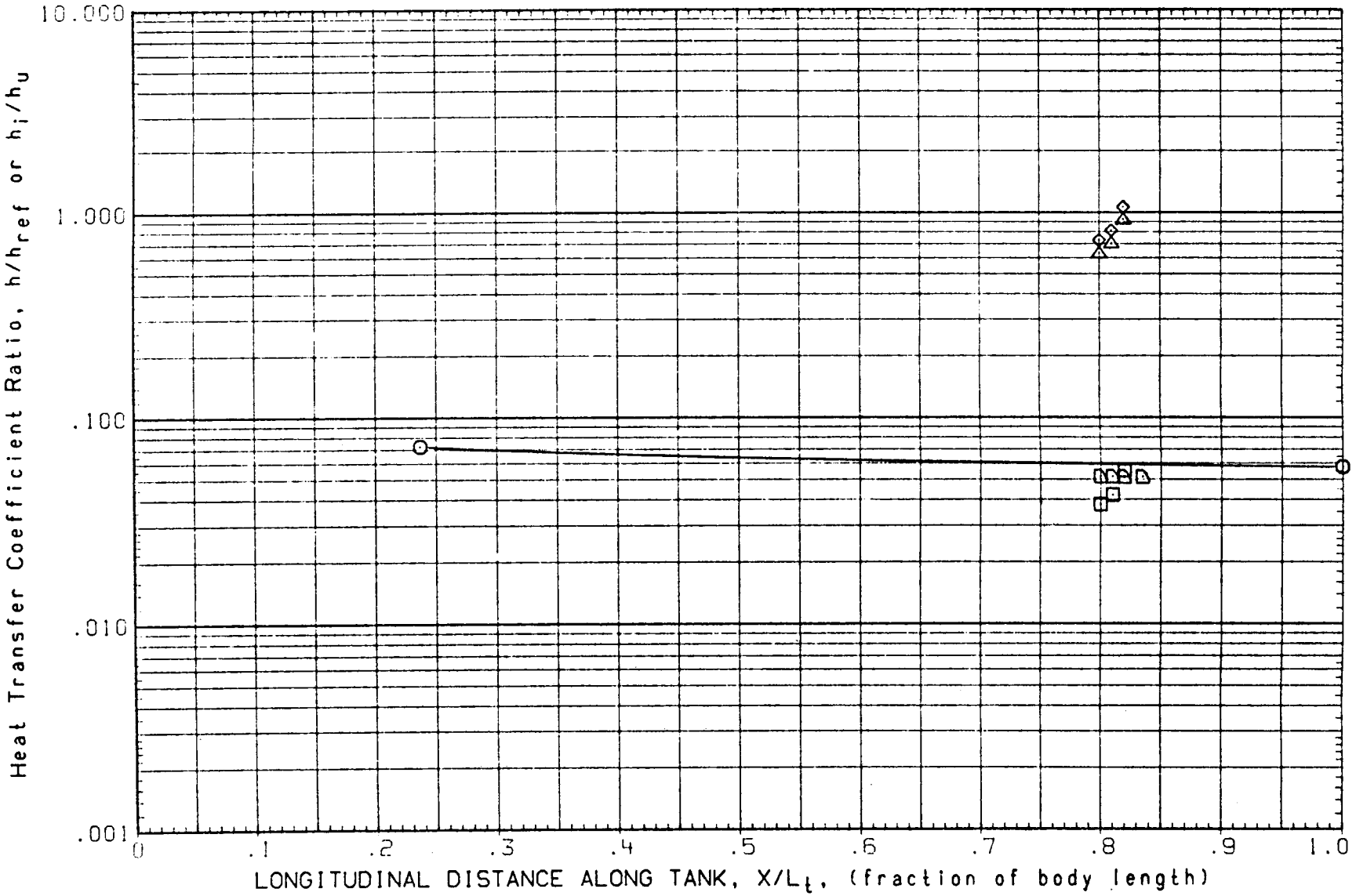

FIG. 4-7 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 309.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT39)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	3.000
(C9NT39)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	3.000
(V4LT33)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	3.000
(X4LT33)	◇	IH85 (W.L. TEST) OTS/ET = V4LT33/C9NT39= HI/HU		4.020	.000	3.000
(Y4LT33)	△	IH85 (W.L. THEORY) OTS/ET = V4LT33/A9NT39= HI/HU		4.020	.000	3.000

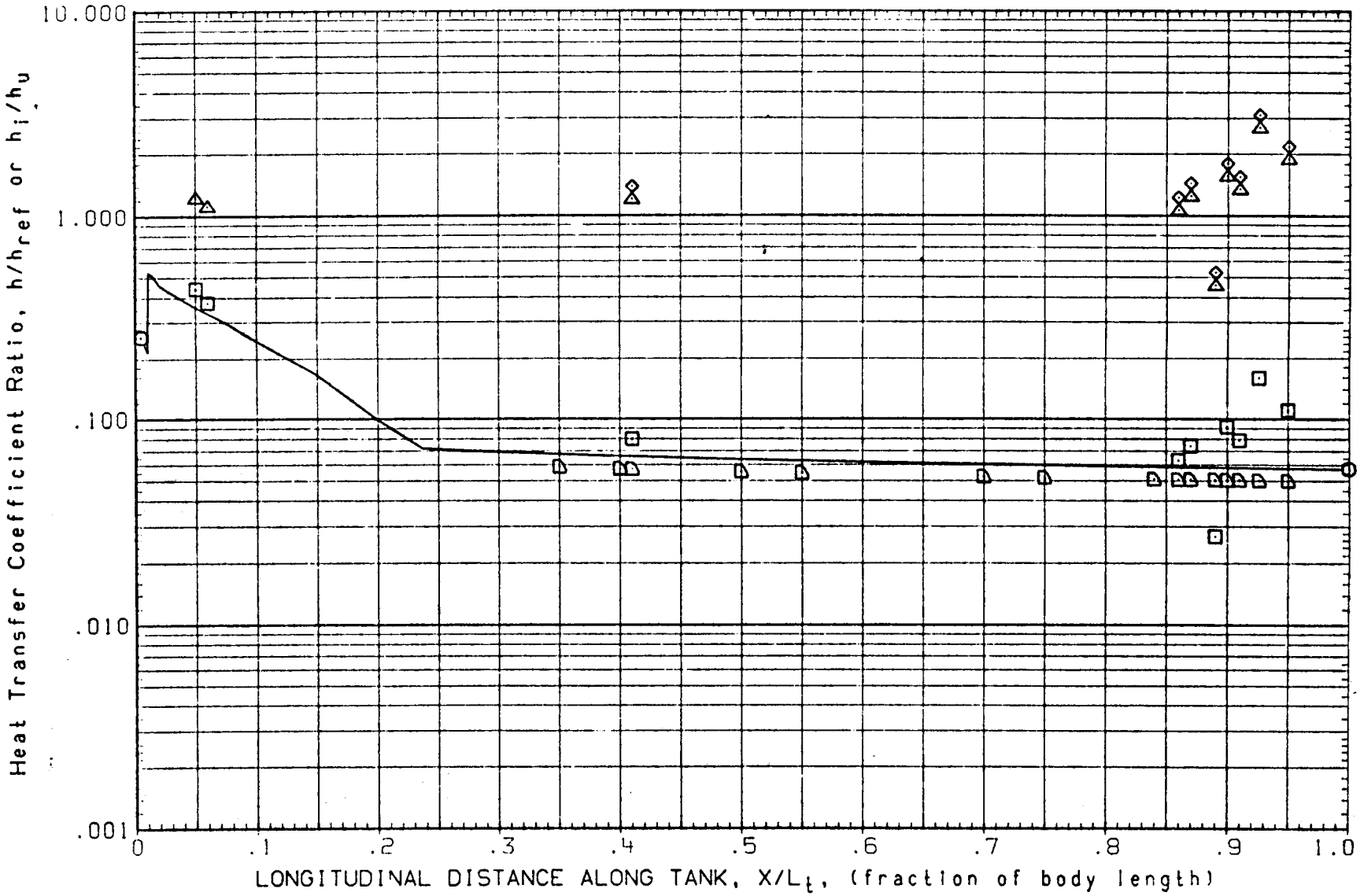

FIG. 4-7 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 315.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT39)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	3.000
(C9NT39)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	3.000
(V4LT33)	□	IH85, AEDC V4:A-W5, CONFIGURATION 0 (T) S		4.020	.000	3.000
(X4LT33)	◇	IH85 (W.L. TEST) OTS/ET = V4LT33/C9NT39= HI/HU		4.020	.000	3.000
(Y4LT33)	△	IH85 (W.L. THEORY) OTS/ET = V4LT33/A9NT39= HI/HU		4.020	.000	3.000

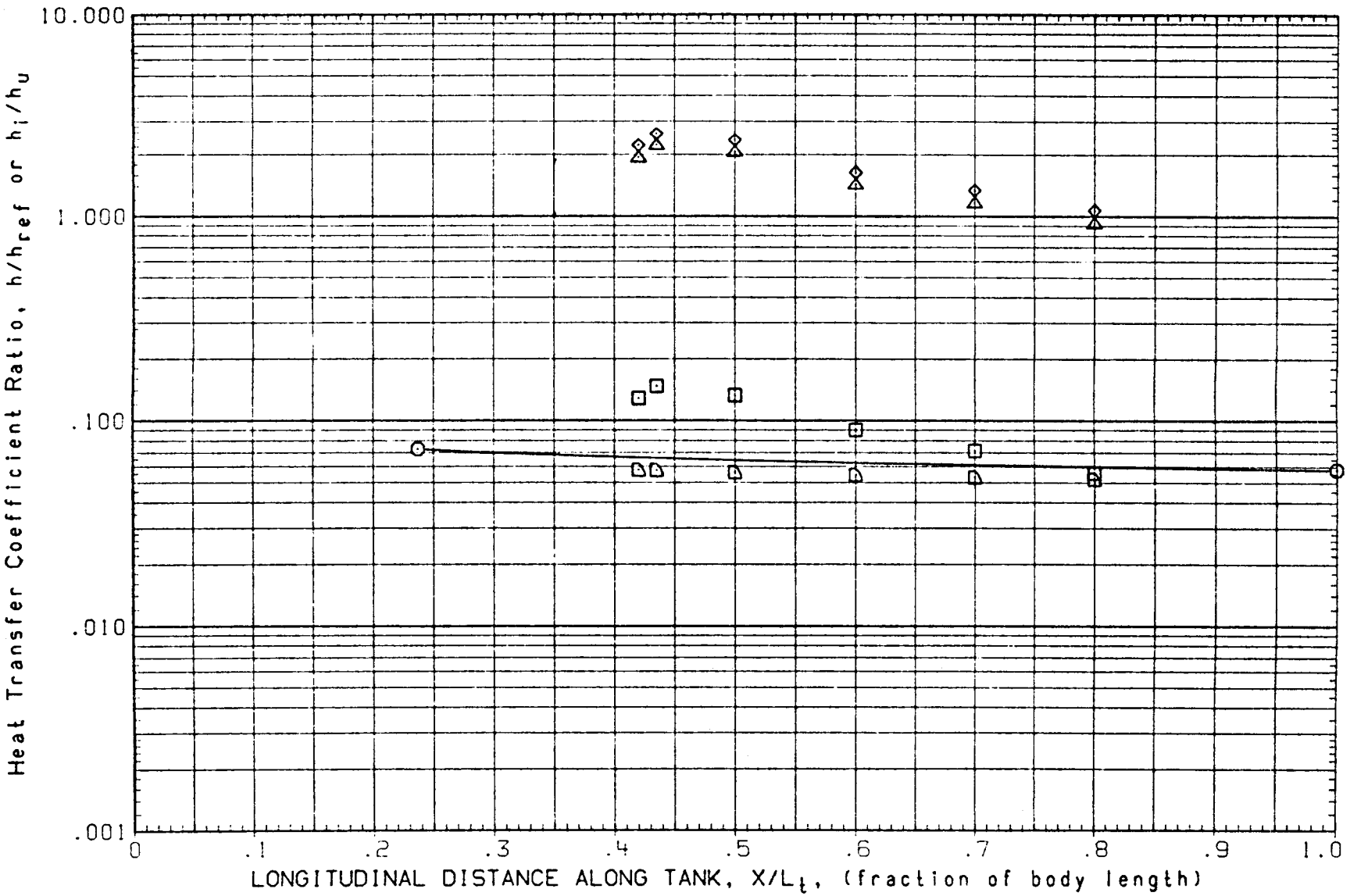

FIG. 4-7 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 322.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT39)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	3.000
(C9NT39)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	3.000
(V4LT33)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	3.000
(X4LT33)	◇	IH85 (W.L. TEST) OTS/ET = V4LT33/C9NT39=	HI/HU	4.020	.000	3.000
(Y4LT33)	△	IH85 (W.L. THEORY) OTS/ET = V4LT33/A9NT39=	HI/HU	4.020	.000	3.000

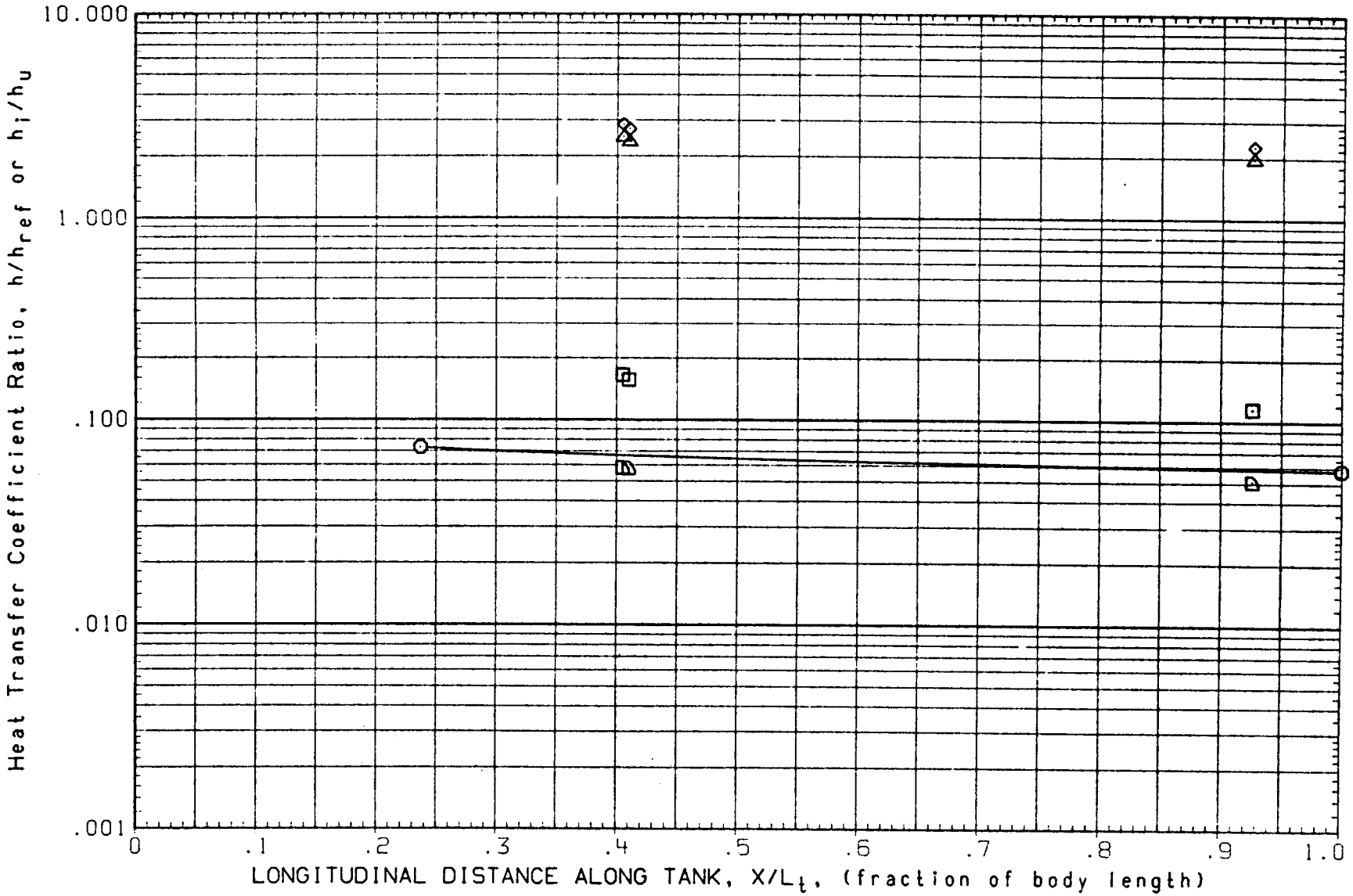

FIG. 4-7 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 324.450

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT39)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	4.020	.000	3.000
(C9NT39)	⌂	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	4.020	.000	3.000
(V4LT33)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	.000	3.000
(X4LT33)	◇	IH85 (W.L. TEST) OTS/ET = V4LT33/C9NT39= HI/HU	4.020	.000	3.000
(Y4LT33)	△	IH85 (W.L. THEORY) OTS/ET = V4LT33/A9NT39= HI/HU	4.020	.000	3.000

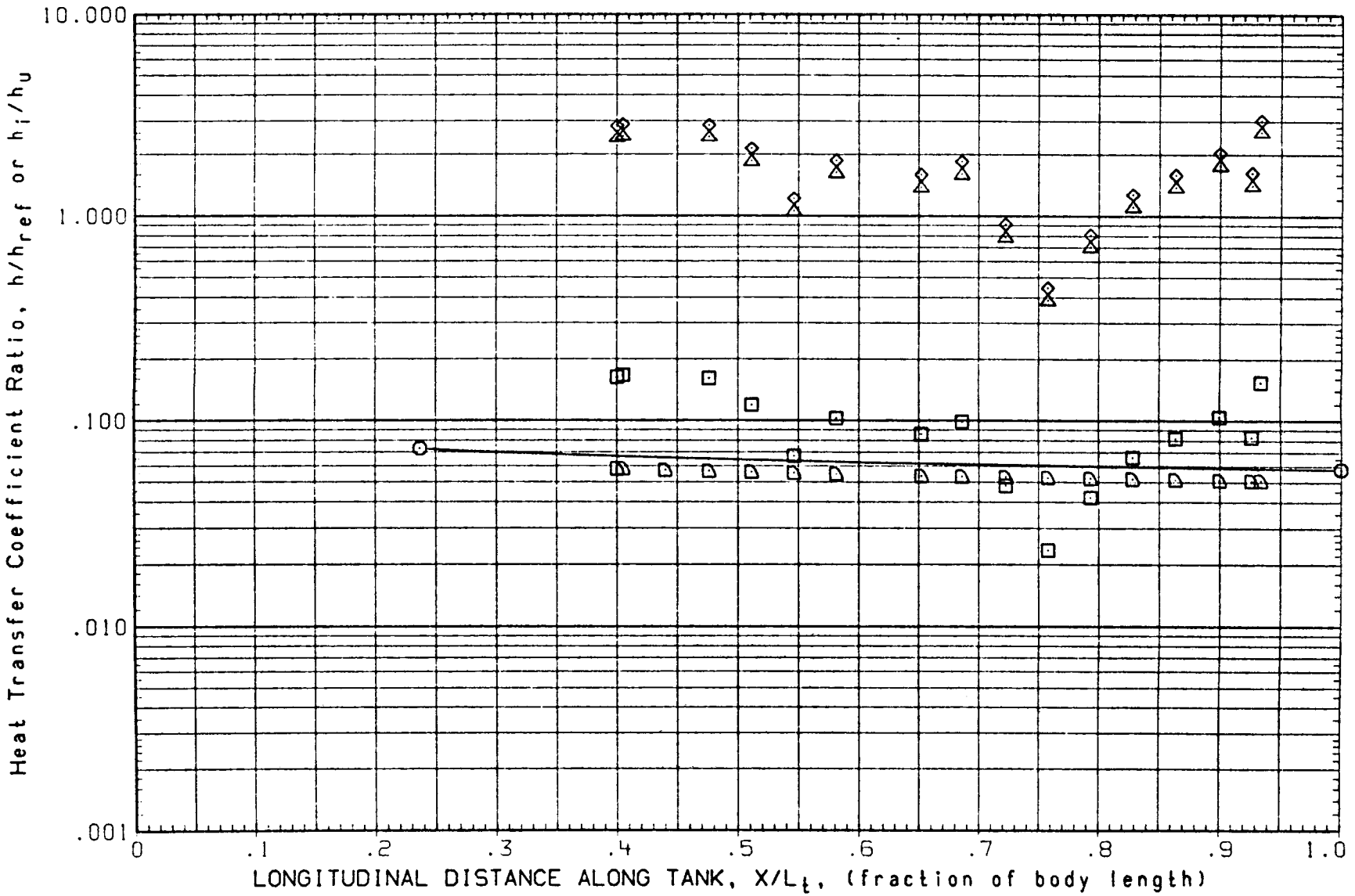

FIG. 4-7 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (L'NEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 326.850

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT39)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	3.000
(C9NT39)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	3.000
(V4LT33)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	3.000
(X4LT33)	◇	IH85 (W.L. TEST) OTS/ET = V4LT33/C9NT39=	HI/HU	4.020	.000	3.000
(Y4LT33)	△	IH85 (W.L. THEORY) OTS/ET = V4LT33/A9NT39=	HI/HU	4.020	.000	3.000

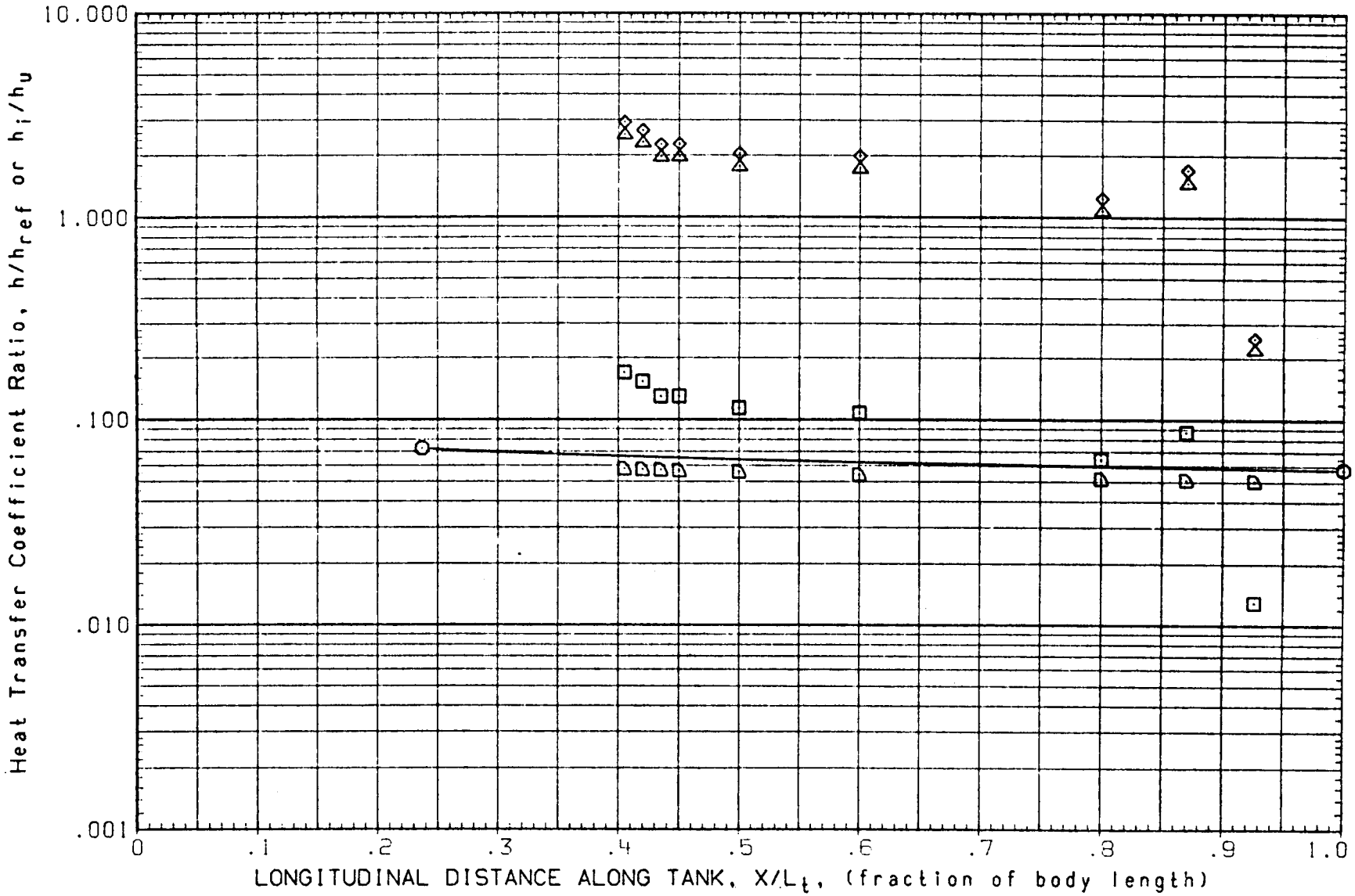

FIG. 4-7 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 330.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT39)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	3.000
(C9NT39)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	3.000
(V4LT33)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	3.000
(X4LT33)	◇	IH85 (W.L. TEST) OTS/ET = V4LT33/C9NT39=	HI/HU	4.020	.000	3.000
(Y4LT33)	△	IH85 (W.L. THEORY) OTS/ET = V4LT33/A9NT39=	HI/HU	4.020	.000	3.000

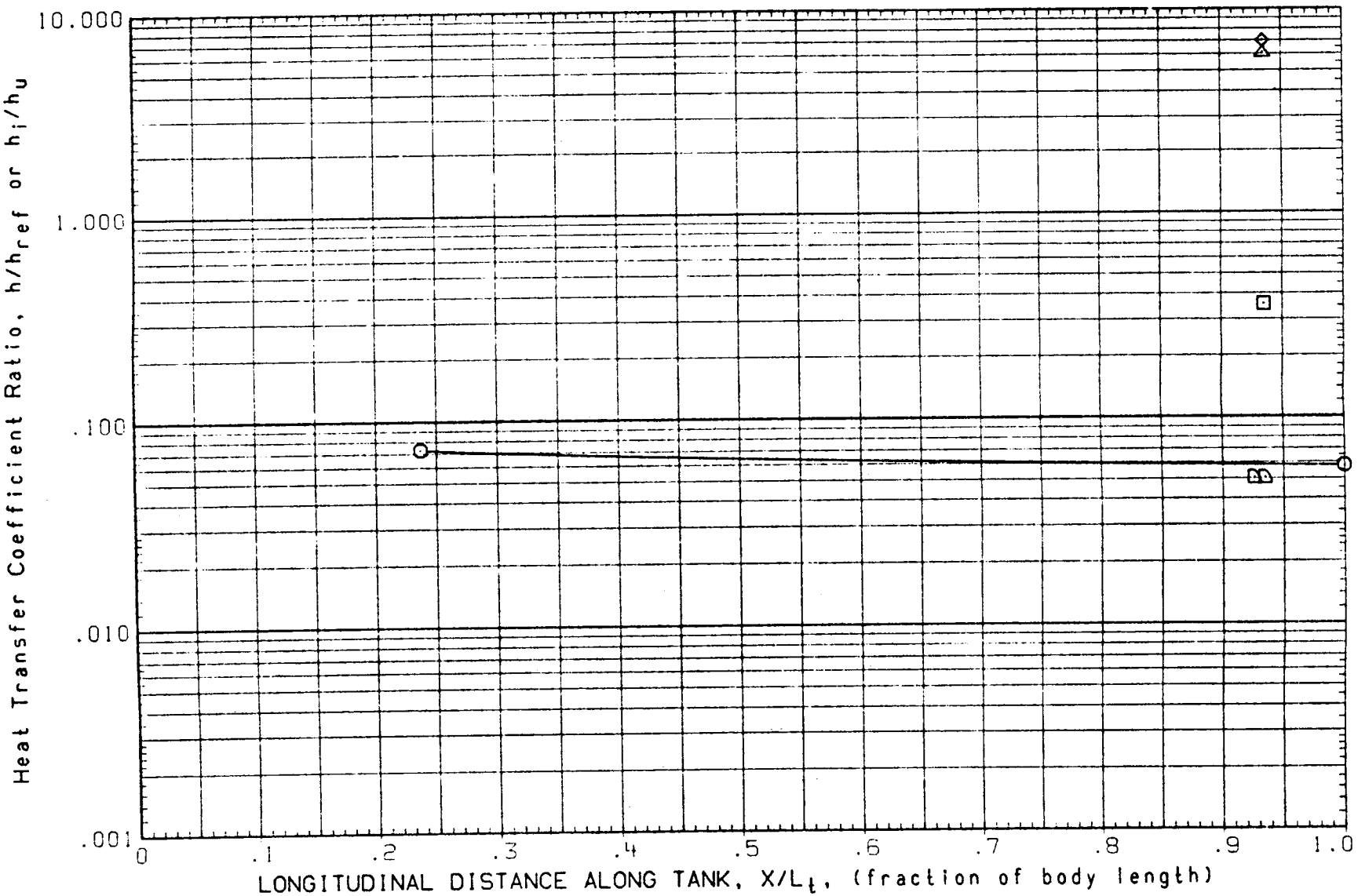

FIG. 4-7 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 334.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT39)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	3.000
(C9NT39)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	3.000
(V4LT33)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	3.000
(X4LT33)	◇	IH85 (W.L, TEST) OTS/ET = V4LT33/C9NT39=	HI/HU	4.020	.000	3.000
(Y4LT33)	△	IH85 (W.L, THEORY) OTS/ET = V4LT33/A9NT39=	HI/HU	4.020	.000	3.000

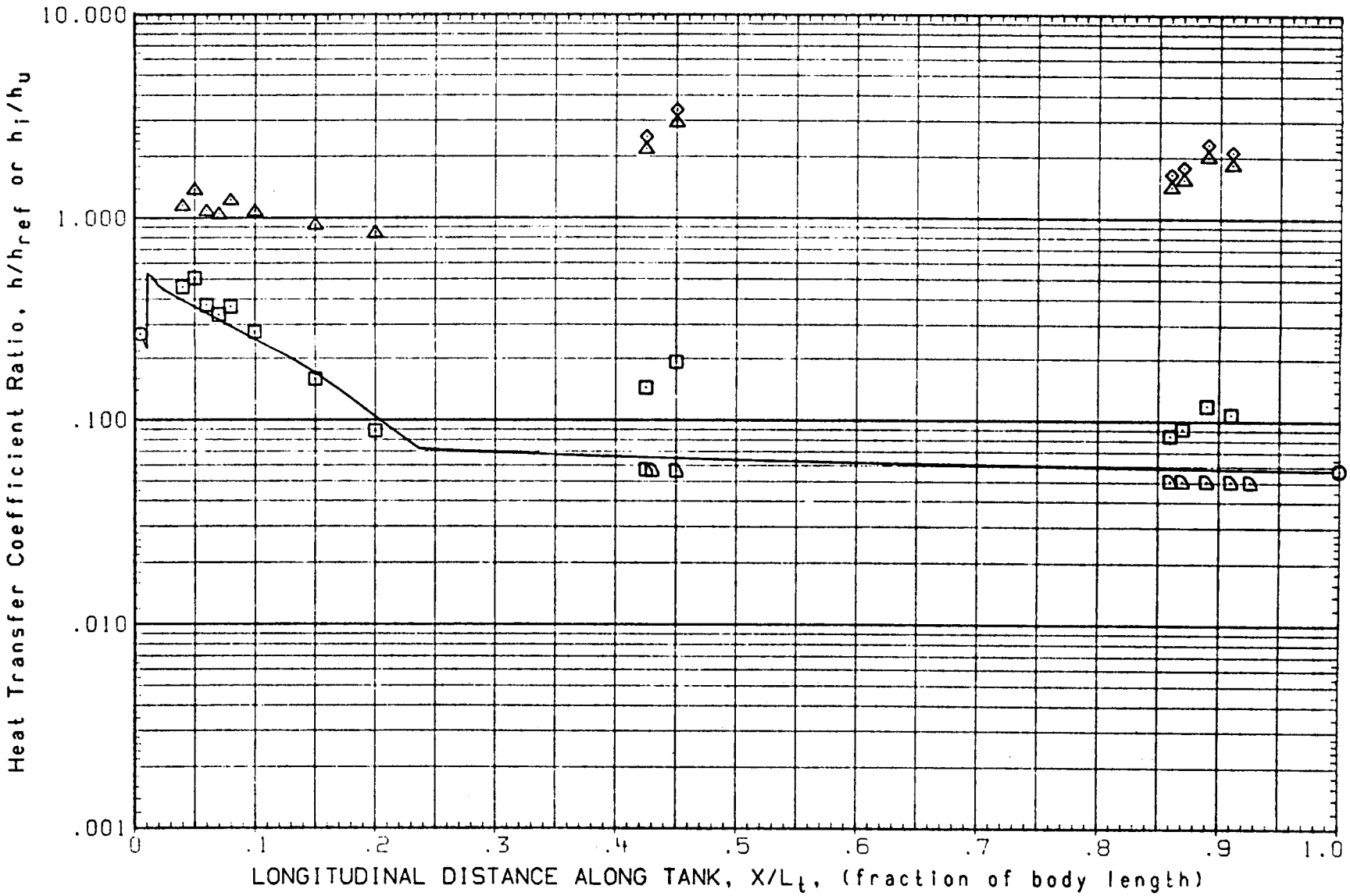

FIG. 4-7 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 337.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT39)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	3.000
(C9NT39)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	3.000
(V4LT33)	□	DATA NOT AVAILABLE		4.020	.000	3.000
(X4LT33)	◇	DATA NOT AVAILABLE		4.020	.000	3.000
(Y4LT33)	△	DATA NOT AVAILABLE		4.020	.000	3.000

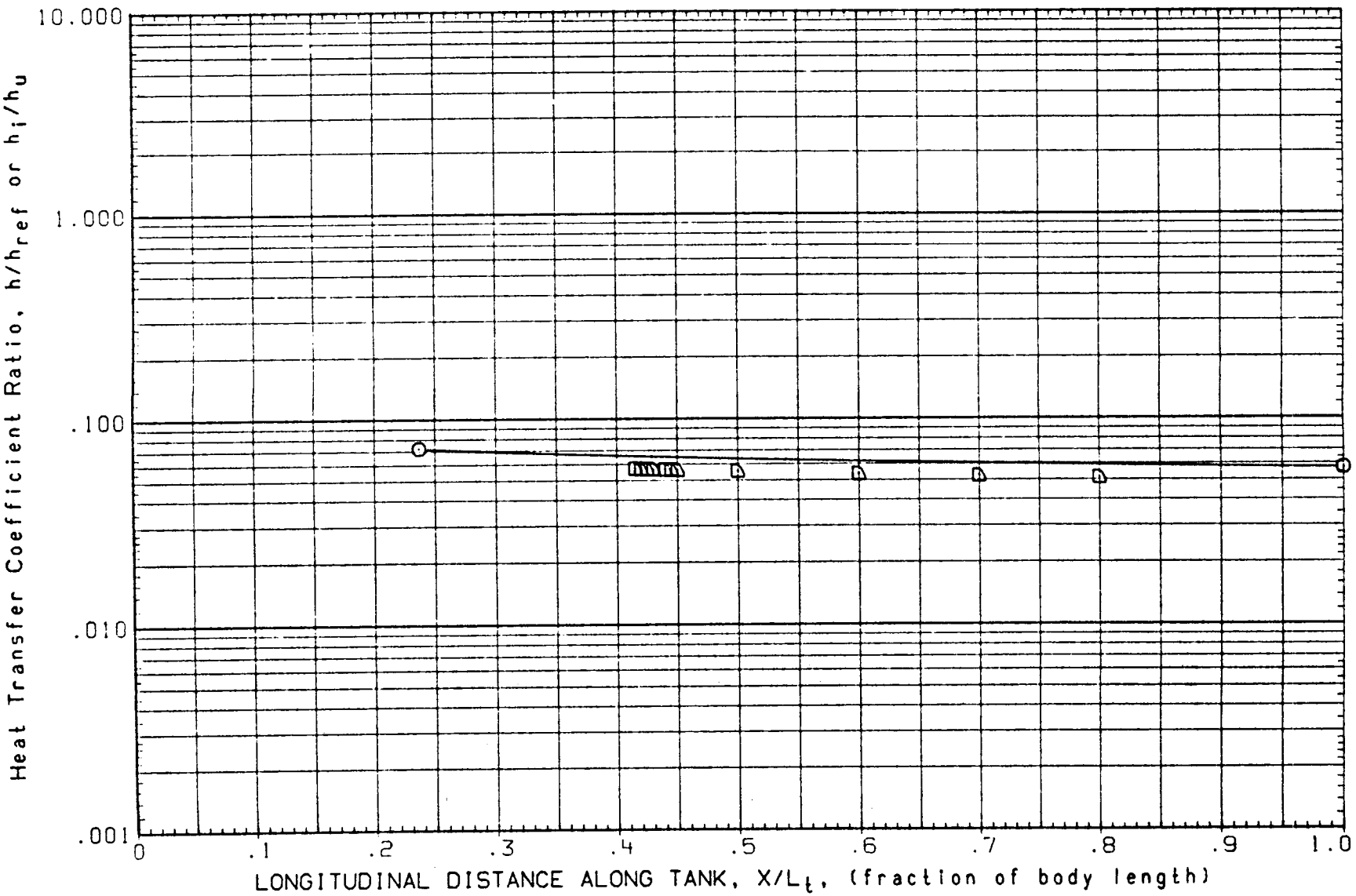

FIG. 4-7 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 343.120

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT39)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	3.000
(C9NT39)	⊃	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	3.000
(V4LT33)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	3.000
(X4LT33)	◇	IH85 (W.L. TEST) OTS/ET = V4LT33/C9NT39=	HI/HU	4.020	.000	3.000
(Y4LT33)	△	IH85 (W.L. THEORY) OTS/ET = V4LT33/A9NT39=	HI/HU	4.020	.000	3.000

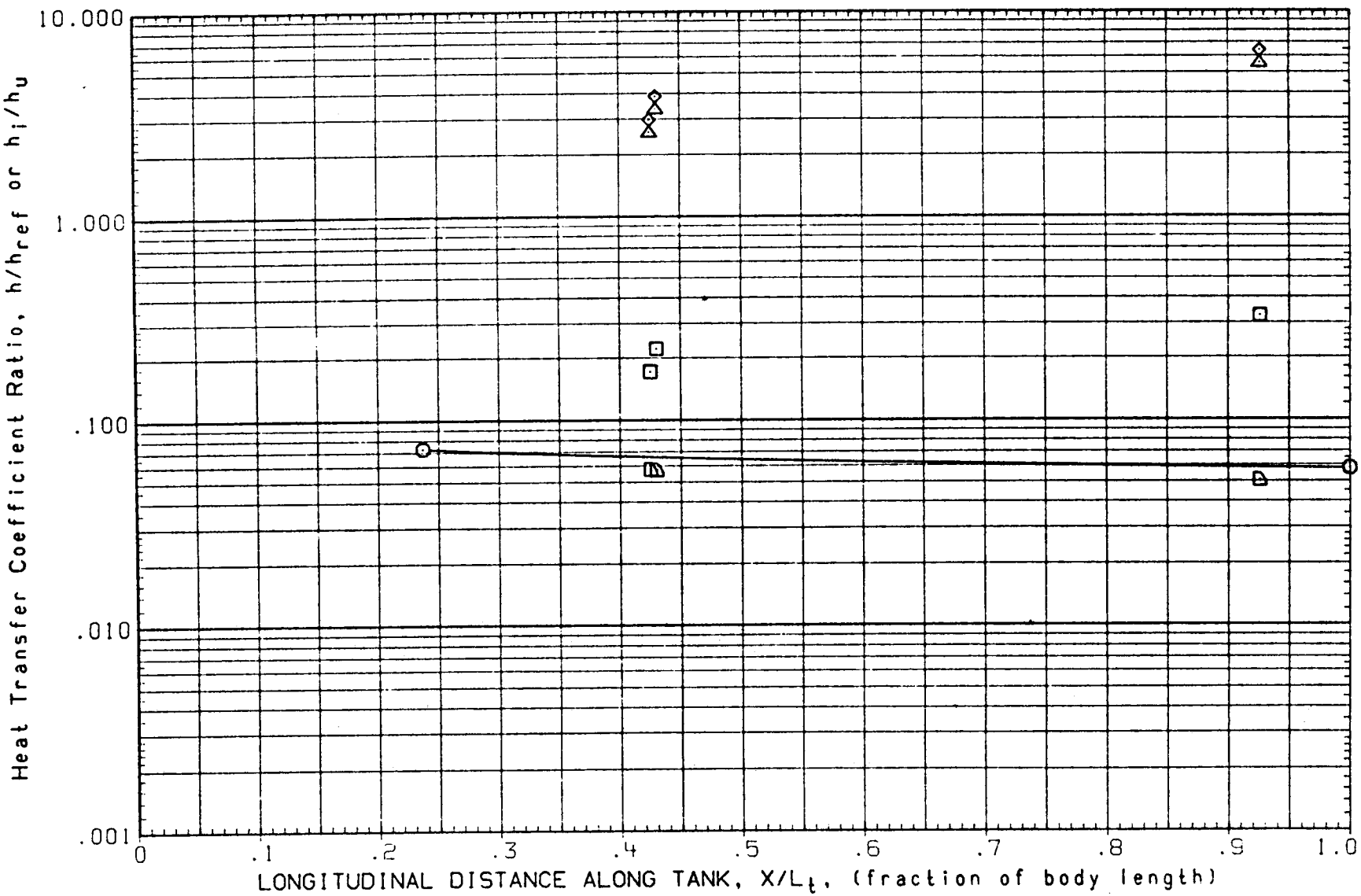

FIG. 4-7 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 345.560

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT39)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	3.000
(C9NT39)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	3.000
(V4LT33)	□	IH85, AEDC V4IA-W5, CONFIGURATION 0 (T) S		4.020	.000	3.000
(X4LT33)	◇	IH85 (W.L. TEST) OTS/ET = V4LT33/C9NT39=	HI/HU	4.020	.000	3.000
(Y4LT33)	△	IH85 (W.L. THEORY) OTS/ET = V4LT33/A9NT39=	HI/HU	4.020	.000	3.000

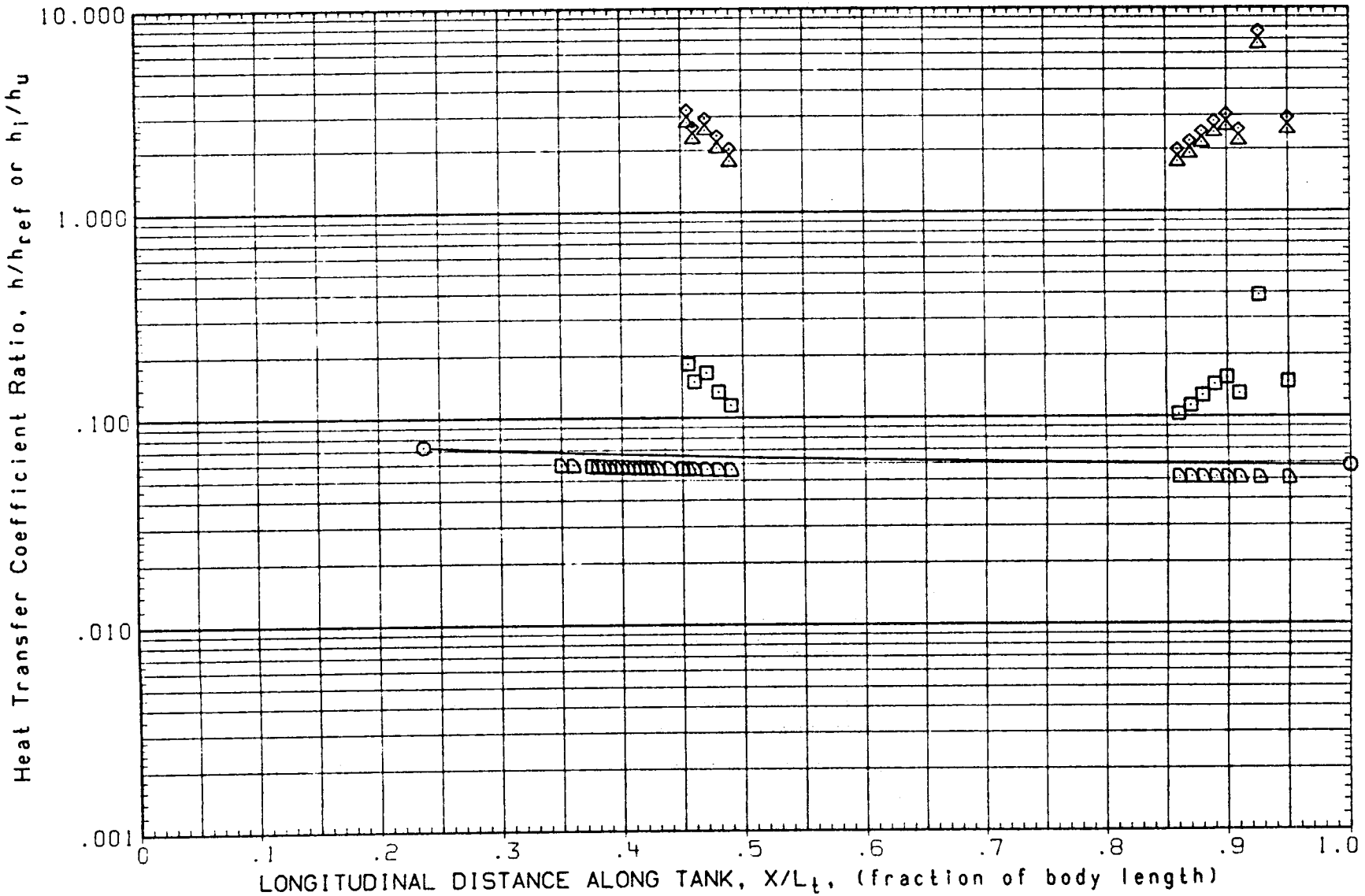

FIG. 4-7 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 348.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT39)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	3.000
(C9NT39)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	3.000
(V4LT33)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	3.000
(X4LT33)	◇	IH85 (W.L. TEST) OTS/ET = V4LT33/C9NT39=	HI/HU	4.020	.000	3.000
(Y4LT33)	△	IH85 (W.L. THEORY) OTS/ET = V4LT33/A9NT39=	HI/HU	4.020	.000	3.000

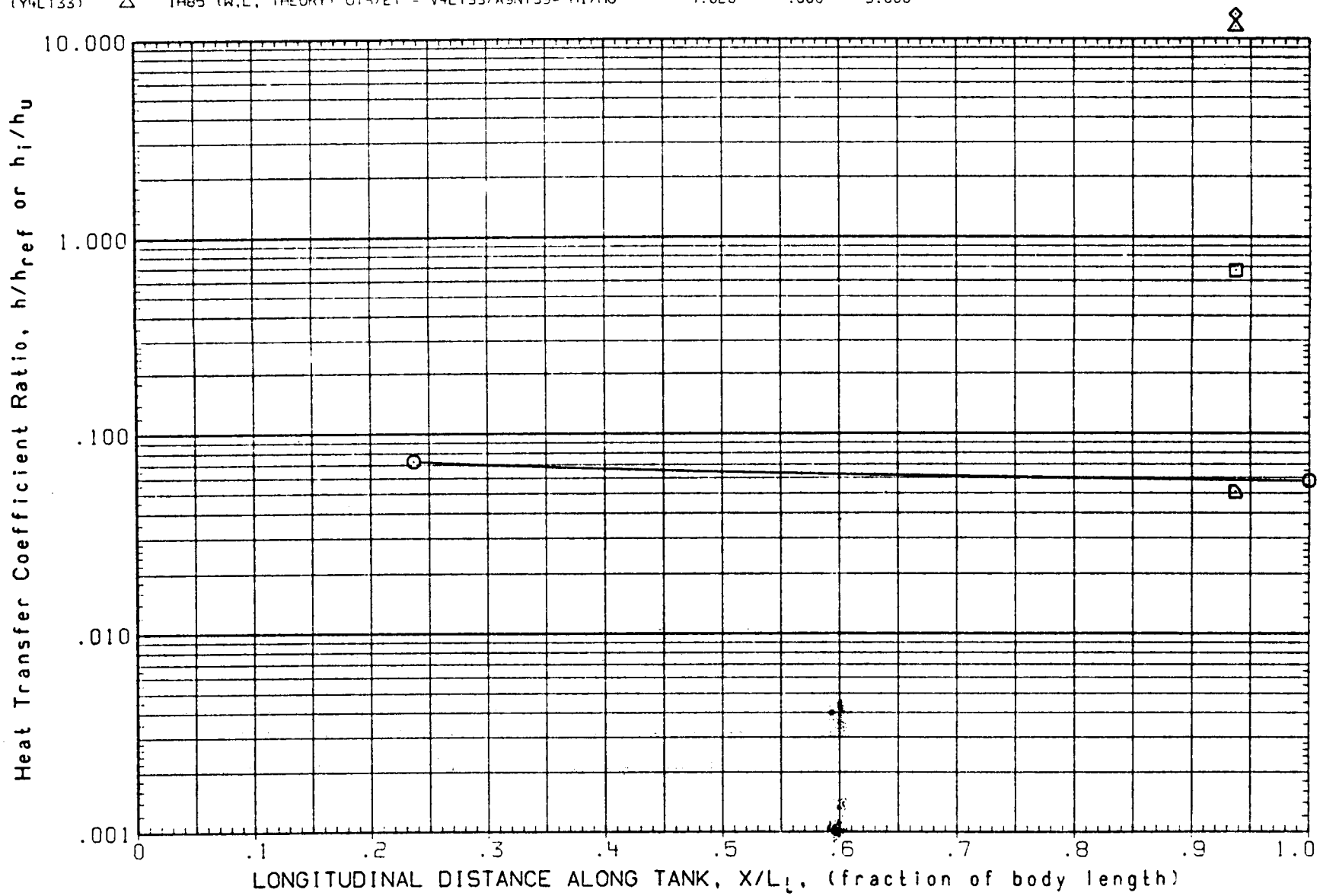

FIG. 4-7 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 352.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT39)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	3.000
(C9NT39)	⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	3.000
(V4LT33)	□	IH95, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	3.000
(X4LT33)	◇	IH85 (W.L. TEST) OTS/ET = V4LT33/C9NT39=	HI/HU	4.020	.000	3.000
(Y4LT33)	△	IH85 (W.L. THEORY) OTS/ET = V4LT33/A9NT39=	HI/HU	4.020	.000	3.000

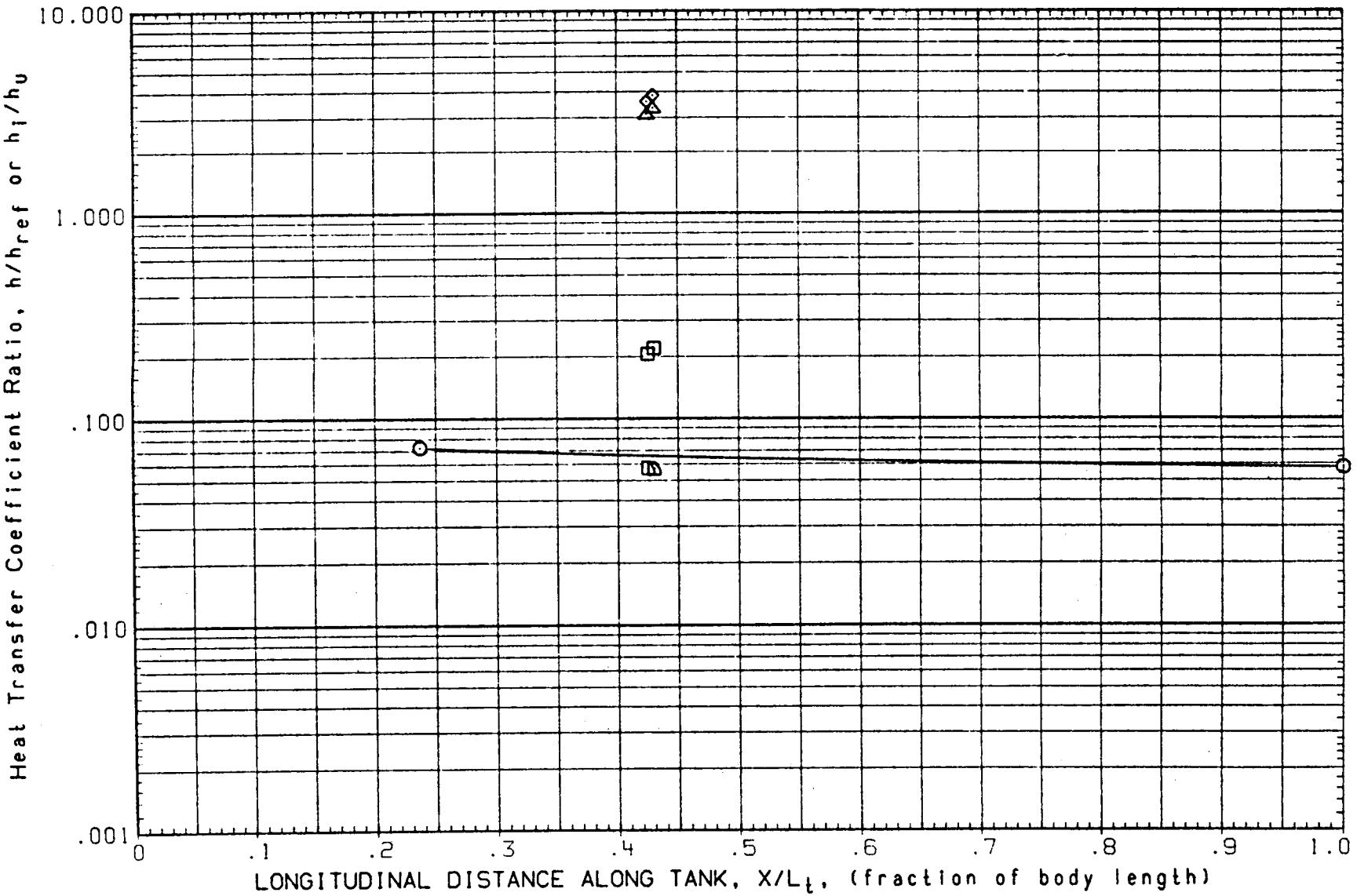

FIG. 4-7 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 354.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT39)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	3.000
(C9NT39)	⬠	DATA NOT AVAILABLE		4.020	.000	3.000
(V4LT33)	□	DATA NOT AVAILABLE		4.020	.000	3.000
(X4LT33)	◇	DATA NOT AVAILABLE		4.020	.000	3.000
(Y4LT33)	△	DATA NOT AVAILABLE		4.020	.000	3.000

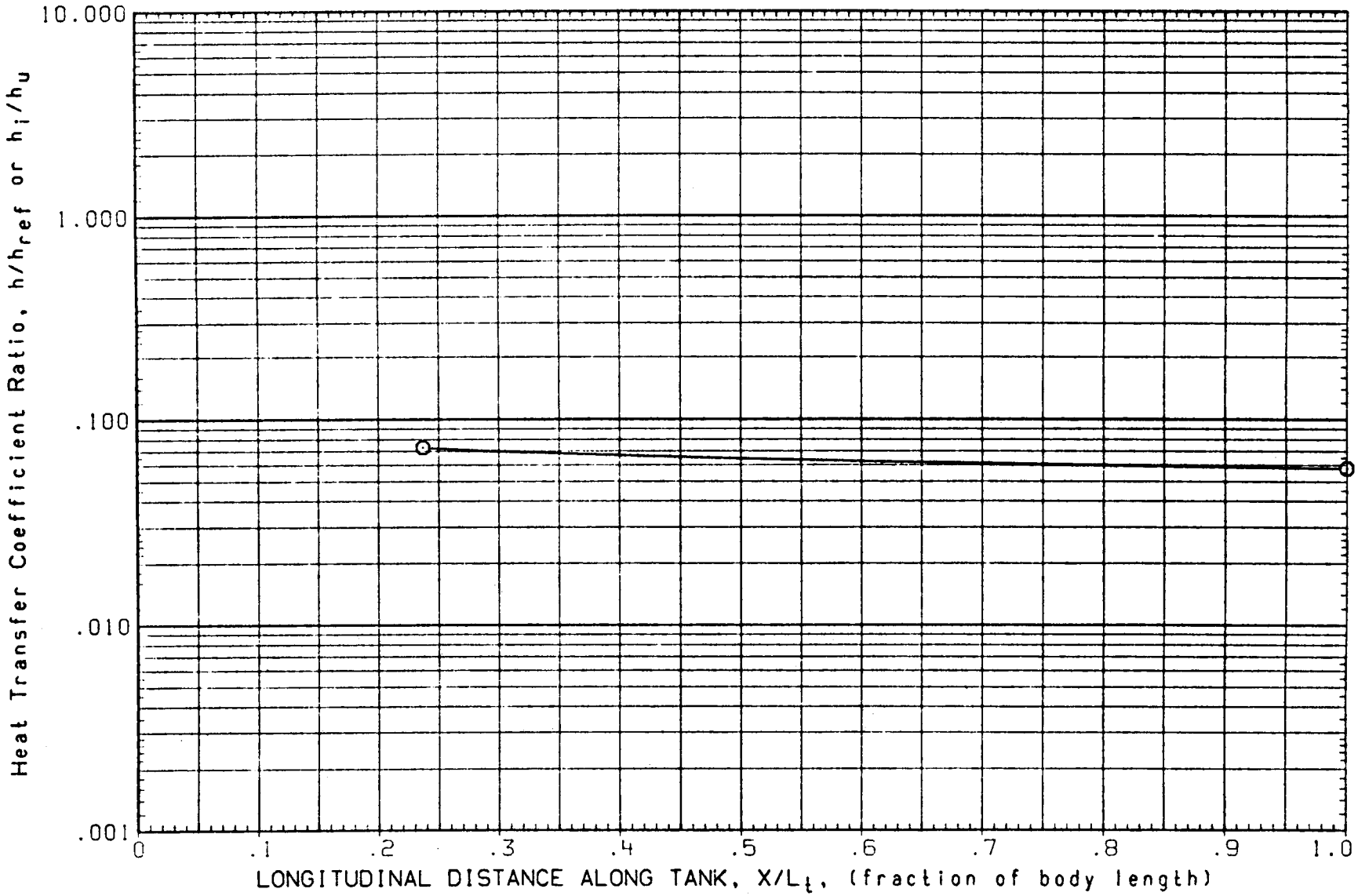

FIG. 4-7 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 355.160

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT39)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	3.000
(C9NT39)	⌂	DATA NOT AVAILABLE		4.020	.000	3.000
(V4LT33)	□	DATA NOT AVAILABLE		4.020	.000	3.000
(X4LT33)	◇	DATA NOT AVAILABLE		4.020	.000	3.000
(Y4LT33)	△	DATA NOT AVAILABLE		4.020	.000	3.000

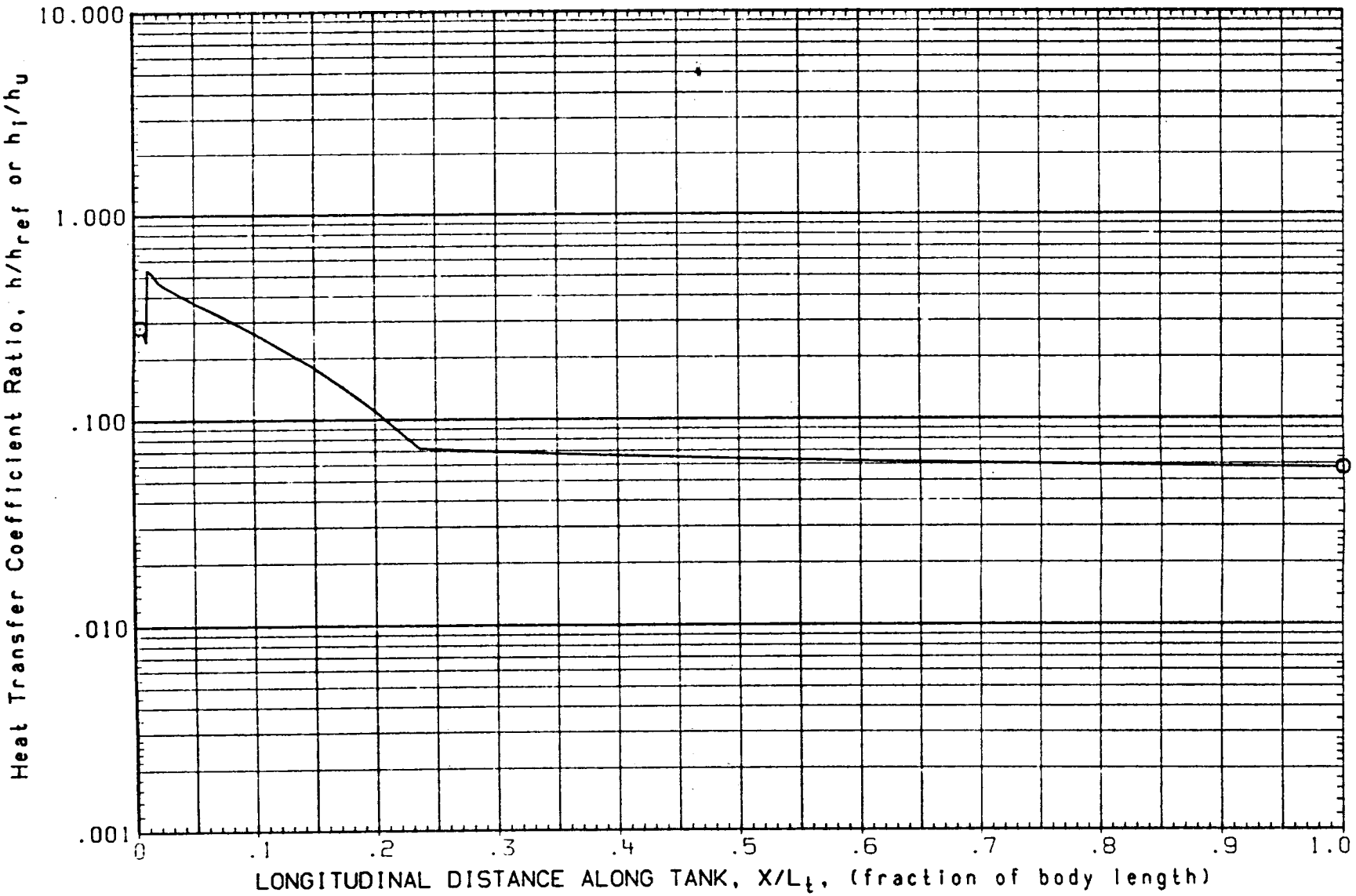

FIG. 4-7 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 360.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT40)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	4.500
(C9NT40)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	4.500
(V4LT34)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	4.500
(X4LT34)	◇	IH85 (W.L. TEST) OTS/ET = V4LT34/C9NT40= HI/HU		4.020	.000	4.500
(Y4LT34)	△	IH85 (W.L. THEORY) OTS/ET = V4LT34/A9NT40= HI/HU		4.020	.000	4.500

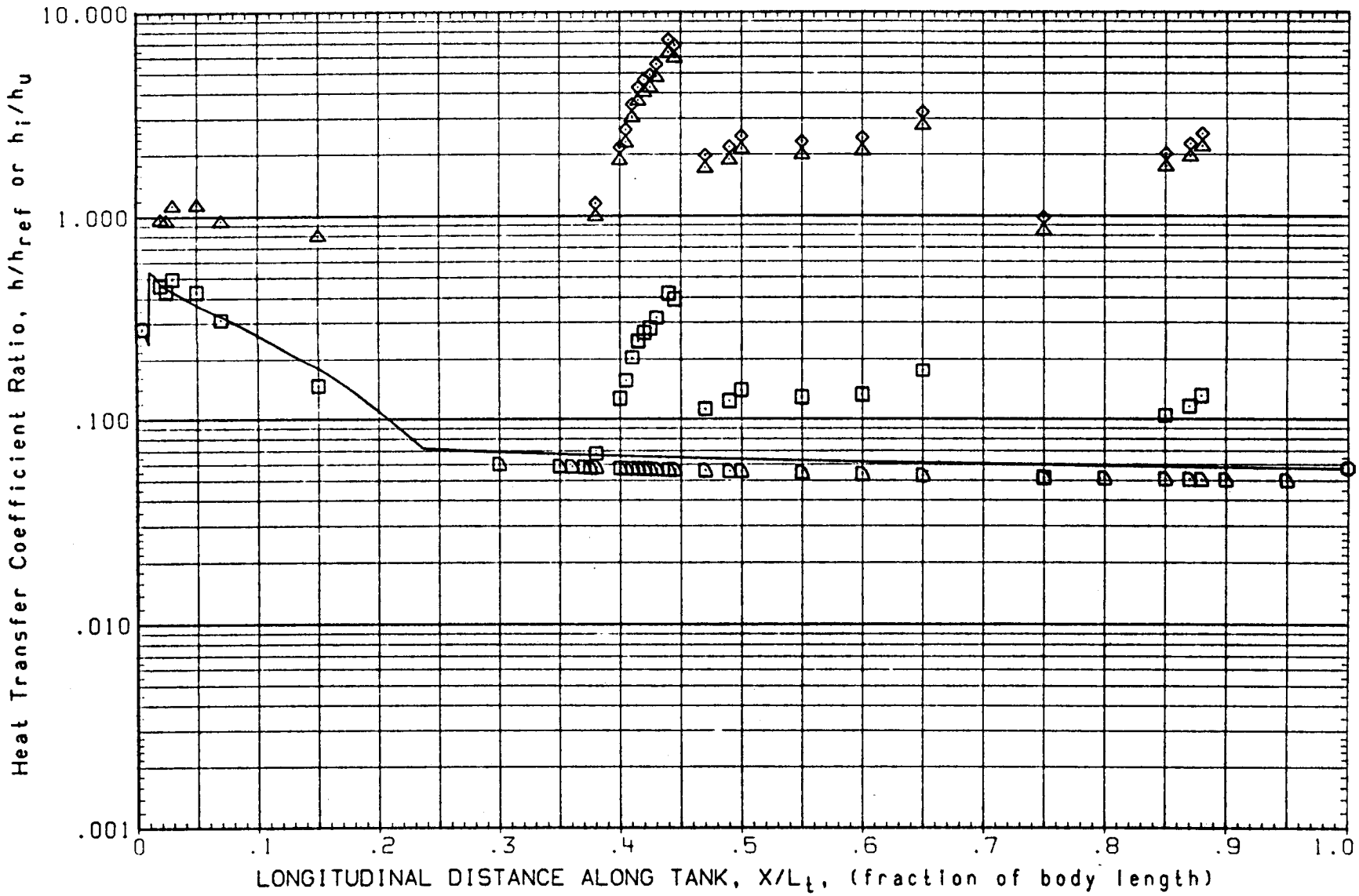

FIG. 4-8 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 4.5
0 < X/L < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = .000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT40)	○	DATA NOT AVAILABLE	4.020	.000	4.500
(C9NT40)	⬡	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	4.020	.000	4.500
(V4LT34)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	.000	4.500
(X4LT34)	◇	IH85 (W.L. TEST) OTS/ET = V4LT34/C9NT40= HI/HU	4.020	.000	4.500
(Y4LT34)	△	IH85 (W.L. THEORY) OTS/ET = V4LT34/A9NT40= HI/HU	4.020	.000	4.500

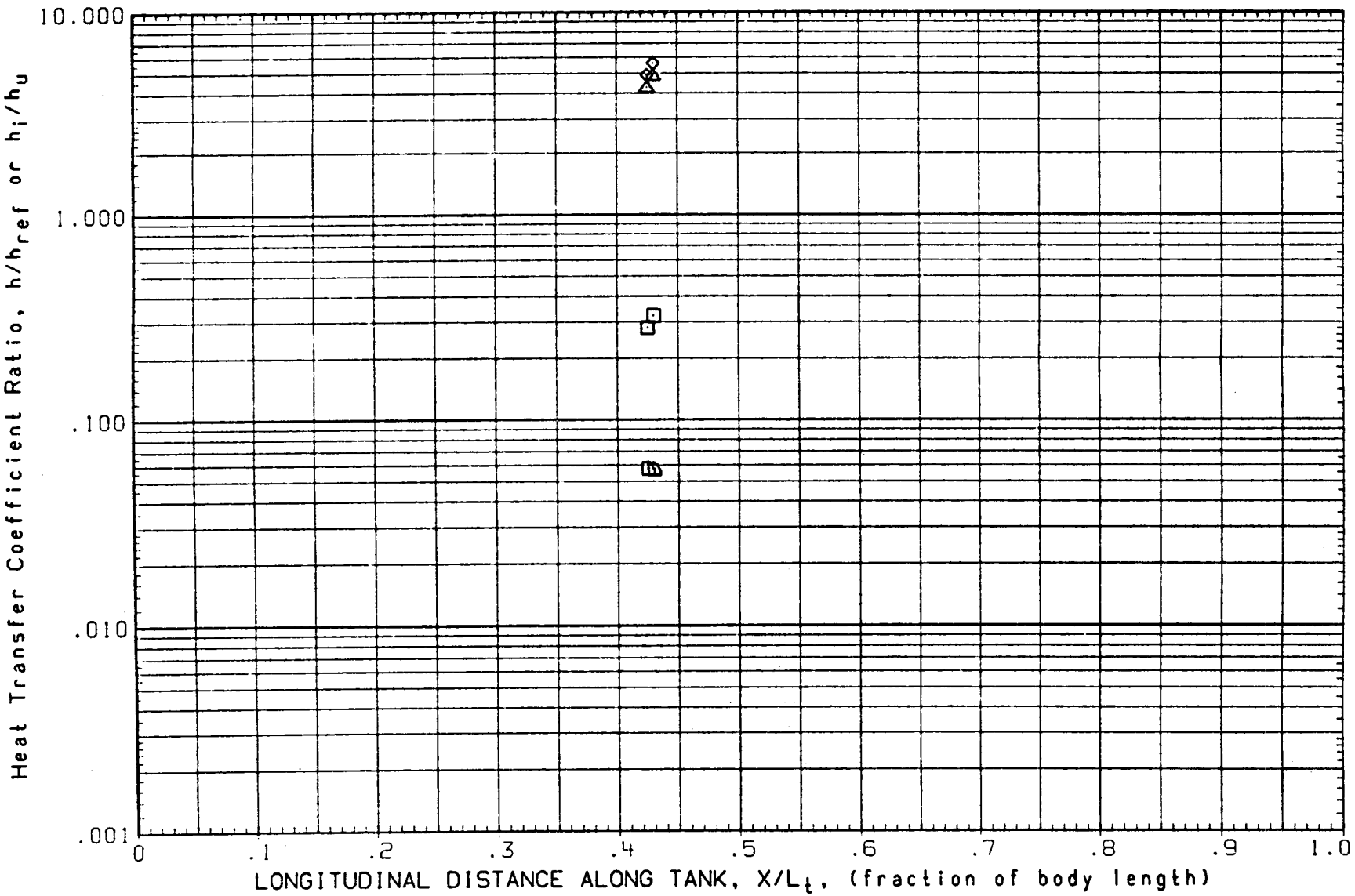

FIG. 4-8 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 5.625

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT40)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	4.500
(C9NT40)	⬠	DATA NOT AVAILABLE		4.020	.000	4.500
(V4LT34)	□	DATA NOT AVAILABLE		4.020	.000	4.500
(X4LT34)	◇	DATA NOT AVAILABLE		4.020	.000	4.500
(Y4LT34)	△	DATA NOT AVAILABLE		4.020	.000	4.500

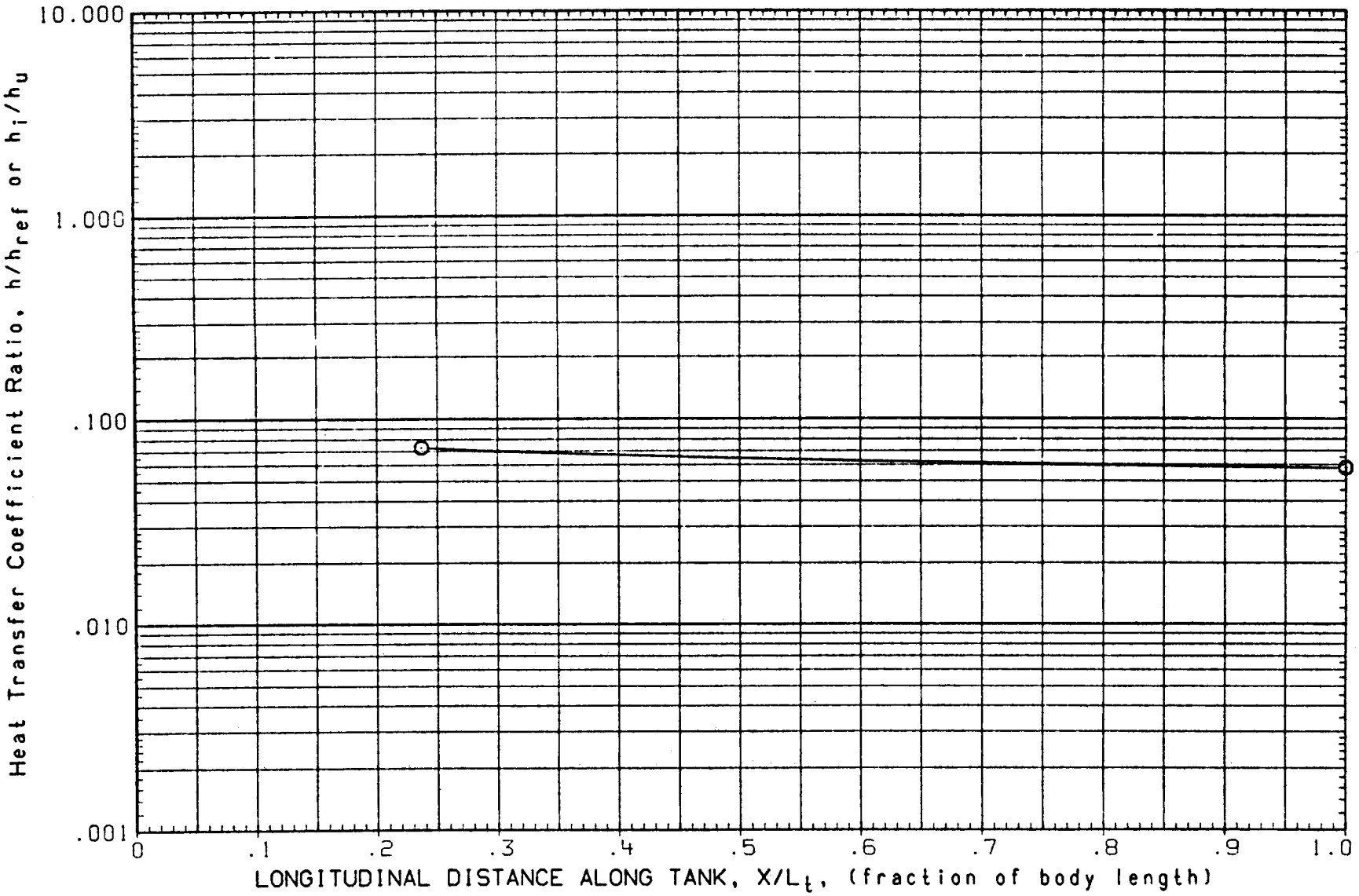

FIG. 4-8 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 5.630

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT40)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	4.500
(C9NT40)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	4.500
(V4LT34)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	4.500
(X4LT34)	◇	IH85 (W.L. TEST) OTS/ET = V4LT34/C9NT40=	HI/HU	4.020	.000	4.500
(Y4LT34)	△	IH85 (W.L. THEORY) OTS/ET = V4LT34/A9NT40=	HI/HU	4.020	.000	4.500

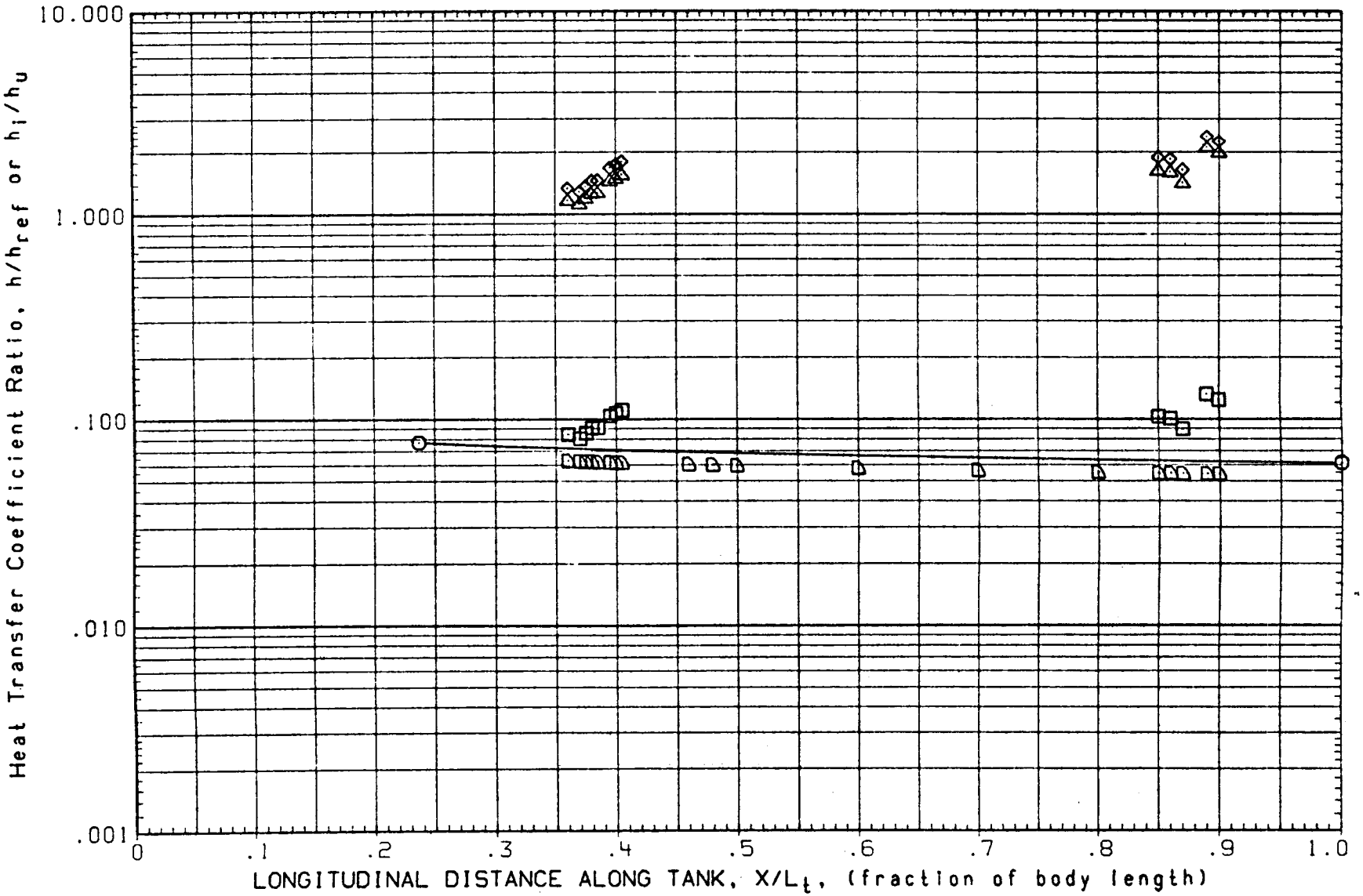

FIG. 4-8 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 11.250

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT40)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	4.500
(C9NT40)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	4.500
(V4LT34)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	4.500
(X4LT34)	◇	IH85 (W.L. TEST) OTS/ET = V4LT34/C9NT40= HI/HU		4.020	.000	4.500
(Y4LT34)	△	IH85 (W.L. THEORY) OTS/ET = V4LT34/A9NT40= HI/HU		4.020	.000	4.500

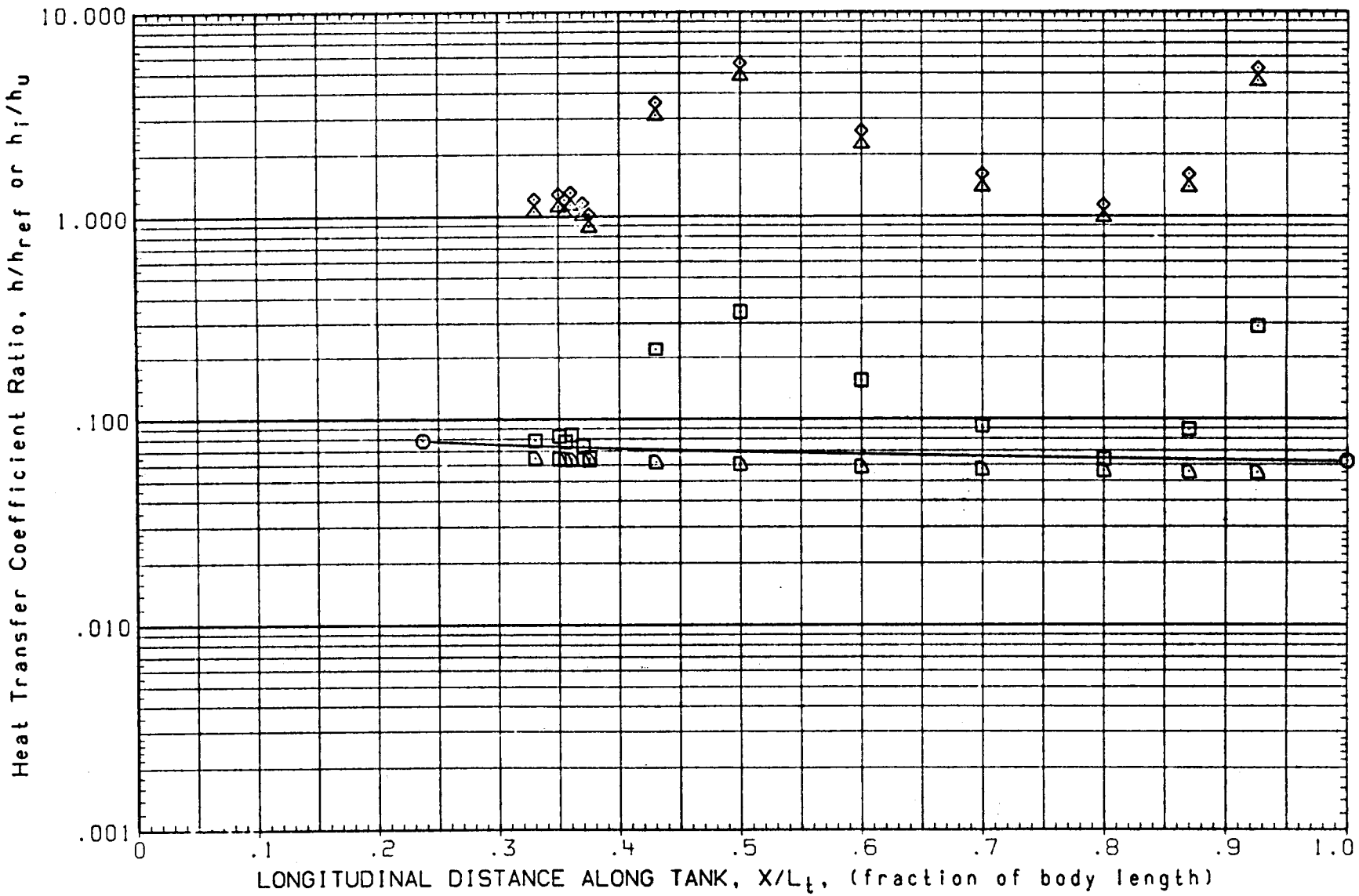

FIG. 4-8 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 17.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT40)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	4.500
(C9NT40)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	4.500
(V4LT34)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	4.500
(X4LT34)	◇	IH85 (W.L. TEST) OTS/ET = V4LT34/C9NT40= HI/HU		4.020	.000	4.500
(Y4LT34)	△	IH85 (W.L. THEORY) OTS/ET = V4LT34/A9NT40= HI/HU		4.020	.000	4.500

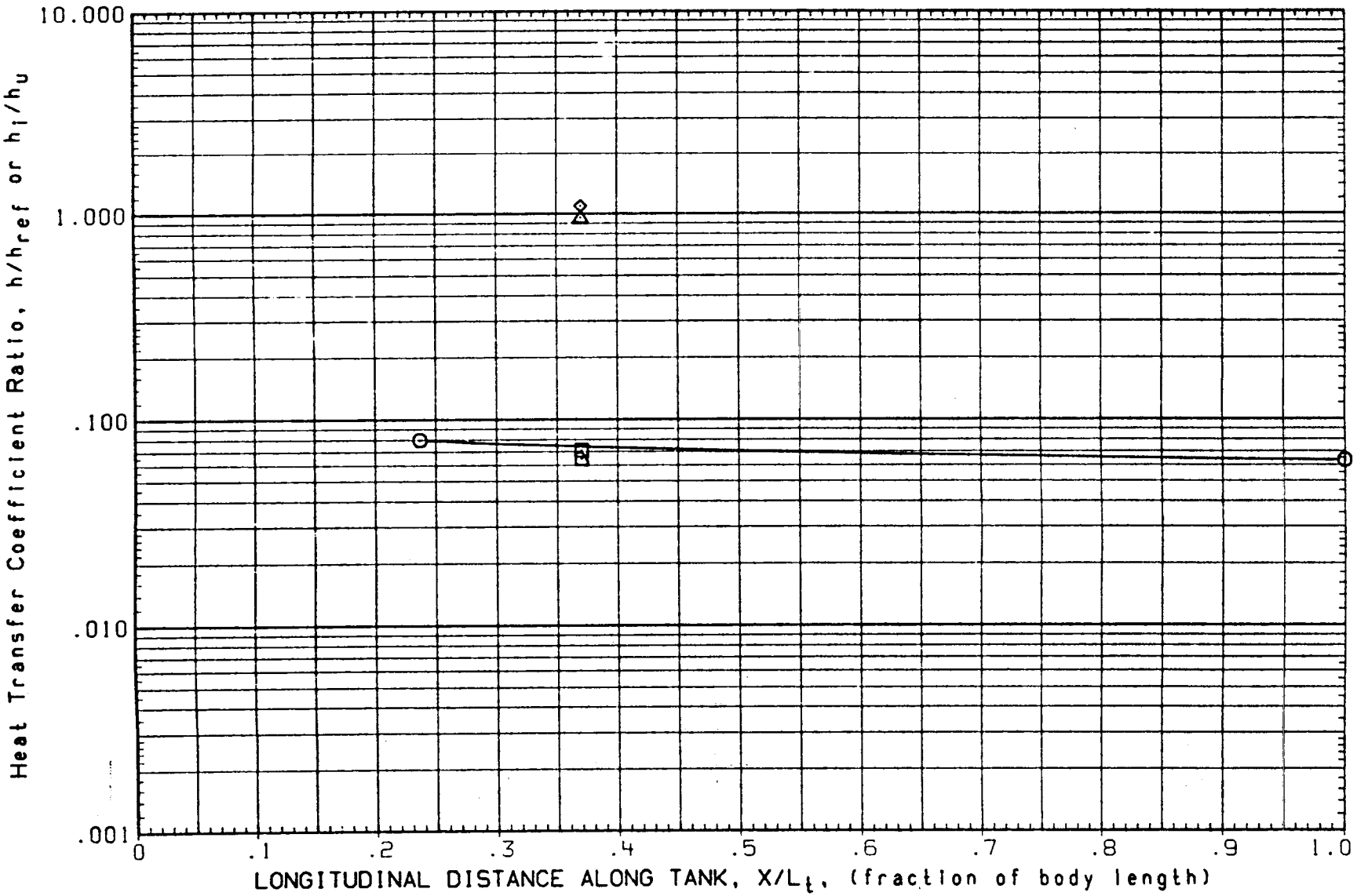

FIG. 4-8 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 20.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT40)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	4.500
(C9NT40)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	4.500
(V4LT34)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	4.500
(X4LT34)	◇	IH85 (W.L. TEST) OTS/ET = V4LT34/C9NT40=	HI/HU	4.020	.000	4.500
(Y4LT34)	△	IH85 (W.L. THEORY) OTS/ET = V4LT34/A9NT40=	HI/HU	4.020	.000	4.500

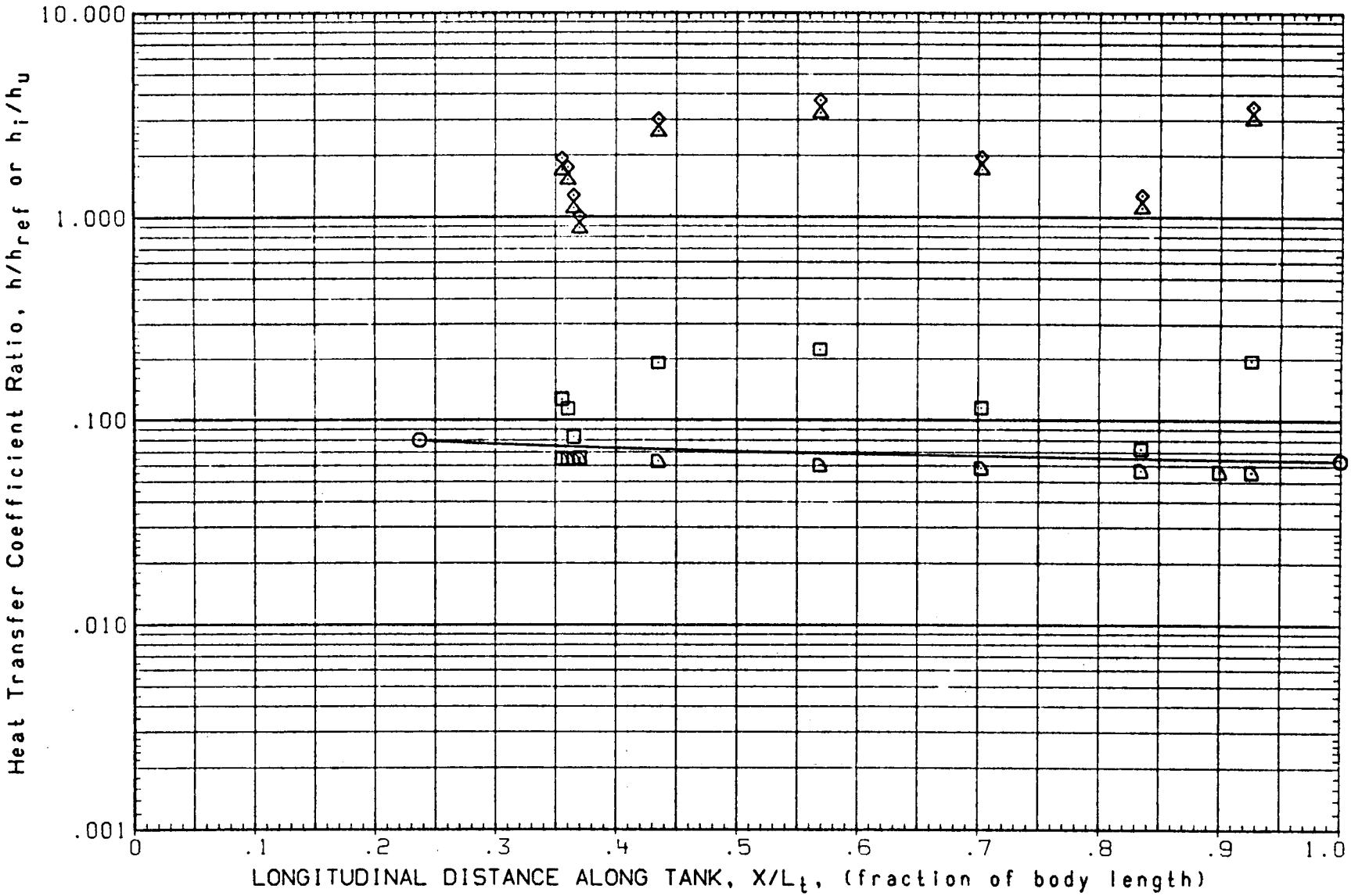

FIG. 4-8 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 23.070

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT40)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	4.500
(C9NT40)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	4.500
(V4LT34)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	4.500
(X4LT34)	◇	IH85 (W.L. TEST) OTS/ET = V4LT34/C9NT40=	HI/HU	4.020	.000	4.500
(Y4LT34)	△	IH85 (W.L. THEORY) OTS/ET = V4LT34/A9NT40=	HI/HU	4.020	.000	4.500

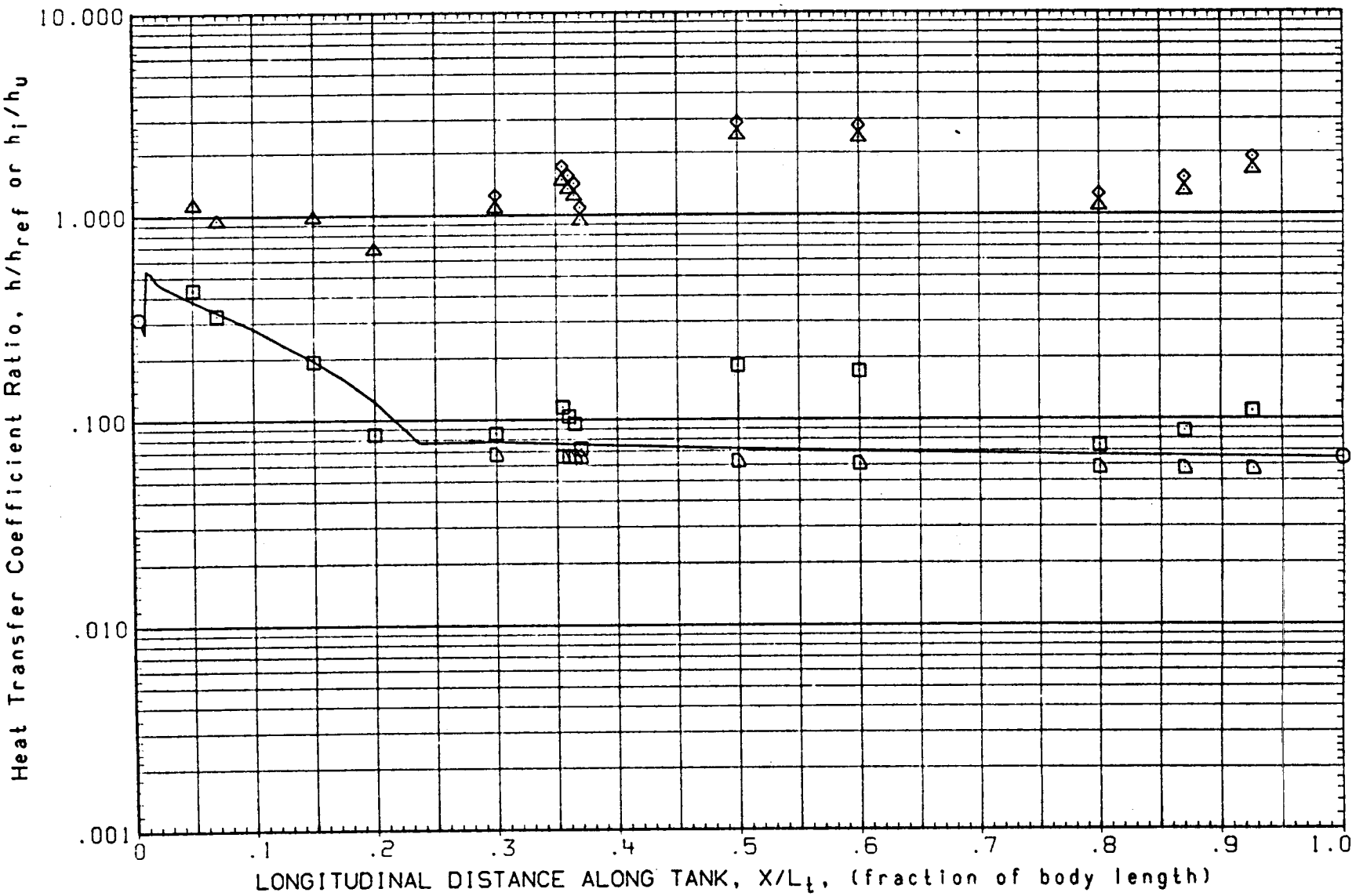

FIG. 4-8 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 29.800

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT40)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	4.500
(C9NT40)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	4.500
(V4LT34)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	4.500
(X4LT34)	◇	IH85 (W.L. TEST) OTS/ET = V4LT34/C9NT40= HI/HU		4.020	.000	4.500
(Y4LT34)	△	IH85 (W.L. THEORY) OTS/ET = V4LT34/A9NT40= HI/HU		4.020	.000	4.500

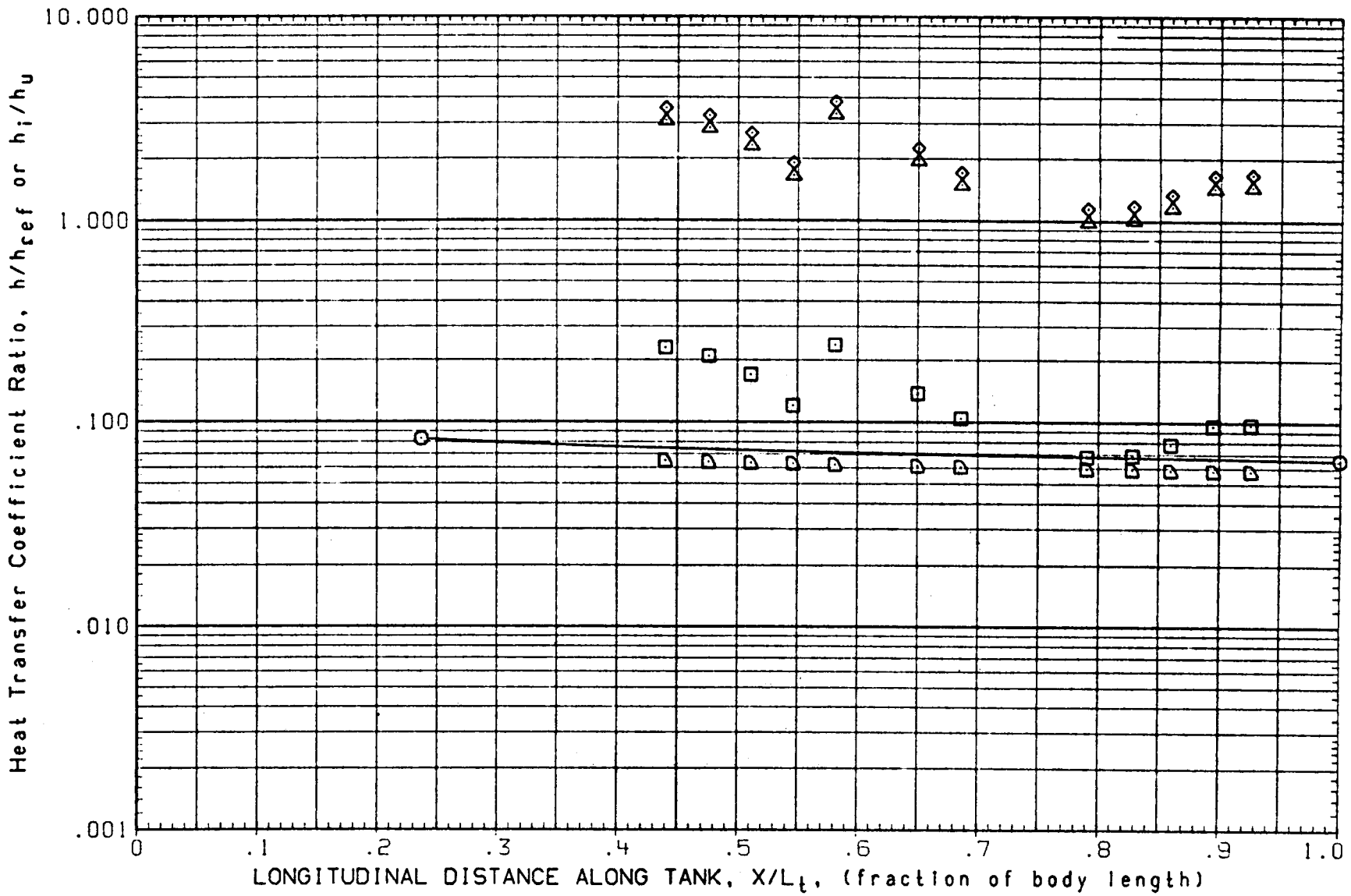

FIG. 4-8 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 31.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT40)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	4.500
(C9NT40)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	4.500
(V4LT34)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	4.500
(X4LT34)	◇	IH85 (W.L. TEST) OTS/ET = V4LT34/C9NT40=	HI/HU	4.020	.000	4.500
(Y4LT34)	△	IH85 (W.L. THEORY) OTS/ET = V4LT34/A9NT40=	HI/HU	4.020	.000	4.500

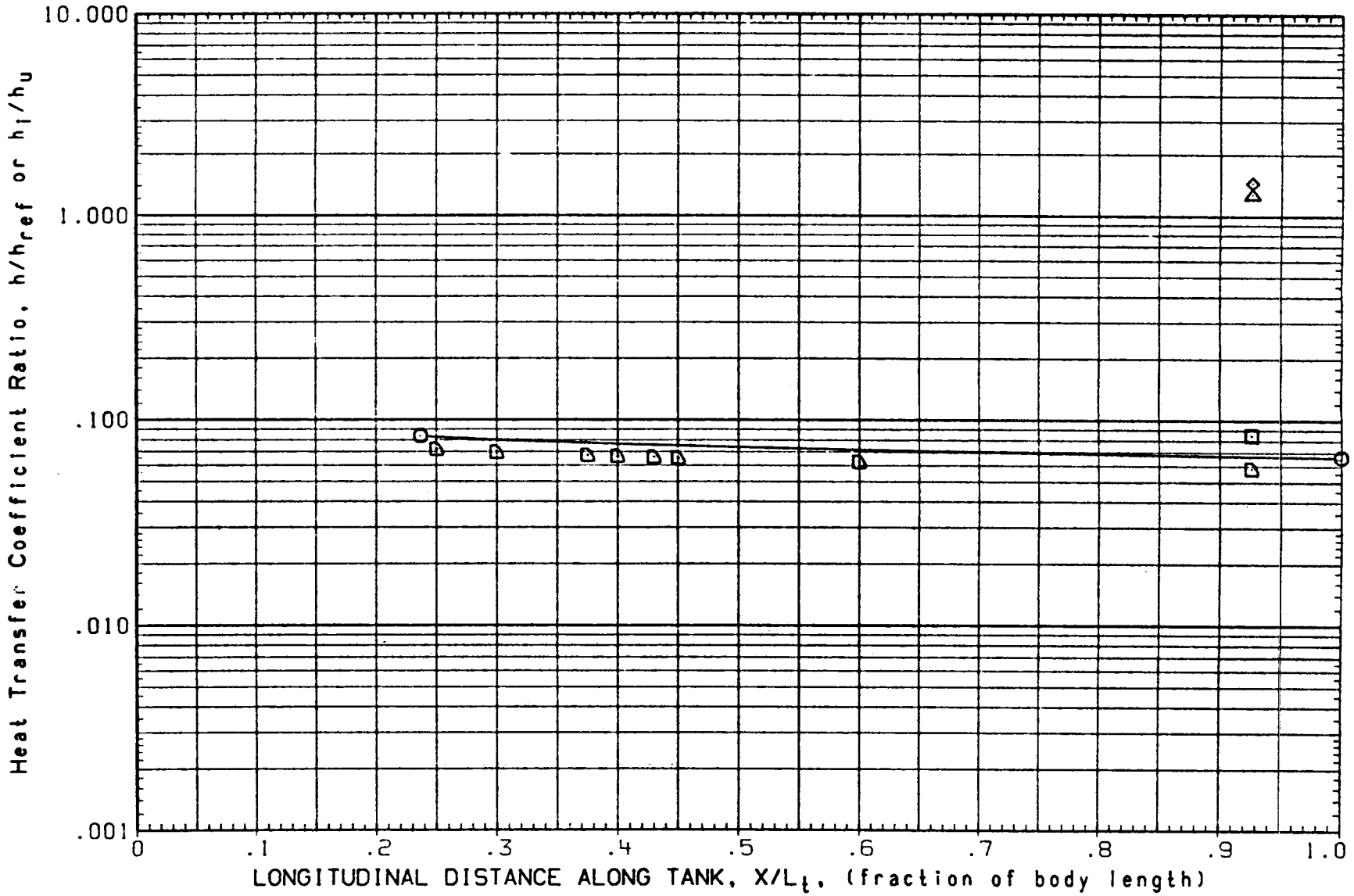

FIG. 4-8 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 33.750

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT40)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	4.500
(C9NT40)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	4.500
(V4LT34)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	4.500
(X4LT34)	◇	IH85 (W.L. TEST) OTS/ET = V4LT34/C9NT40=	HI/HU	4.020	.000	4.500
(Y4LT34)	△	IH85 (W.L. THEORY) OTS/ET = V4LT34/A9NT40=	HI/HU	4.020	.000	4.500

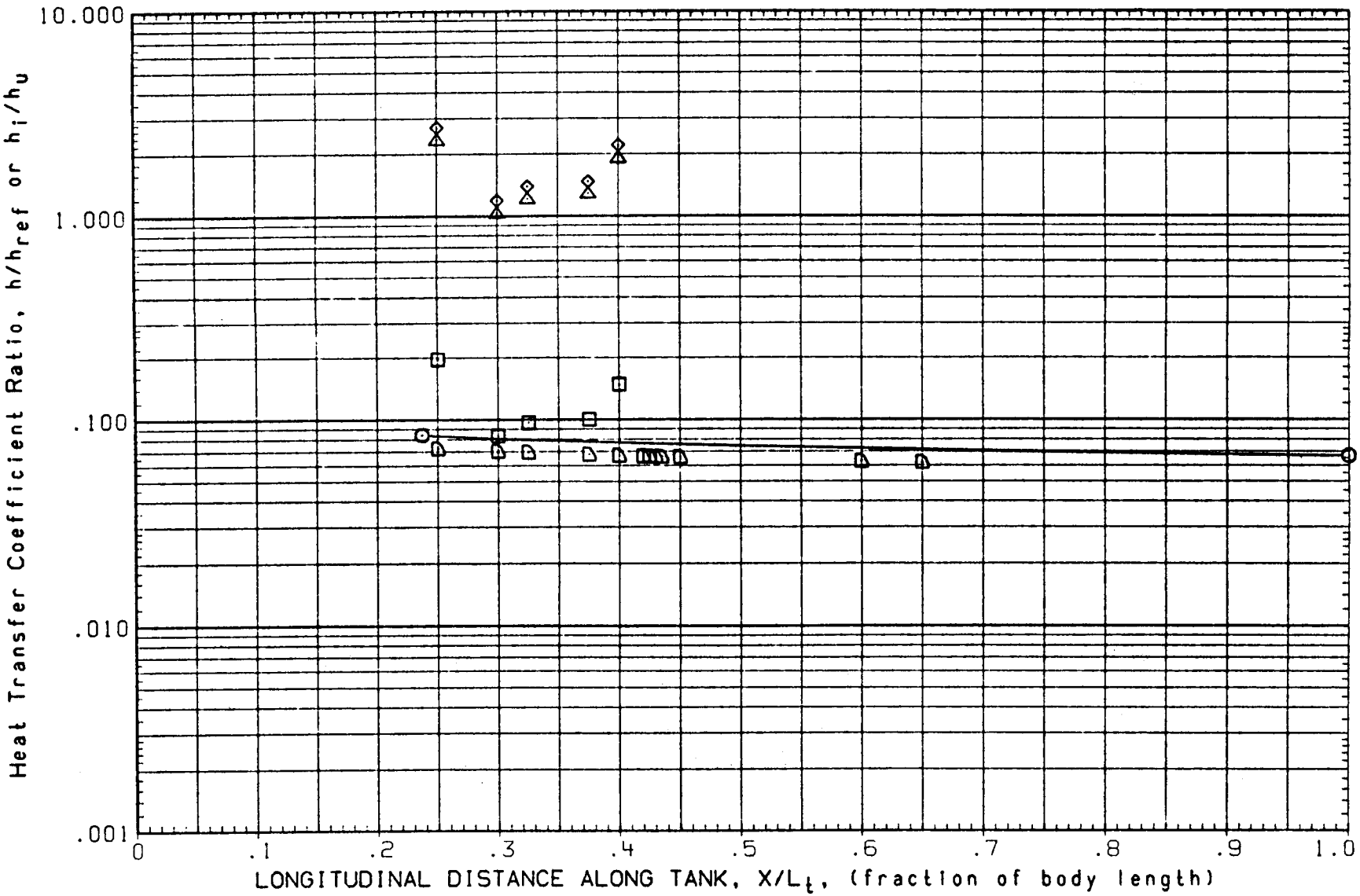

FIG. 4-8 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 36.320

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT40)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	4.020	.000	4.500
(C9NT40)	◗	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	4.020	.000	4.500
(V4LT34)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	.000	4.500
(X4LT34)	◇	IH85 (W.L. TEST) OTS/ET = V4LT34/C9NT40= HI/HU	4.020	.000	4.500
(Y4LT34)	△	IH85 (W.L. THEORY) OTS/ET = V4LT34/A9NT40= HI/HU	4.020	.000	4.500

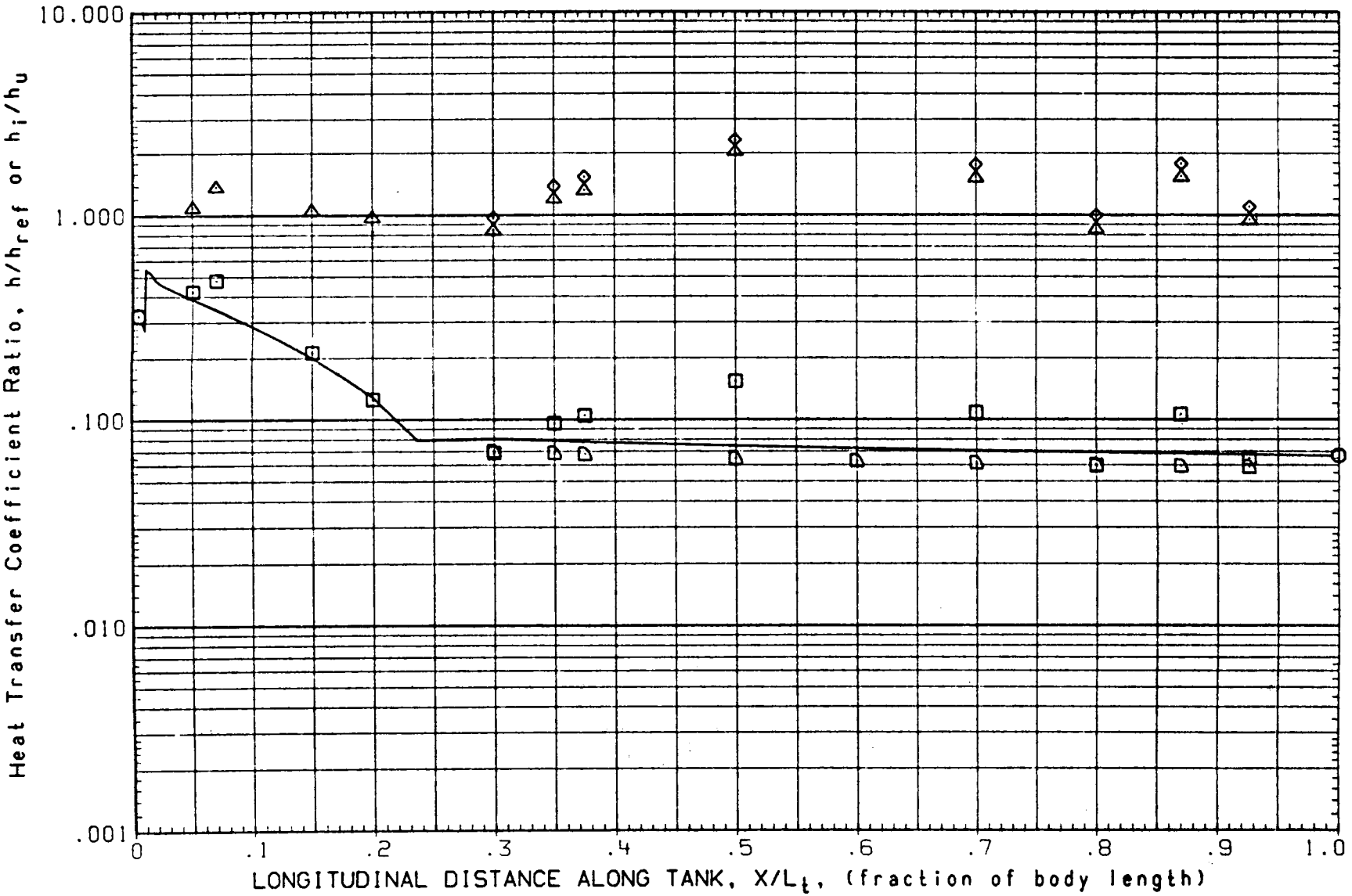

FIG. 4-8 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 37.700

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT40)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	4.500
(C9NT40)	⬠	DATA NOT AVAILABLE		4.020	.000	4.500
(V4LT34)	□	DATA NOT AVAILABLE		4.020	.000	4.500
(X4LT34)	◇	DATA NOT AVAILABLE		4.020	.000	4.500
(Y4LT34)	△	DATA NOT AVAILABLE		4.020	.000	4.500

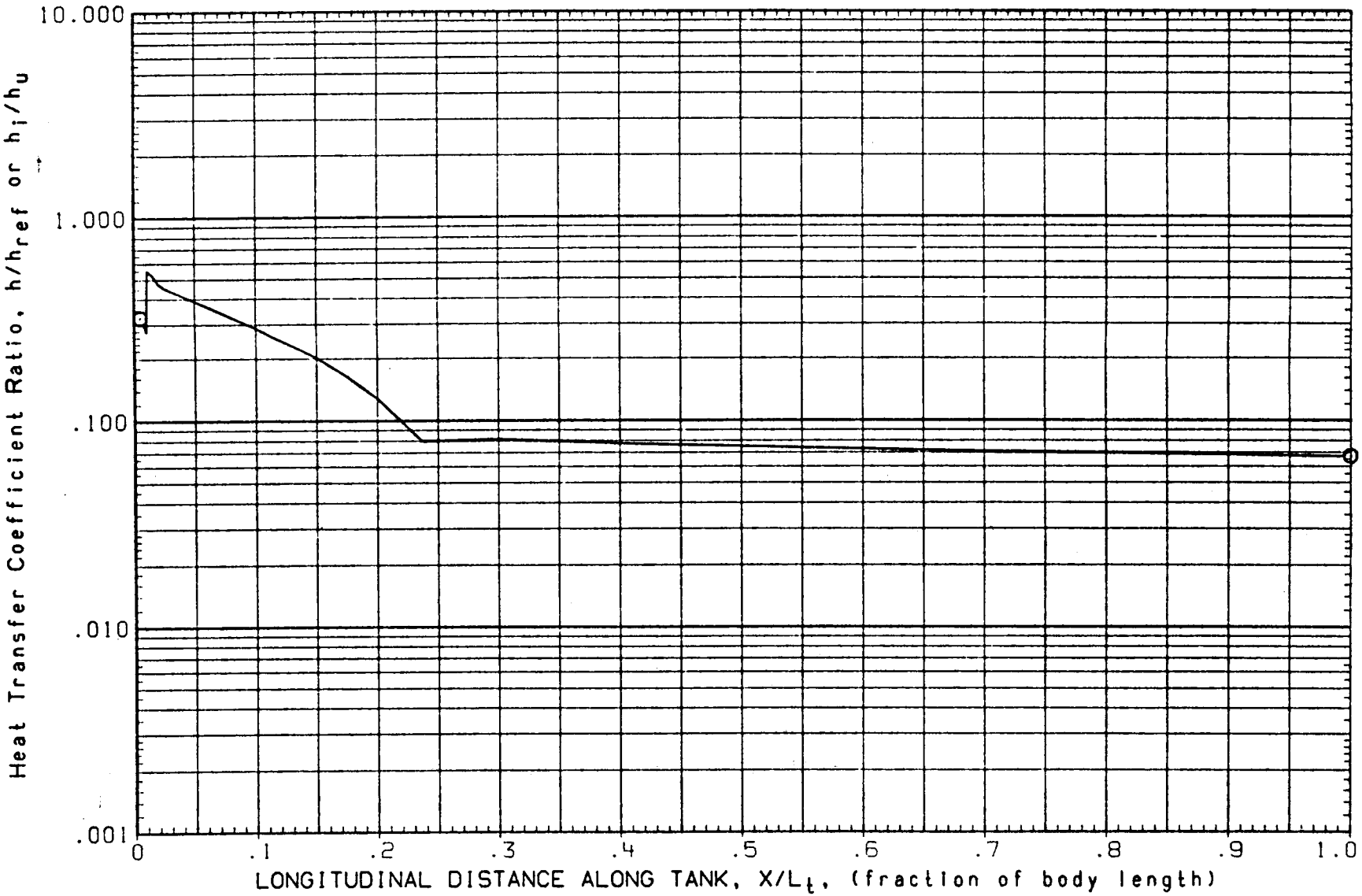

FIG. 4-8 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 39.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT40)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	4.500
(C9NT40)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	4.500
(V4LT34)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) 5		4.020	.000	4.500
(X4LT34)	◇	IH85 (W.L. TEST) OTS/ET = V4LT34/C9NT40=	HI/HU	4.020	.000	4.500
(Y4LT34)	△	IH85 (W.L. THEORY) OTS/ET = V4LT34/A9NT40=	HI/HU	4.020	.000	4.500

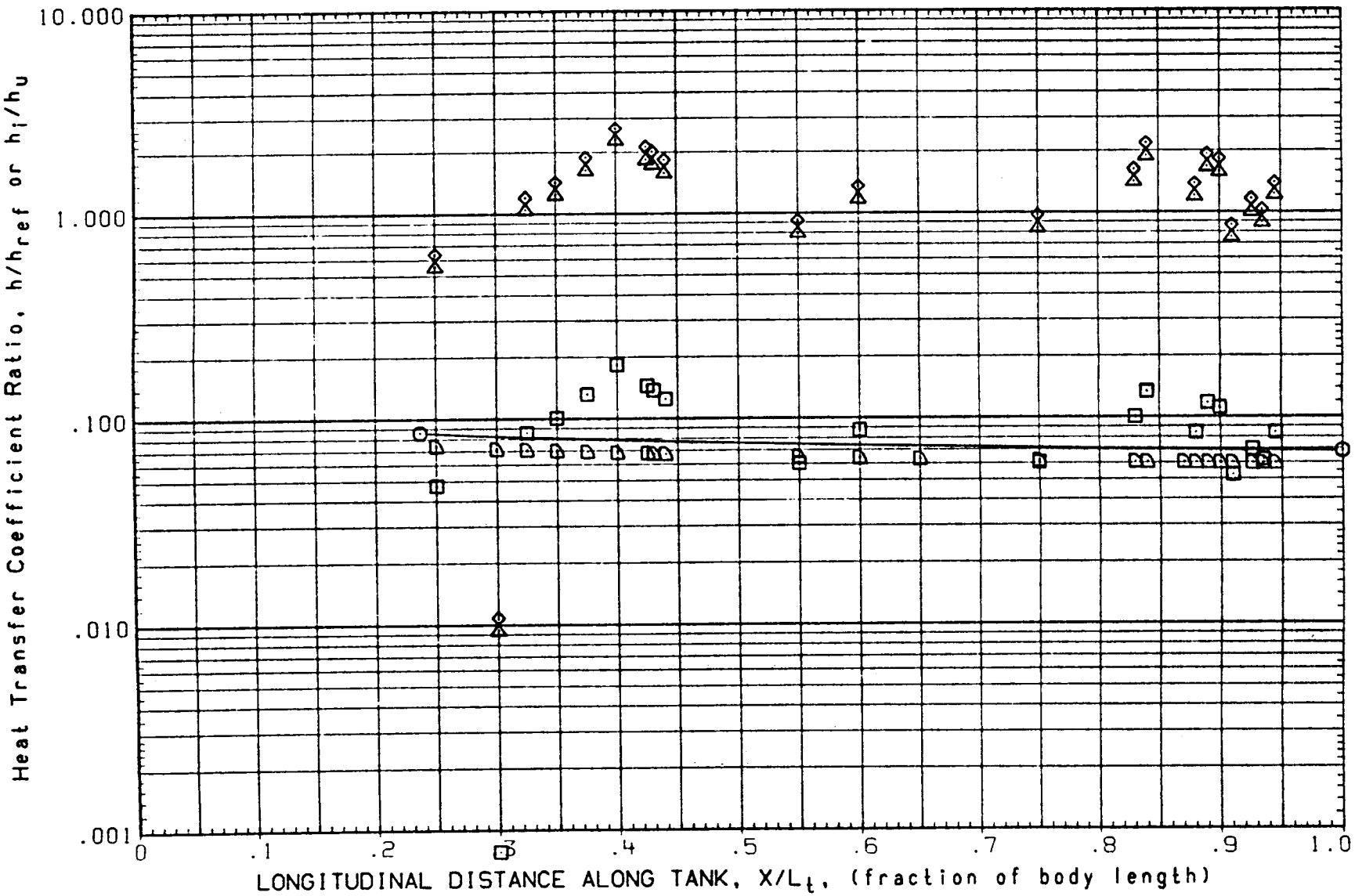

FIG. 4-8 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 45.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT40)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	4.020	.000	4.500
(C9NT40)	⬠	DATA NOT AVAILABLE	4.020	.000	4.500
(V4LT34)	□	IH85, AEDC V41A-W5, CONFIGURATION O (T) S	4.020	.000	4.500
(X4LT34)	◇	DATA NOT AVAILABLE	4.020	.000	4.500
(Y4LT34)	△	IH85 (W.L. THEORY) OTS/ET = V4LT34/A9NT40= HI/HU	4.020	.000	4.500

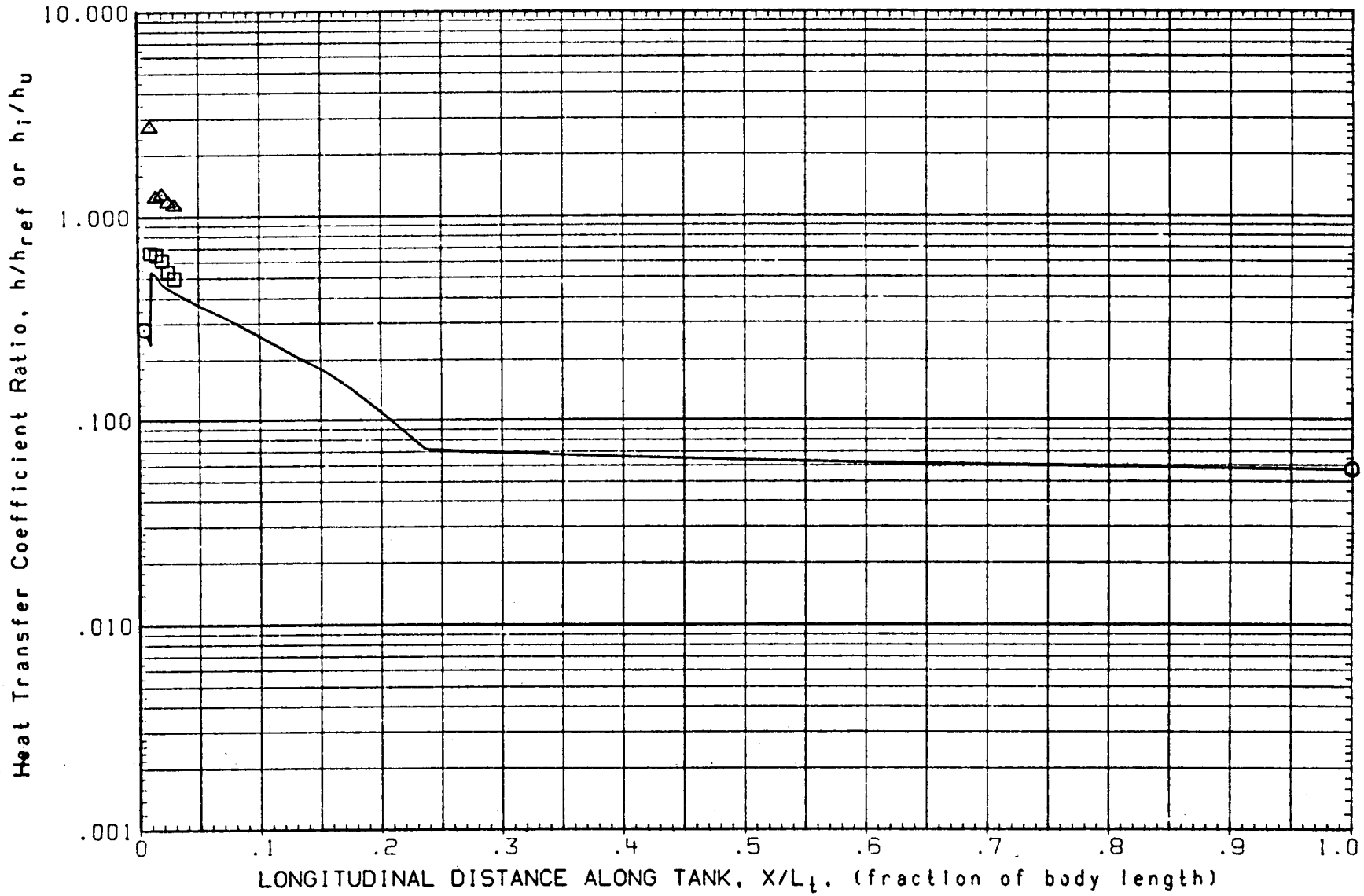

FIG. 4-8 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 180.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT40)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	4.500
(C9NT40)	⬠	DATA NOT AVAILABLE		4.020	.000	4.500
(V4LT34)	□	DATA NOT AVAILABLE		4.020	.000	4.500
(X4LT34)	◇	DATA NOT AVAILABLE		4.020	.000	4.500
(Y4LT34)	△	DATA NOT AVAILABLE		4.020	.000	4.500

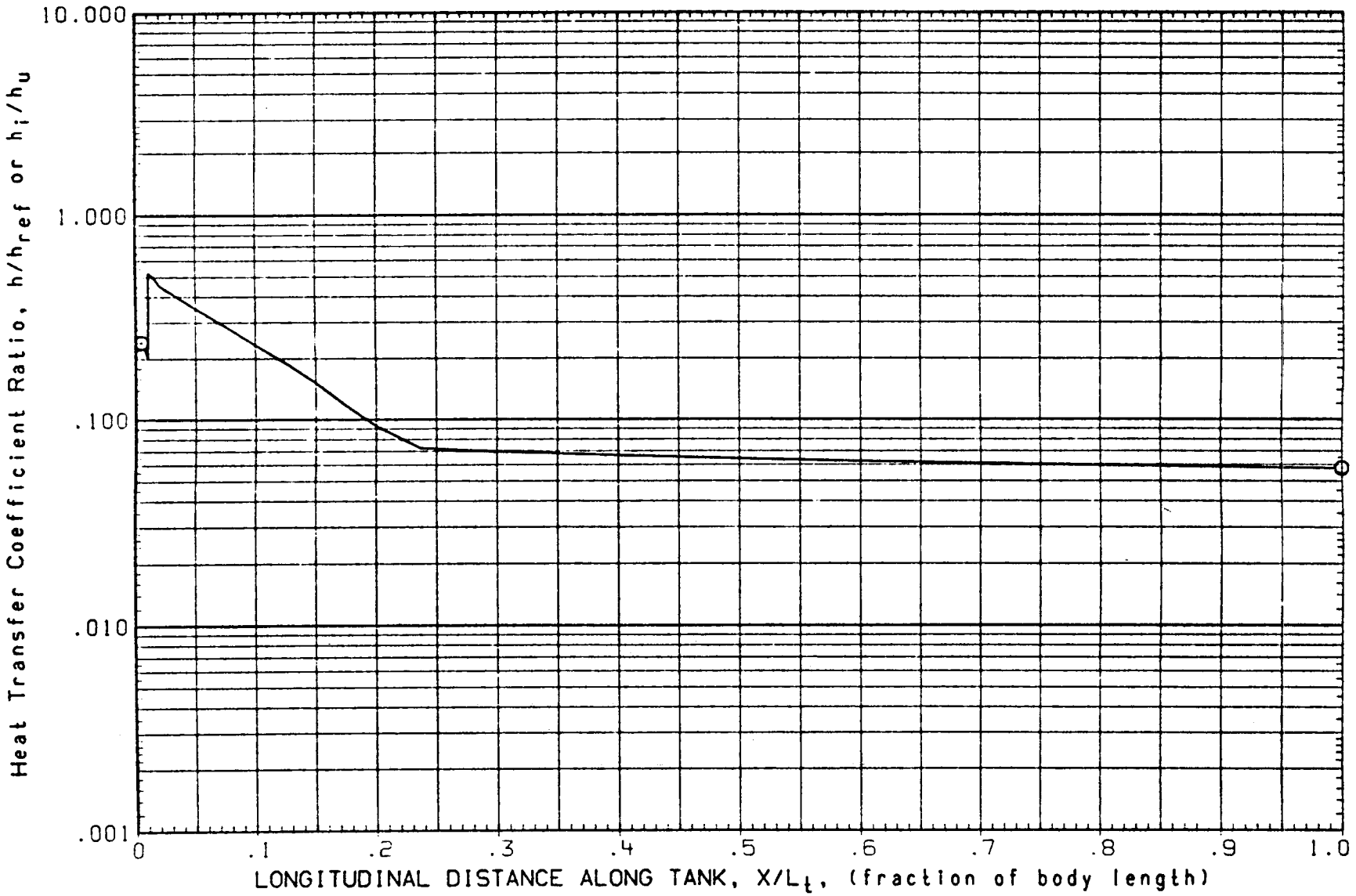

FIG. 4-8 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 235.000

C-5

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT40)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	4.500
(C9NT40)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	4.500
(V4LT34)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	4.500
(X4LT34)	◇	IH65 (W.L. TEST) OTS/ET = V4LT34/C9NT40=	HI/HU	4.020	.000	4.500
(Y4LT34)	△	IH85 (W.L. THEORY) OTS/ET = V4LT34/A9NT40=	HI/HU	4.020	.000	4.500

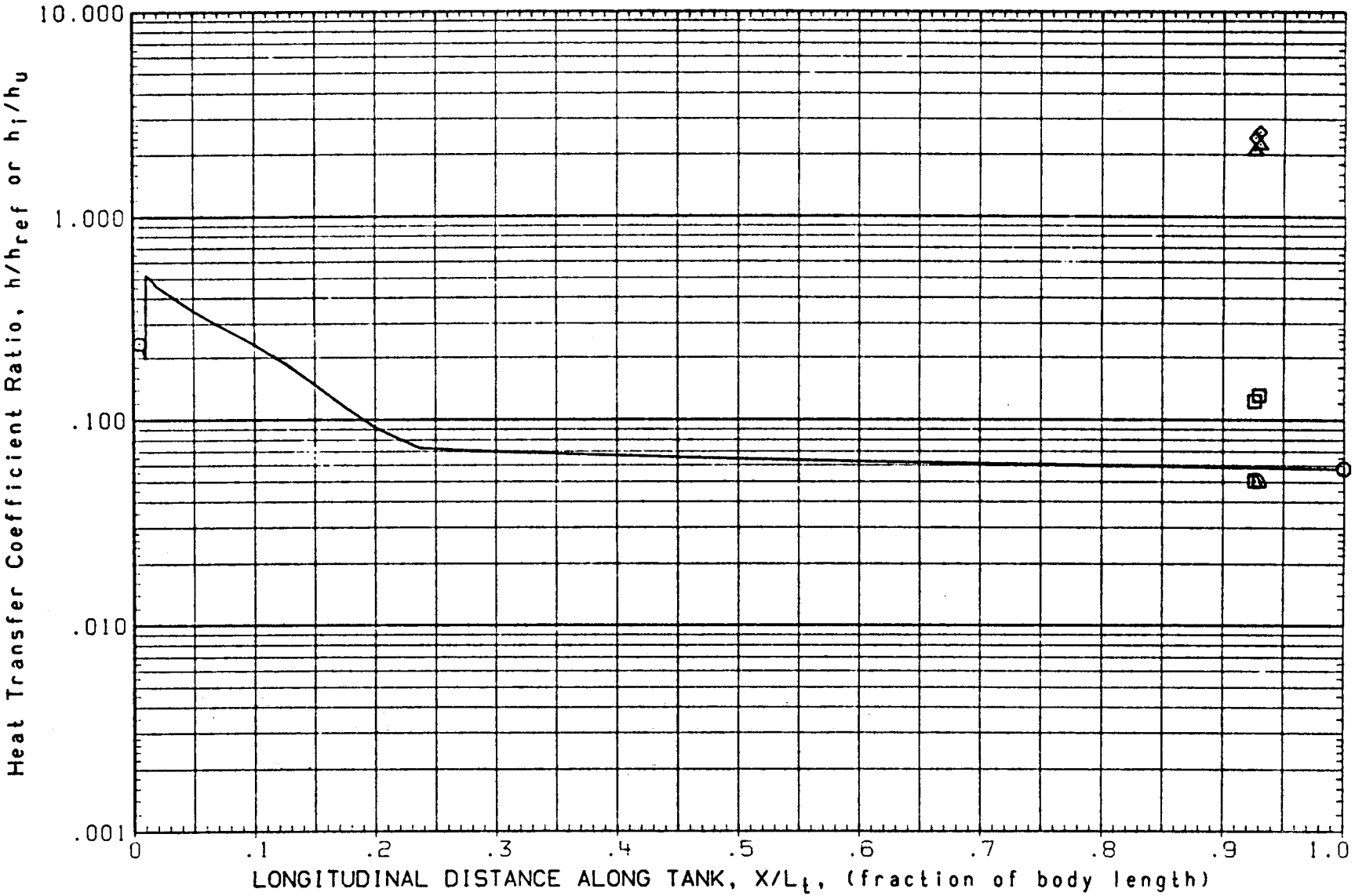

FIG. 4-8 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 247.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT40)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	4.500
(C9NT40)	⬡	DATA NOT AVAILABLE		4.020	.000	4.500
(V4LT34)	□	DATA NOT AVAILABLE		4.020	.000	4.500
(X4LT34)	◇	DATA NOT AVAILABLE		4.020	.000	4.500
(Y4LT34)	△	DATA NOT AVAILABLE		4.020	.000	4.500

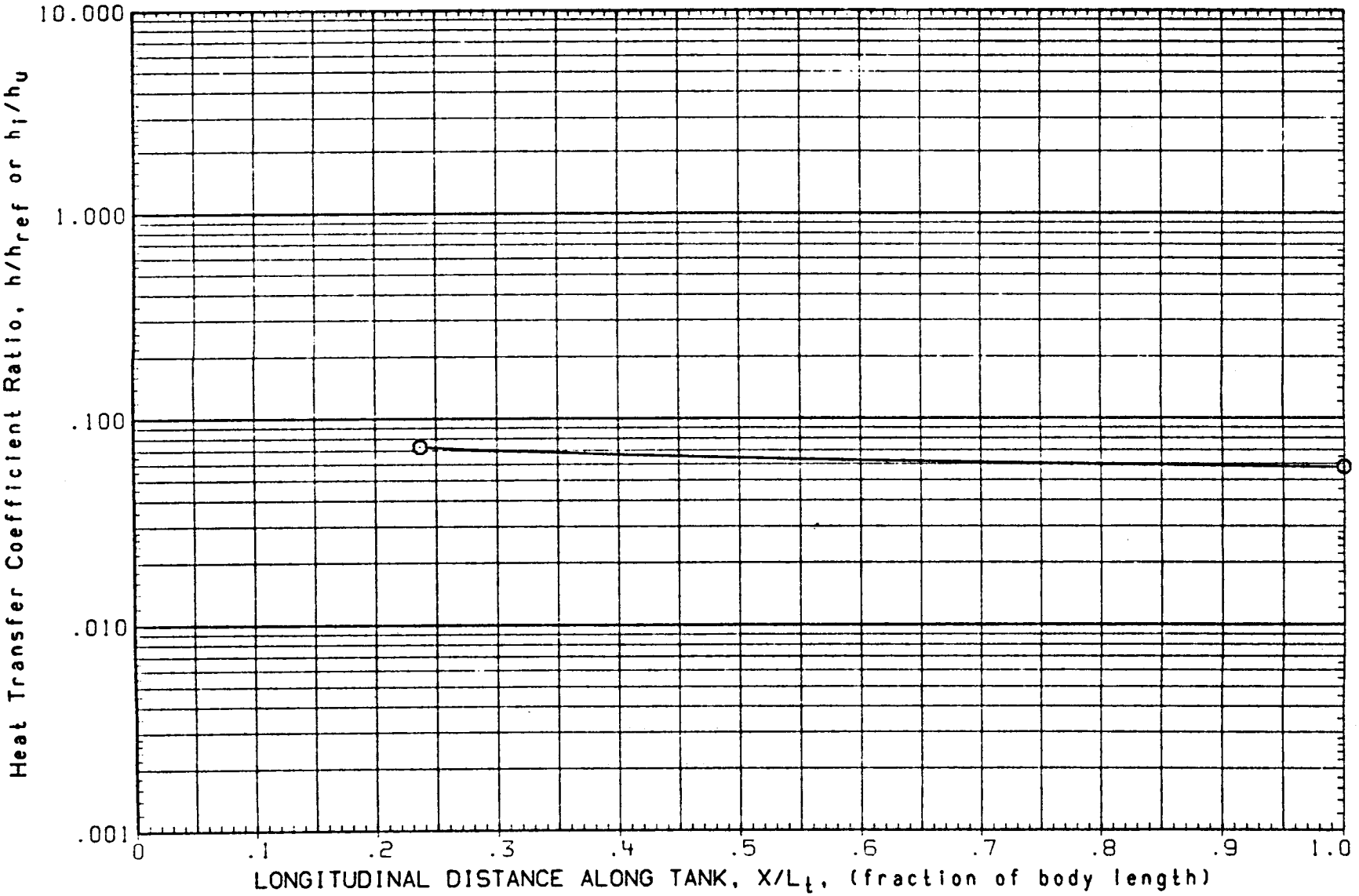

FIG. 4-8 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 247.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT40)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	4.500
(C9NT40)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	4.500
(V4LT34)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	4.500
(X4LT34)	◇	IH85 (W.L. TEST) OTS/ET = V4LT34/C9NT40=	HI/HU	4.020	.000	4.500
(Y4LT34)	△	IH85 (W.L. THEORY) OTS/ET = V4LT34/A9NT40=	HI/HU	4.020	.000	4.500

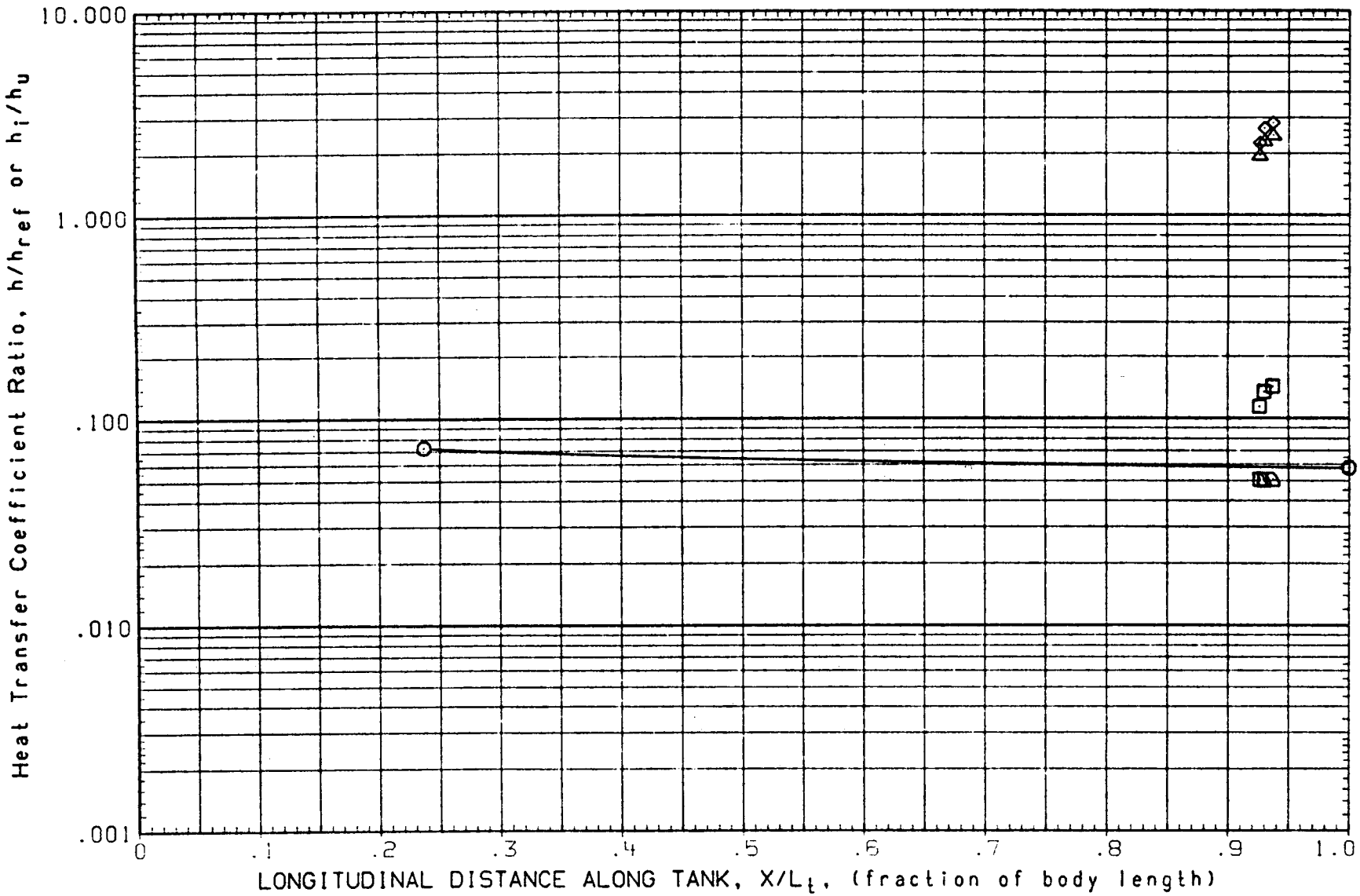

FIG. 4-8 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PH. = 250.570

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT40)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	4.500
(C9NT40)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	4.500
(V4LT34)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	4.500
(X4LT34)	◇	IH85 (W.L. TEST) OTS/ET = V4LT34/C9NT40= HI/HU		4.020	.000	4.500
(Y4LT34)	△	IH85 (W.L. THEORY) OTS/ET = V4LT34 A9NT40= HI/HU		4.020	.000	4.500

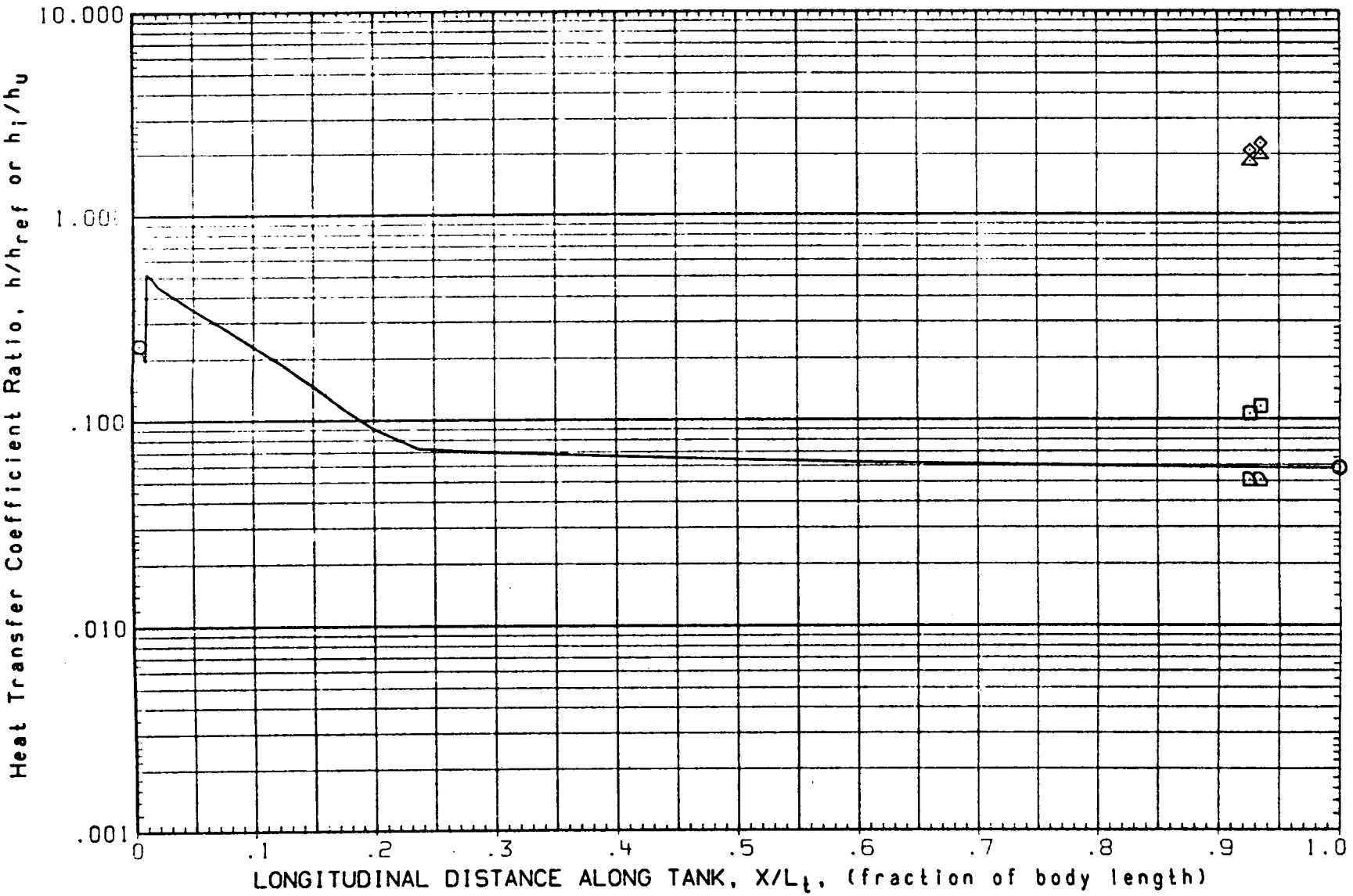

FIG. 4-8 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 258.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT40)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	4.500
(C9NT40)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	4.500
(V4LT34)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	4.500
(X4LT34)	◇	IH85 (W.L. TEST) OTS/ET = V4LT34/C9NT40=	HI/HU	4.020	.000	4.500
(Y4LT34)	△	IH85 (W.L. THEORY) OTS/ET = V4LT34/A9NT40=	HI/HU	4.020	.000	4.500

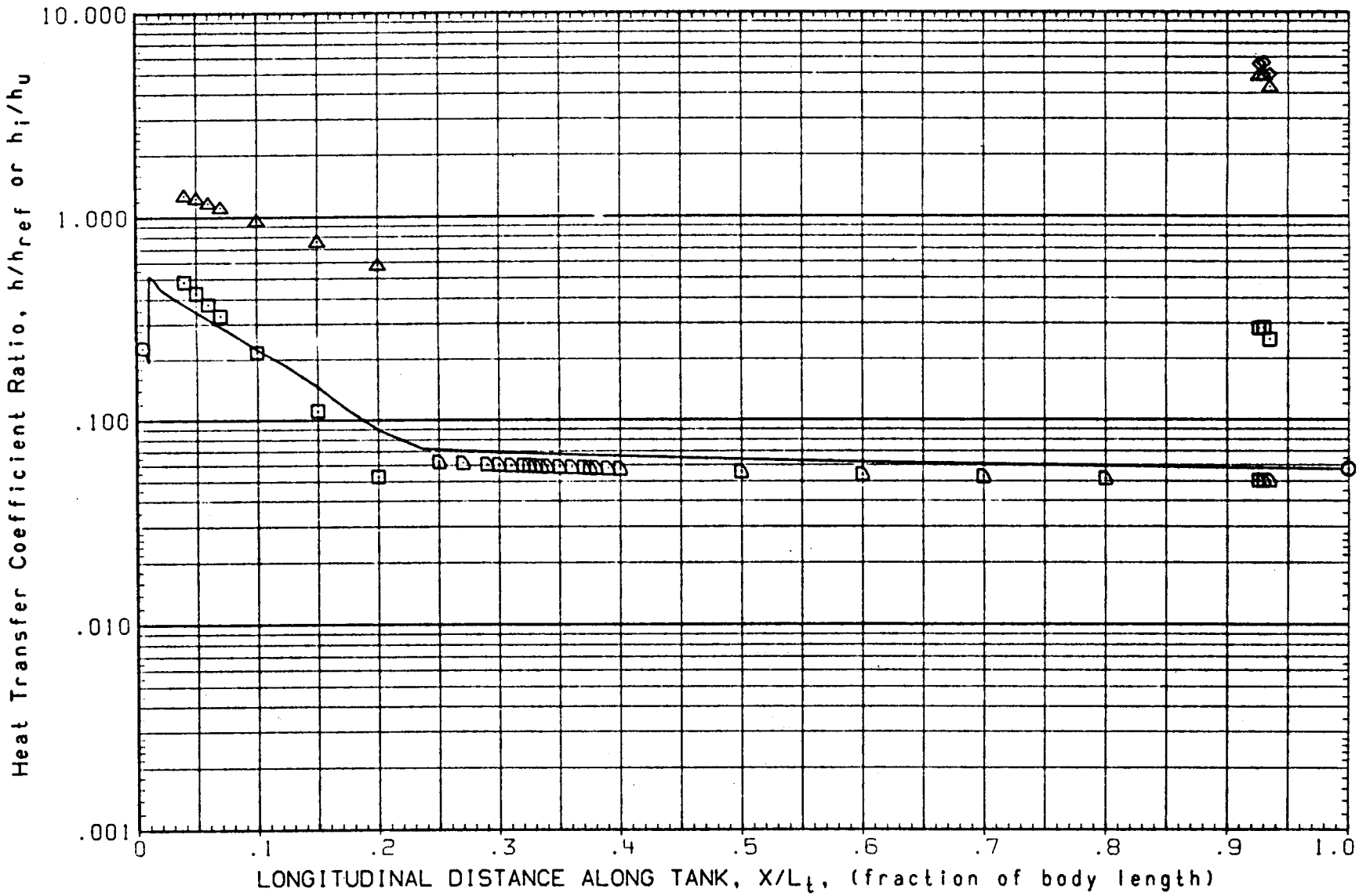

FIG. 4-8 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 270.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT40)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	4.500
(C9NT40)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	4.500
(V4LT34)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	4.500
(X4LT34)	◇	IH85 (W.L. TEST) OTS/ET = V4LT34/C9NT40=	HI/HU	4.020	.000	4.500
(Y4LT34)	△	IH85 (W.L. THEORY) OTS/ET = V4LT34/A9NT40=	HI/HU	4.020	.000	4.500

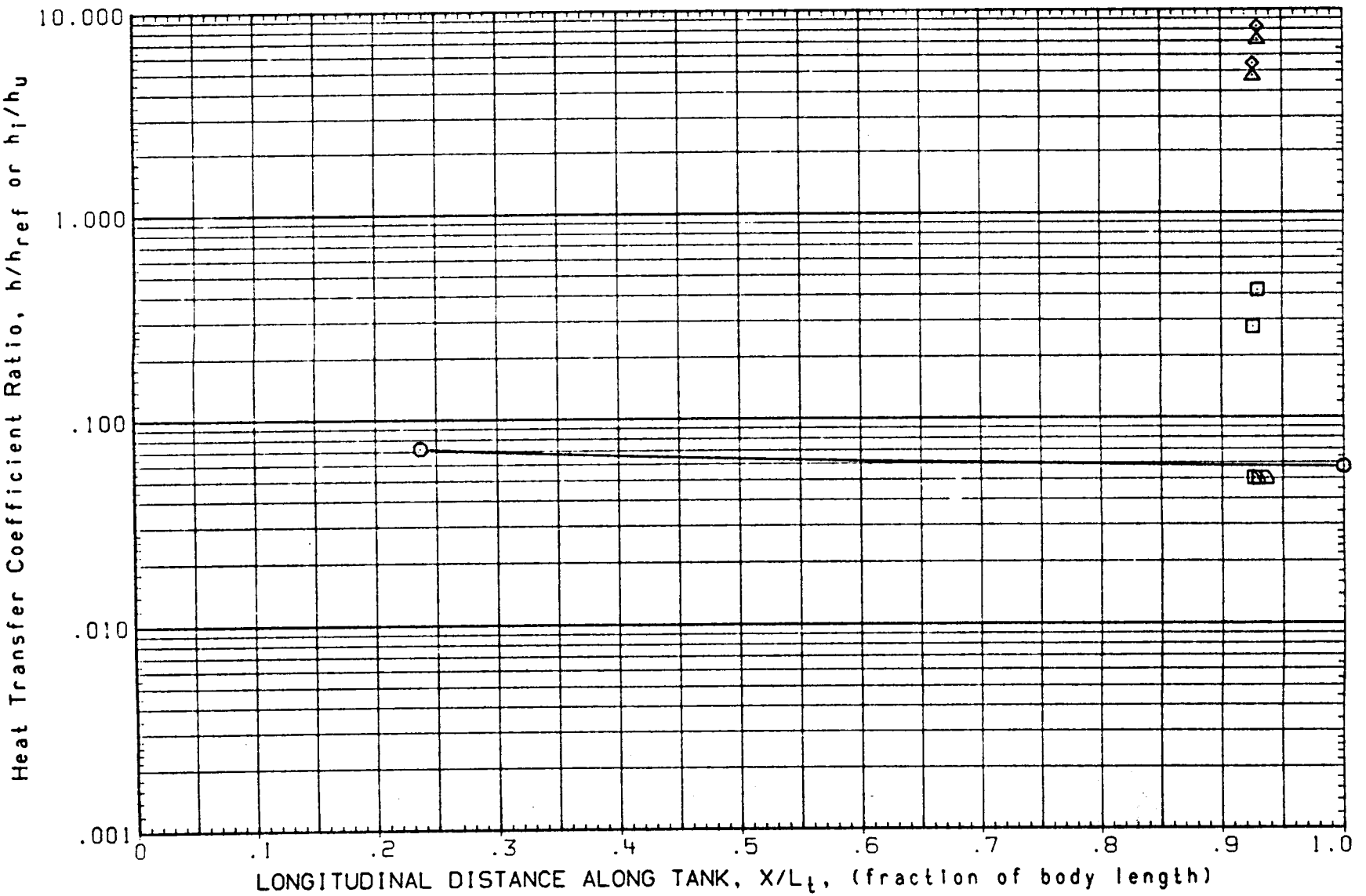

FIG. 4-8 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 289.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT40)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	4.020	.000	4.500
(C9NT40)	⌂	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	4.020	.000	4.500
(V4LT34)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	.000	4.500
(X4LT34)	◇	IH85 (W.L. TEST) OTS/ET = V4LT34/C9NT40= HI/HU	4.020	.000	4.500
(Y4LT34)	△	IH85 (W.L. THEORY) OTS/ET = V4LT34/A9NT40= HI/HU	4.020	.000	4.500

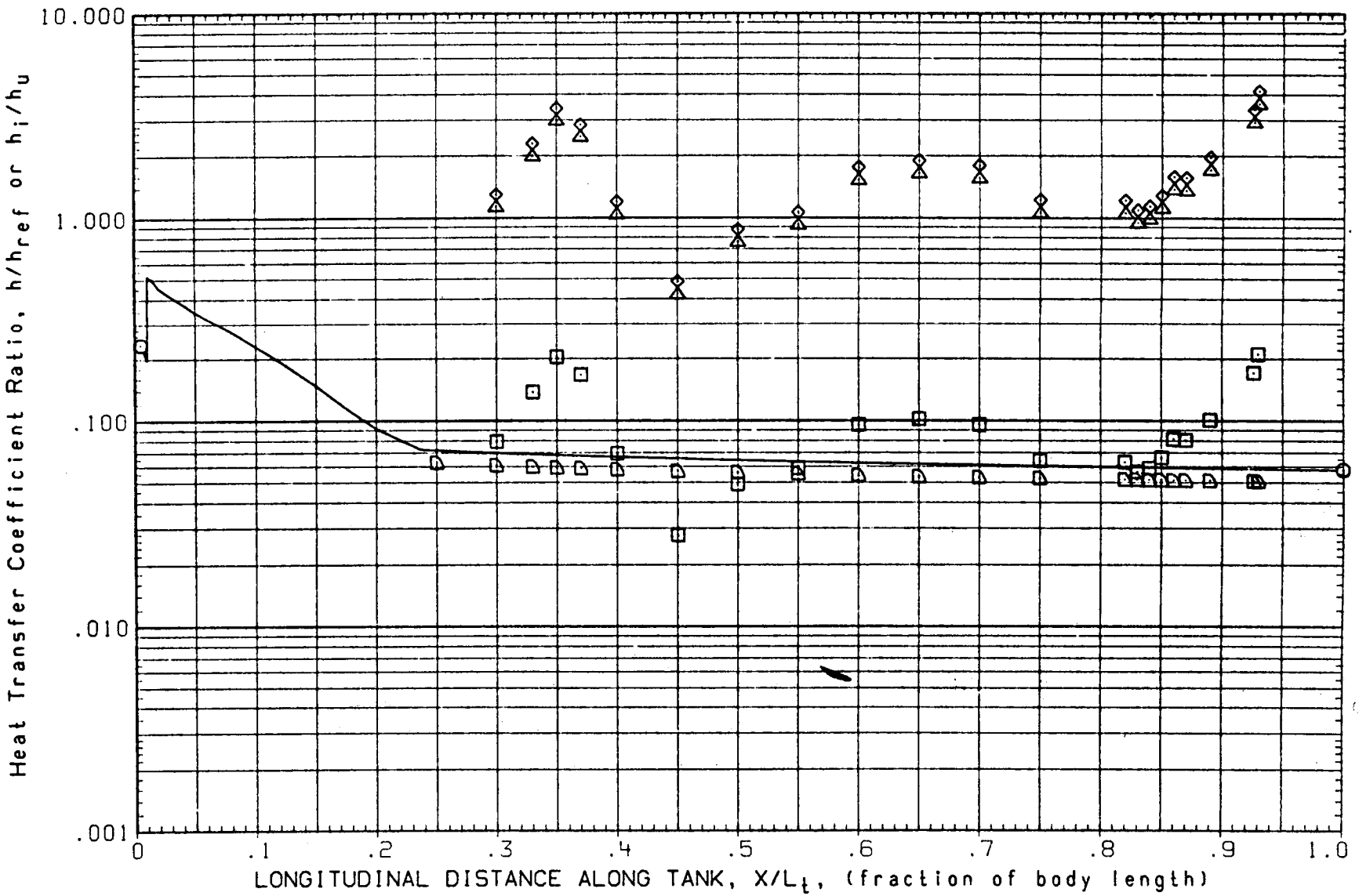

FIG. 4-8 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 292.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT40)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	4.500
(C9NT40)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	4.500
(V4LT34)	□	IH85, AEDC V41A-W5, CONFIGURATION O (T) S		4.020	.000	4.500
(X4LT34)	◇	IH85 (W.L. TEST) OTS/ET = V4LT34/C9NT40=	HI/HU	4.020	.000	4.500
(Y4LT34)	△	IH85 (W.L. THEORY) OTS/ET = V4LT34/A9NT40=	HI/HU	4.020	.000	4.500

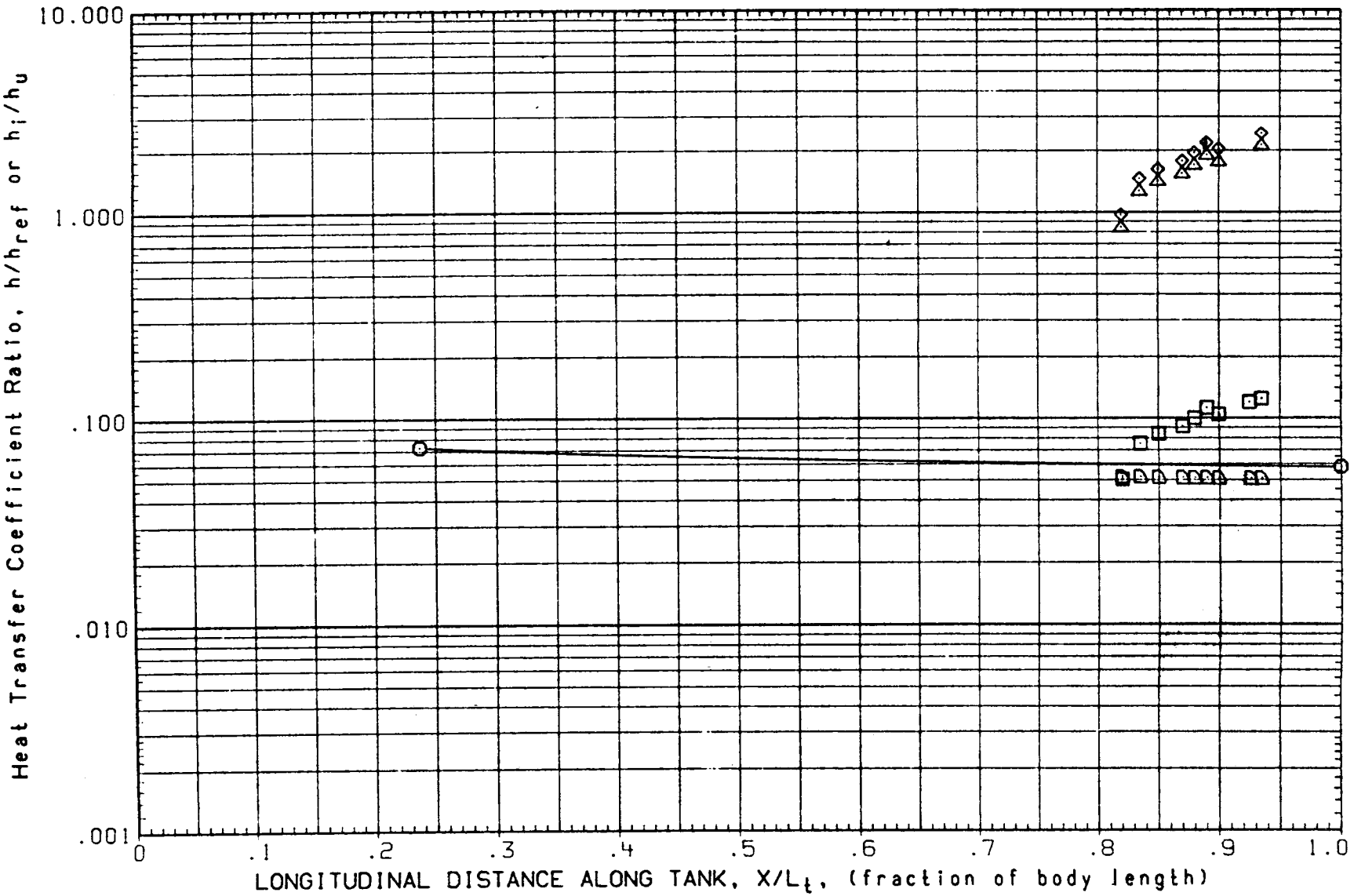

FIG. 4-8 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 301.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT40)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	4.020	.000	4.500
(C9NT40)	⌂	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	4.020	.000	4.500
(V4LT34)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	.000	4.500
(X4LT34)	◇	IH85 (W,L, TEST) OTS/ET = V4LT34/C9NT40= HI/HU	4.020	.000	4.500
(Y4LT34)	△	IH85 (W,L, THEORY) OTS/ET = V4LT34/A9NT40= HI/HU	4.020	.000	4.500

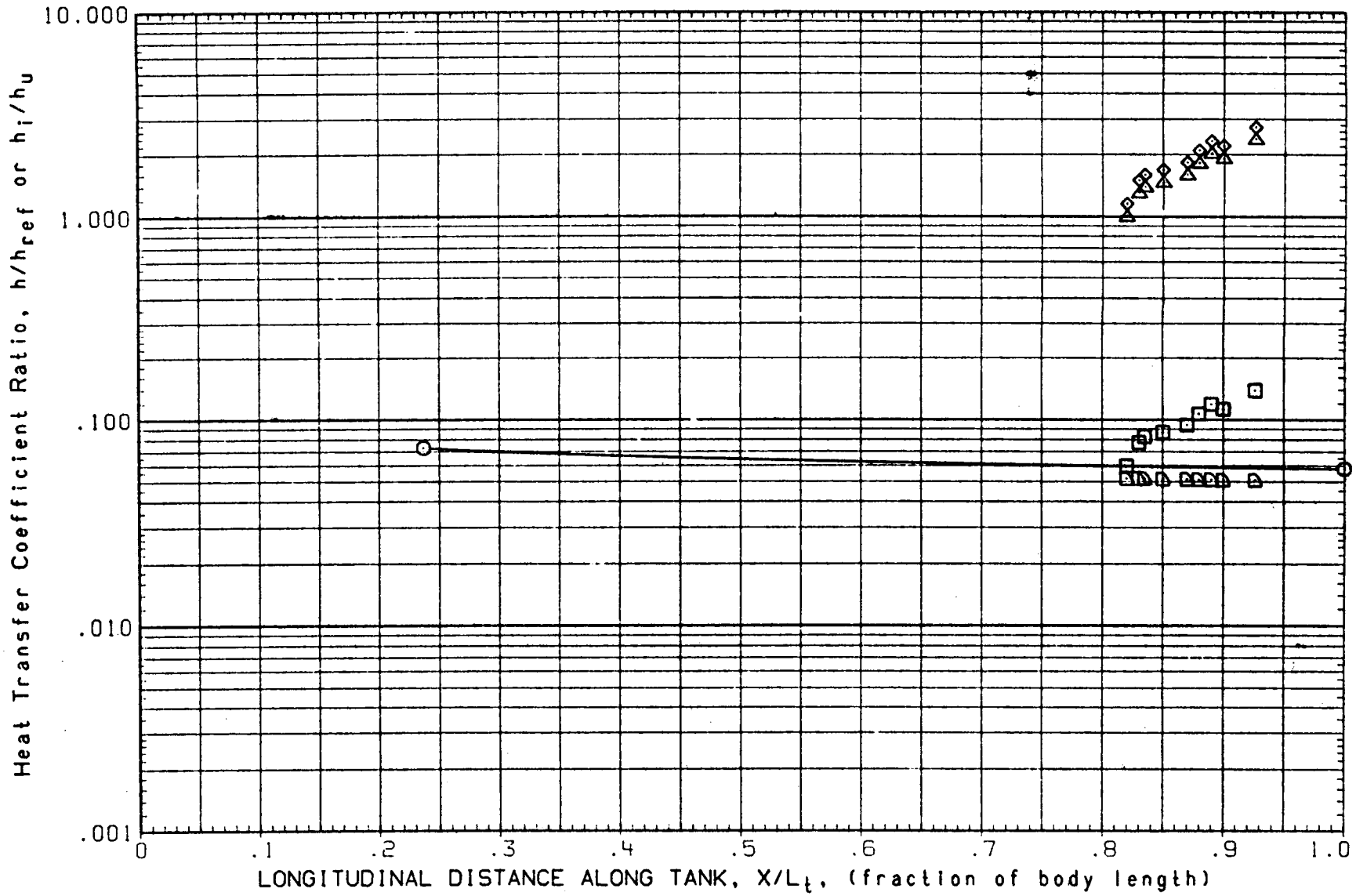

FIG. 4-8 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 305.400

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT40)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	4.500
(C9NT40)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	4.500
(V4LT34)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	4.500
(X4LT34)	◇	IH85 (W,L, TEST) OTS/ET = V4LT34/C9NT40=	HI/HU	4.020	.000	4.500
(Y4LT34)	△	IH85 (W,L, THEORY) OTS/ET = V4LT34/A9NT40=	HI/HU	4.020	.000	4.500

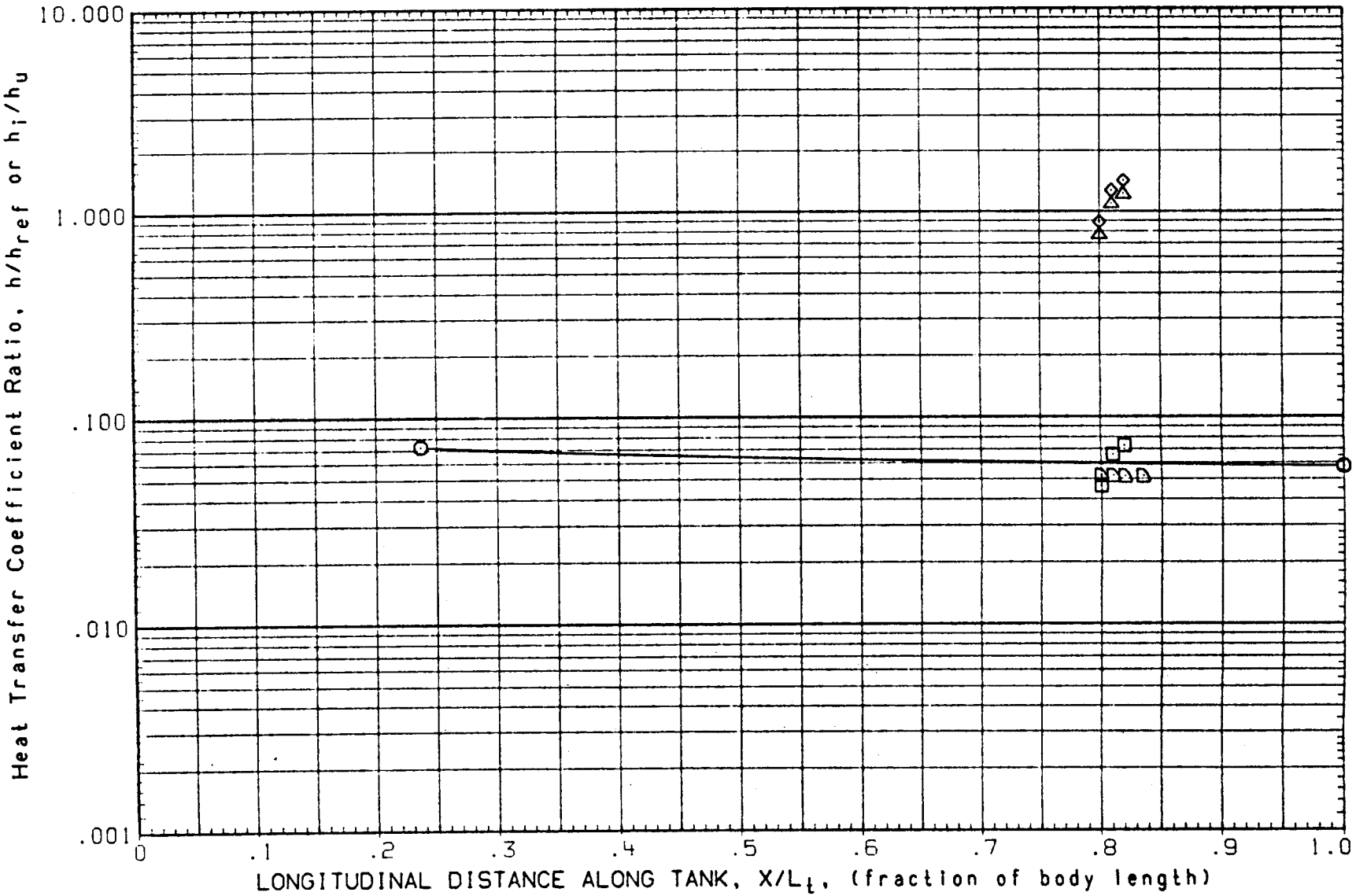

FIG. 4-8 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 309.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT40)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	4.500
(C9NT40)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	4.500
(V4LT34)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	4.500
(X4LT34)	◇	IH85 (W.L. TEST) OTS/ET = V4LT34/C9NT40= HI/HU		4.020	.000	4.500
(Y4LT34)	△	IH85 (W.L. THEORY) OTS/ET = V4LT34/A9NT40= HI/HU		4.020	.000	4.500

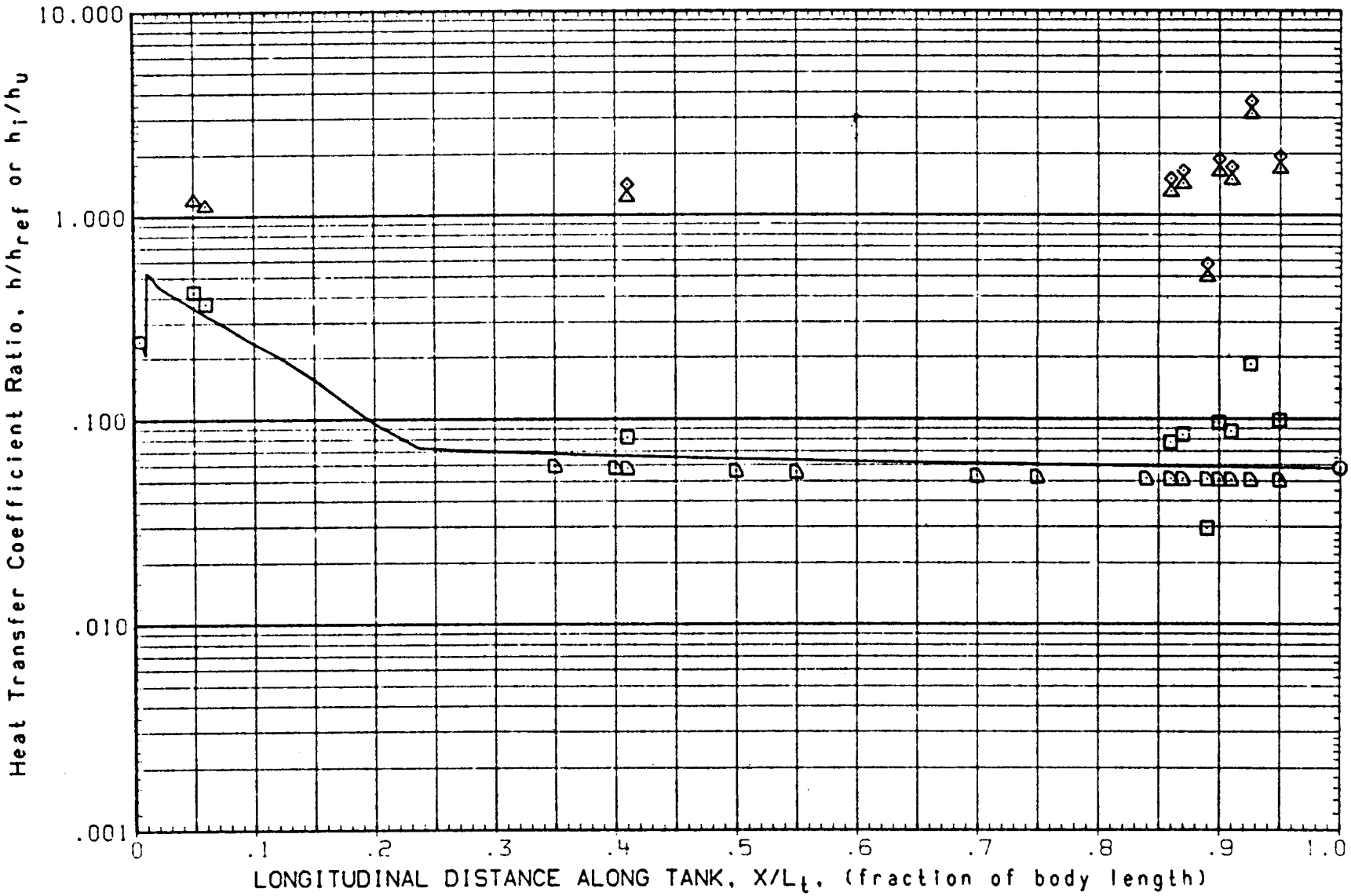

FIG. 4-8 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 315.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT40)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	4.500
(C9NT40)	□	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	4.500
(V4LT34)	◇	IH85, AEDC V4TA-W5, CONFIGURATION 0 (T) S		4.020	.000	4.500
(X4LT34)	▽	IH85 (W.L. TEST) OTS/ET = V4LT34/C9NT40= HI/HU		4.020	.000	4.500
(Y4LT34)	△	IH85 (W.L. THEORY) OTS/ET = V4LT34/A9NT40= HI/HU		4.020	.000	4.500

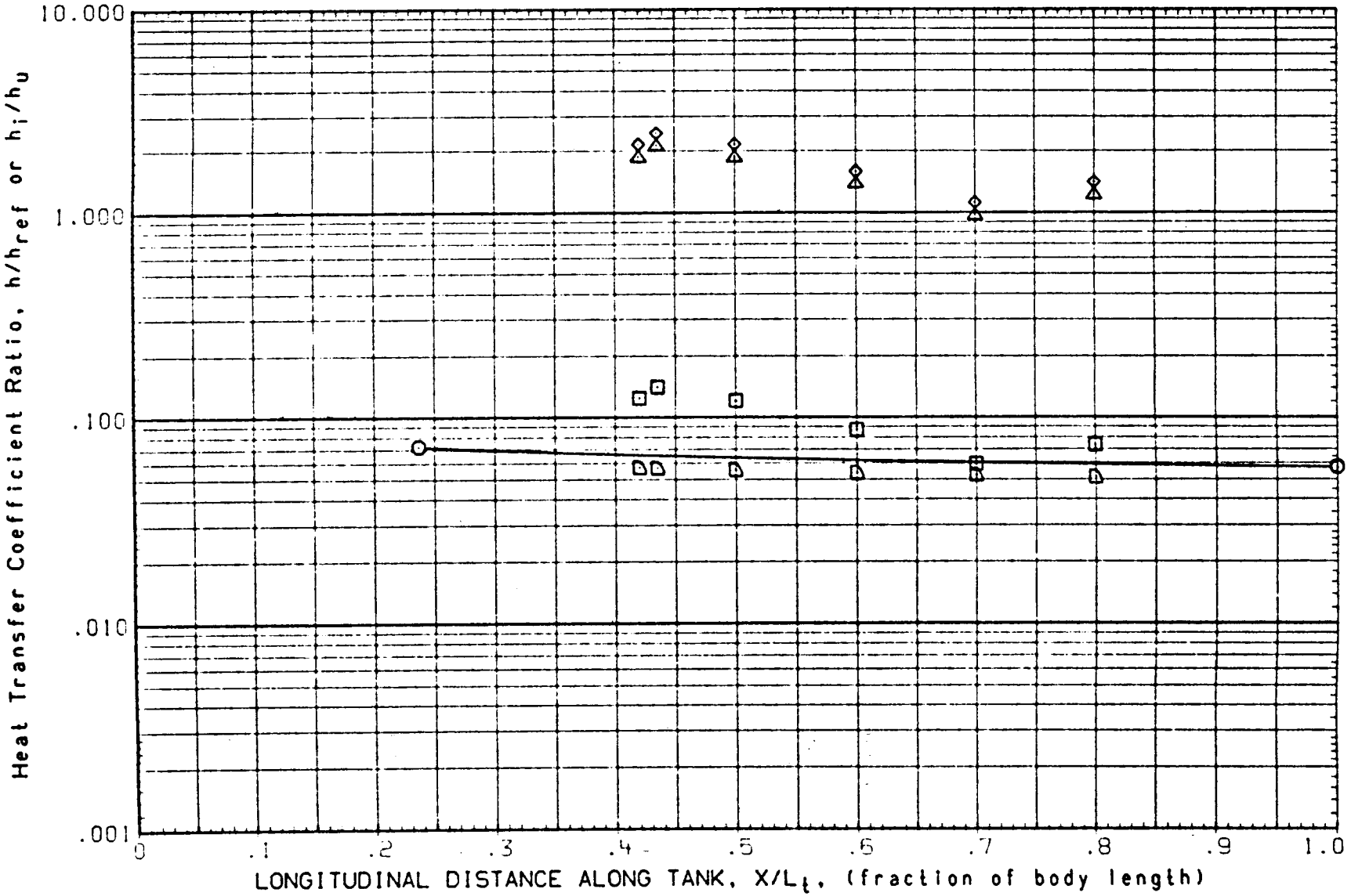

FIG. 4-8 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 322.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT40)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	4.500
(C9NT40)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	4.500
(V4LT34)	□	IH85, AEDC V4TA-W5, CONFIGURATION 0 (T) S		4.020	.000	4.500
(X4LT34)	⊗	IH85 (W.T. TEST) OTS/ET * V4LT34/C9NT40* HI/HU		4.020	.000	4.500
(Y4LT34)	△	IH85 (W.T. THEORY) OTS/ET * V4LT34/A9NT40* HI/HU		4.020	.000	4.500

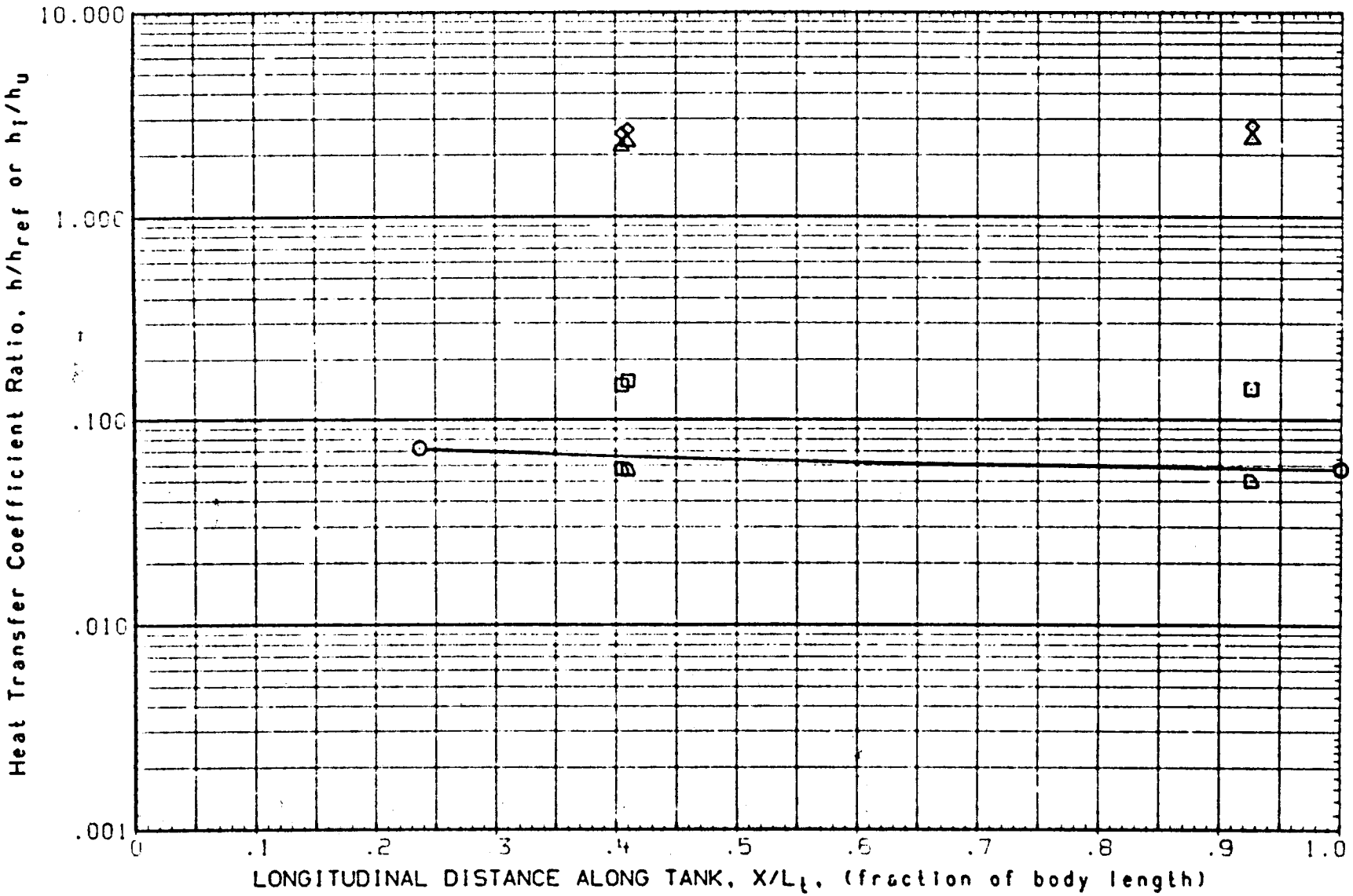

FIG. 4-8 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 324.450

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT40)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	4.500
(C9NT40)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	4.500
(V4LT34)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	4.500
(X4LT34)	◇	IH85 (W.L. TEST) OTS/ET = V4LT34/C9NT40=	HI/HU	4.020	.000	4.500
(Y4LT34)	△	IH85 (W.L. THEORY) OTS/ET = V4LT34/A9NT40=	HI/HU	4.020	.000	4.500

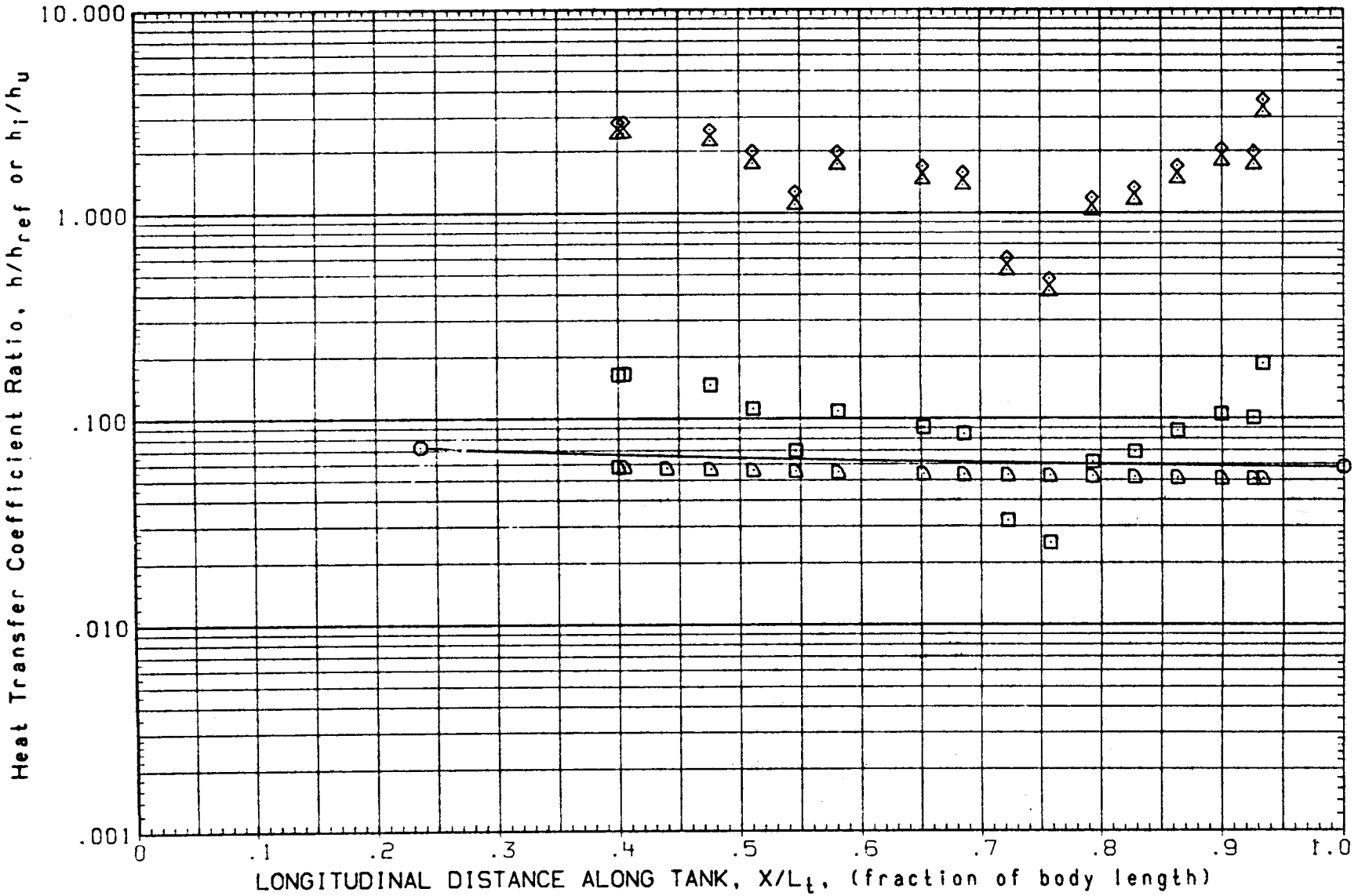

FIG. 4-8 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 326.850

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT40)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	4.500
(C9NT40)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	4.500
(V4LT34)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	4.500
(X4LT34)	◇	IH85 (W.L. TEST) OTS/ET = V4LT34/C9NT40=	HI/HU	4.020	.000	4.500
(Y4LT34)	△	IH85 (W.L. THEORY) OTS/ET = V4LT34/A9NT40=	HI/HU	4.020	.000	4.500

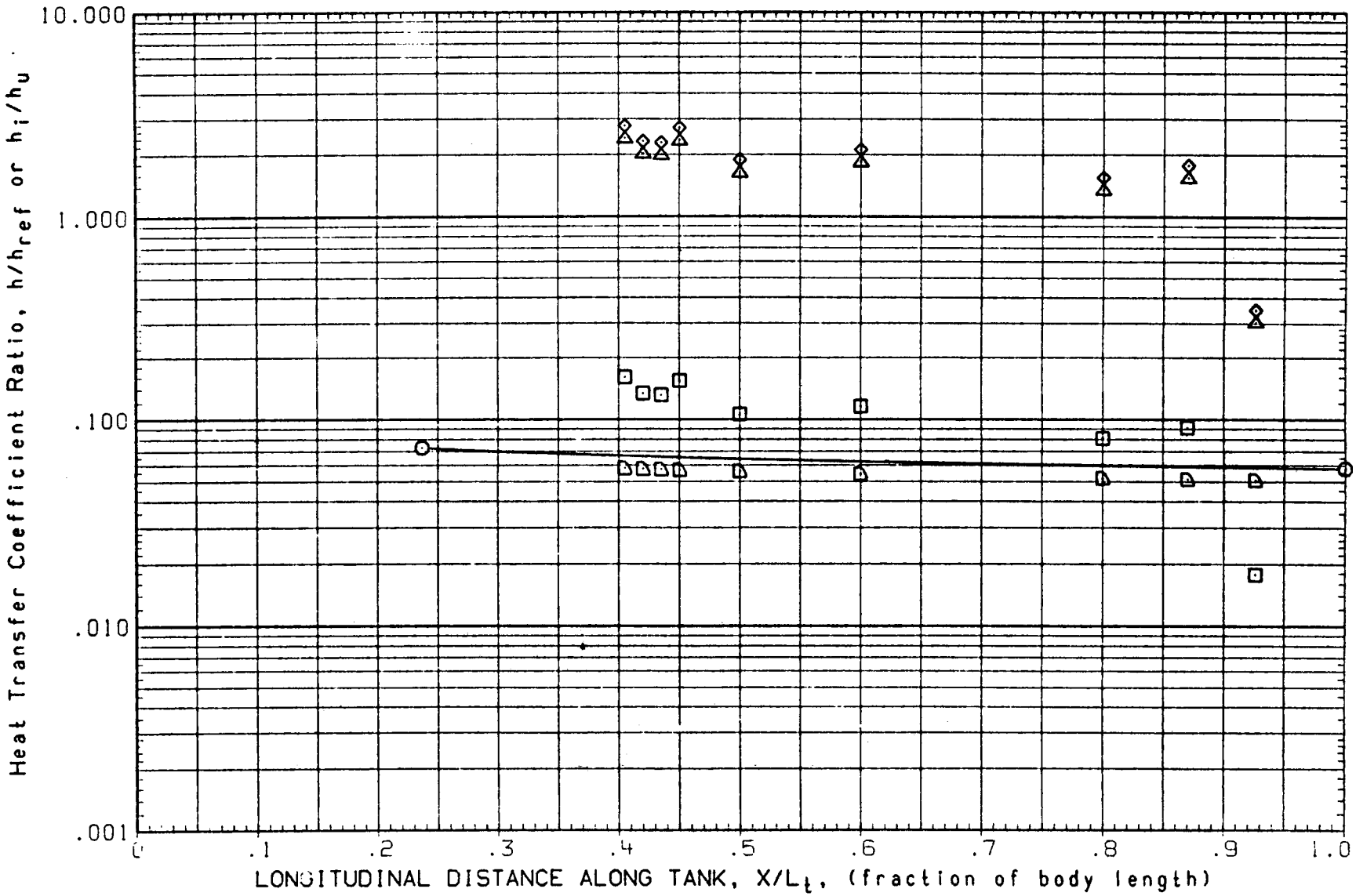

FIG. 4-8 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 330.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT40)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	4.500
(C9NT40)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	4.500
(V4LT34)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	4.500
(X4LT34)	◇	IH85 (W,L, TEST) OTS/ET = V4LT34/C9NT40=	HI/HU	4.020	.000	4.500
(Y4LT34)	△	IH85 (W,L, THEORY) OTS/ET = V4LT34/A9NT40=	HI/HU	4.020	.000	4.500

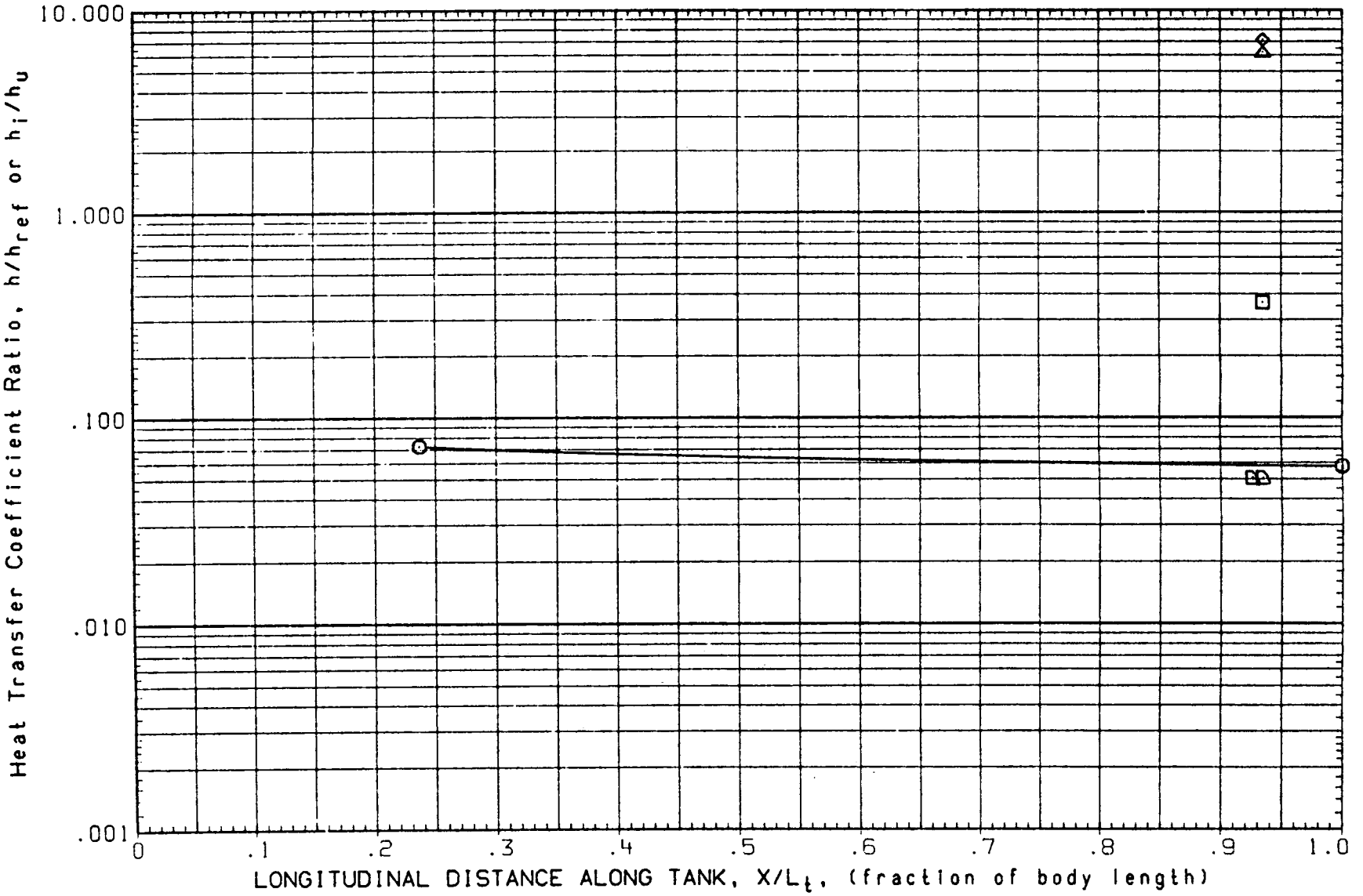

FIG. 4-8 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 334.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT40)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	4.500
(C9NT40)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	4.500
(V4LT34)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	4.500
(X4LT34)	◇	IH85 (W.L. TEST) OTS/ET = V4LT34/C9NT40= HI/HU		4.020	.000	4.500
(Y4LT34)	△	IH85 (W.L. THEORY) OTS/ET = V4LT34/A9NT40= HI/HU		4.020	.000	4.500

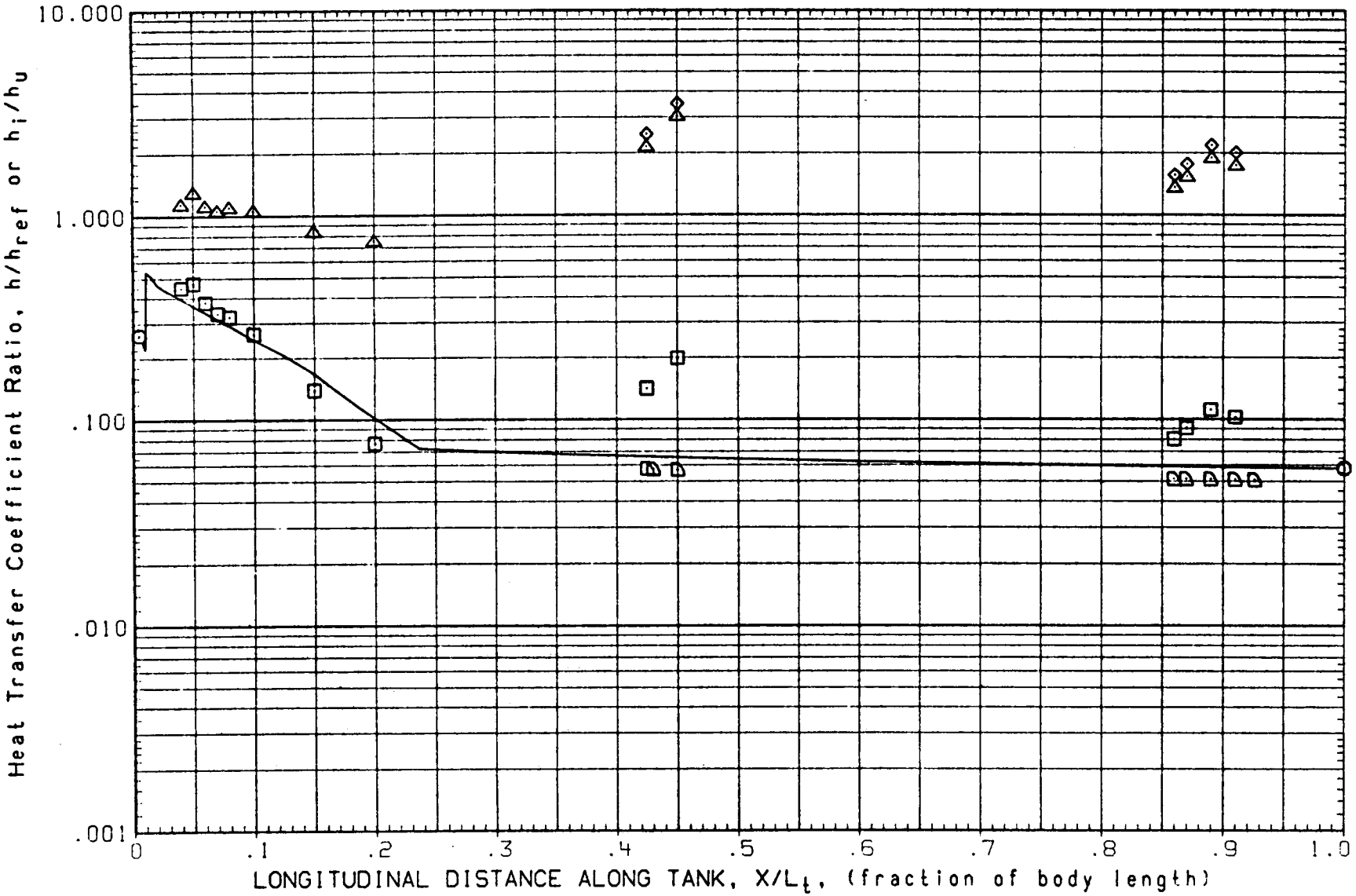

FIG. 4-8 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 337.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT40)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	4.500
(C9NT40)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	4.500
(V4LT34)	□	DATA NOT AVAILABLE		4.020	.000	4.500
(X4LT34)	◇	DATA NOT AVAILABLE		4.020	.000	4.500
(Y4LT34)	△	DATA NOT AVAILABLE		4.020	.000	4.500

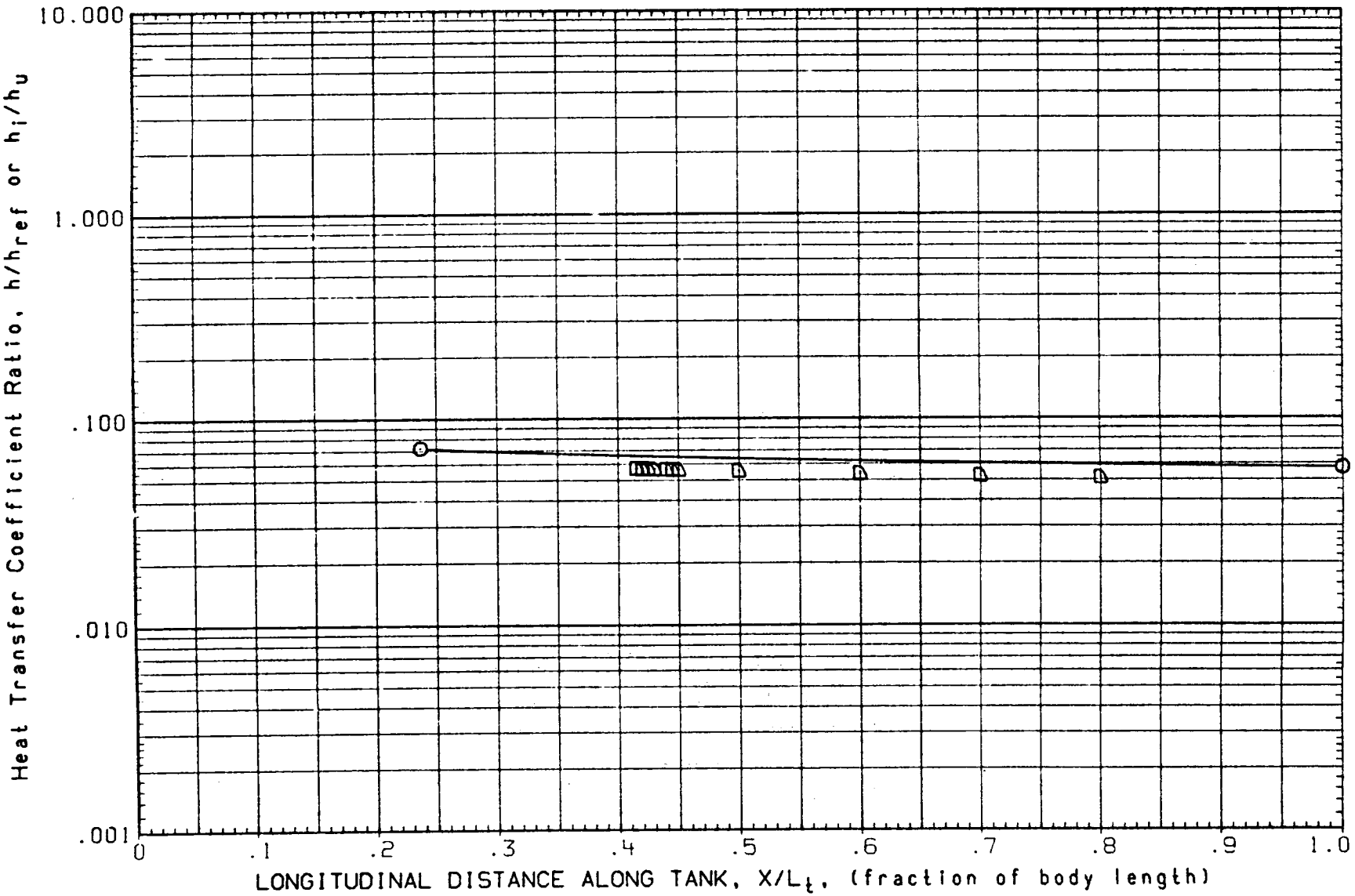

FIG. 4-8 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 343.120

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT40)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	4.500
(C9NT40)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	4.500
(V4LT34)	□	IH85, AEDC V4IA-W5, CONFIGURATION 0 (T) S		4.020	.000	4.500
(X4LT34)	◇	IH85 (W.L. TEST) OTS/ET = V4LT34/C9NT40=	HI/HU	4.020	.000	4.500
(Y4LT34)	△	IH95 (W.L. THEORY) OTS/ET = V4LT34/A9NT40=	HI/HU	4.020	.000	4.500

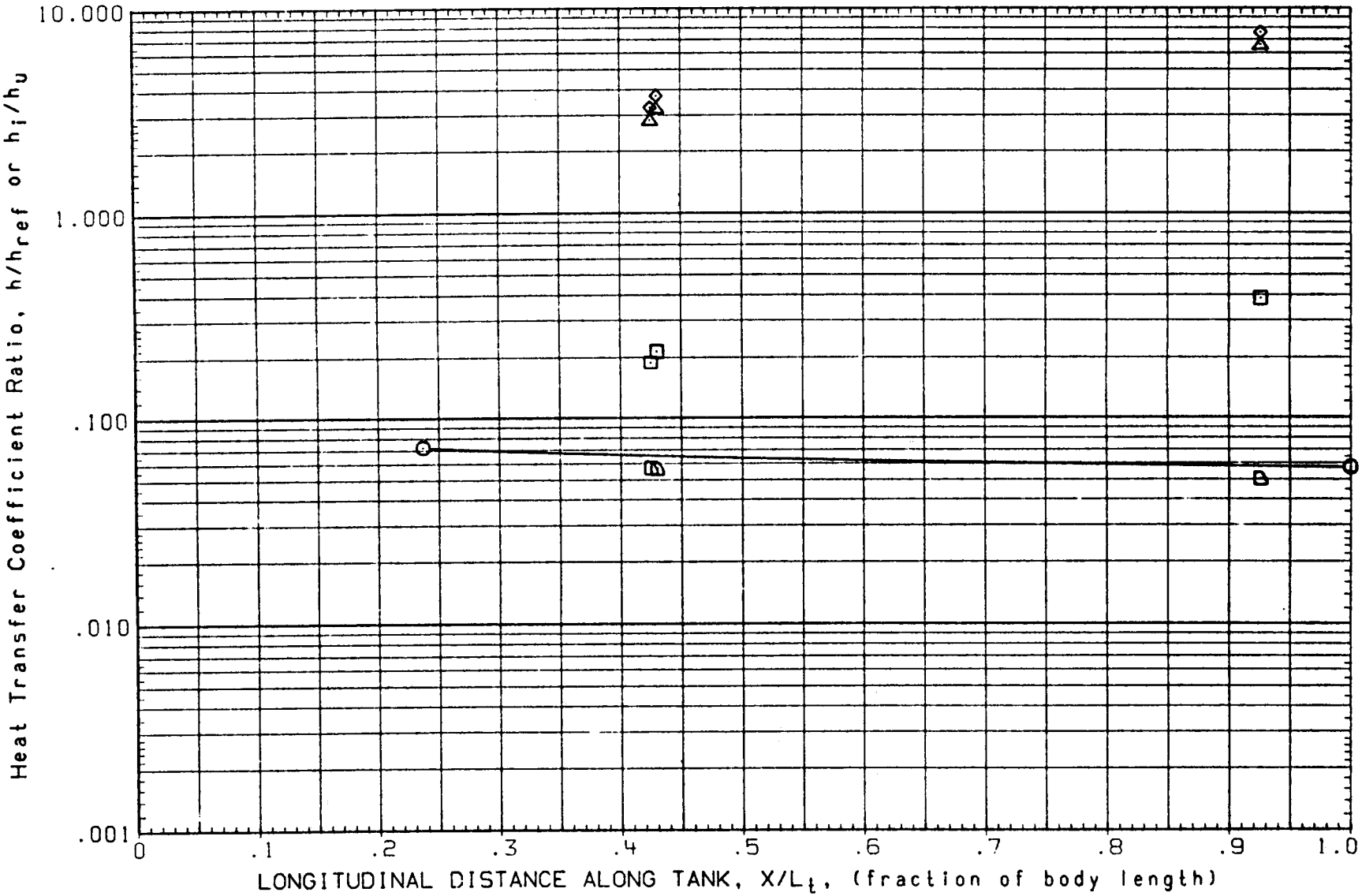

FIG. 4-8 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 345.560

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT40)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	4.020	.000	4.500
(C9NT40)	⌂	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	4.020	.000	4.500
(V4LT34)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	.000	4.500
(X4LT34)	◇	IH85 (W.L. TEST) OTS/ET = V4LT34/C9NT40= HI/HU	4.020	.000	4.500
(Y4LT34)	△	IH85 (W.L. THEORY) OTS/ET = V4LT34/A9NT40= HI/HU	4.020	.000	4.500

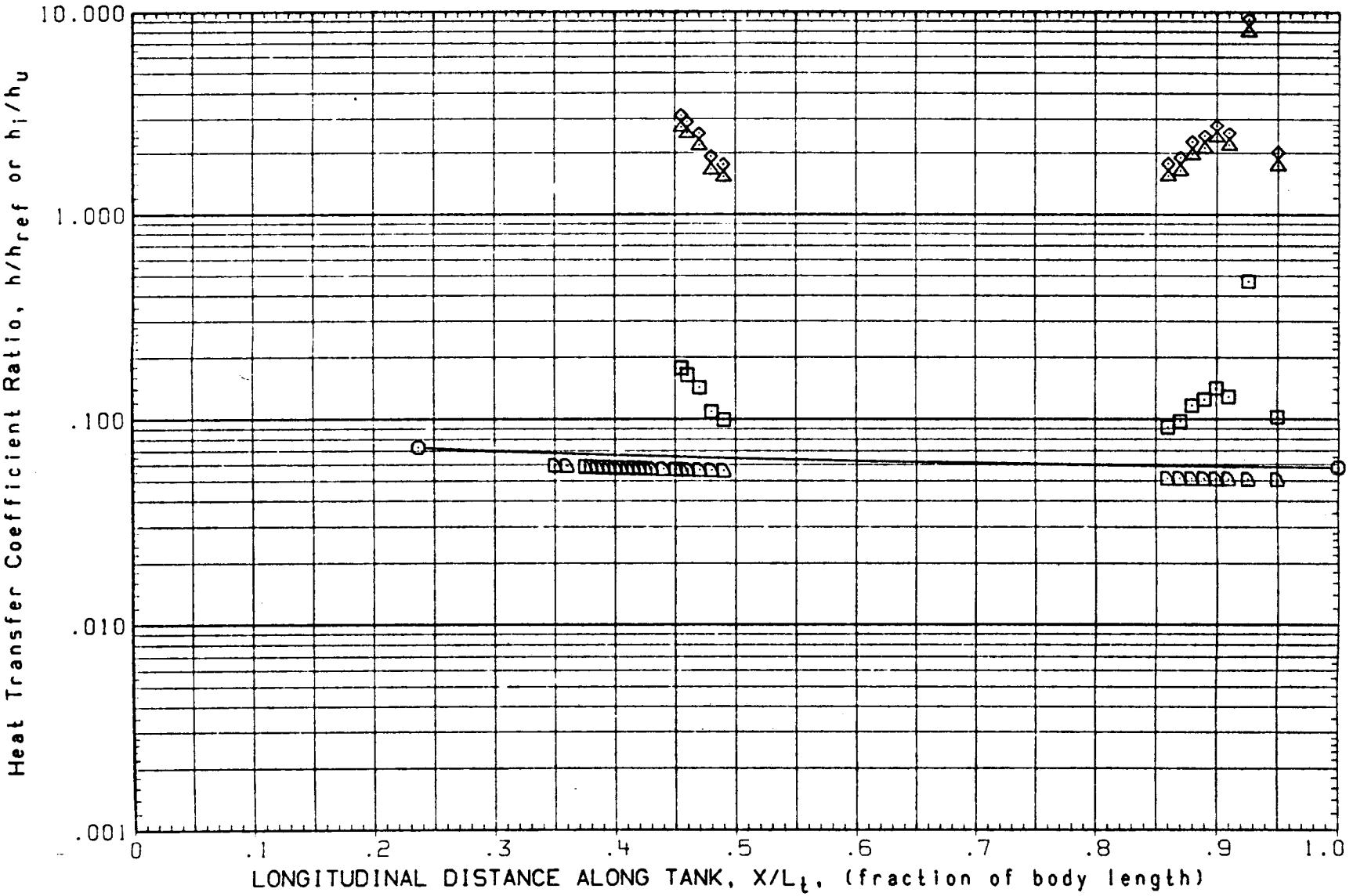

FIG. 4-8 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 348.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT40)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	4.500
(C9NT40)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	4.500
(V4LT34)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	4.500
(X4LT34)	◇	IH85 (W.L. TEST) OTS/ET = V4LT34/C9NT40=	HI/HU	4.020	.000	4.500
(Y4LT34)	△	IH85 (W.L. THEORY) OTS/ET = V4LT34/A9NT40=	HI/HU	4.020	.000	4.500

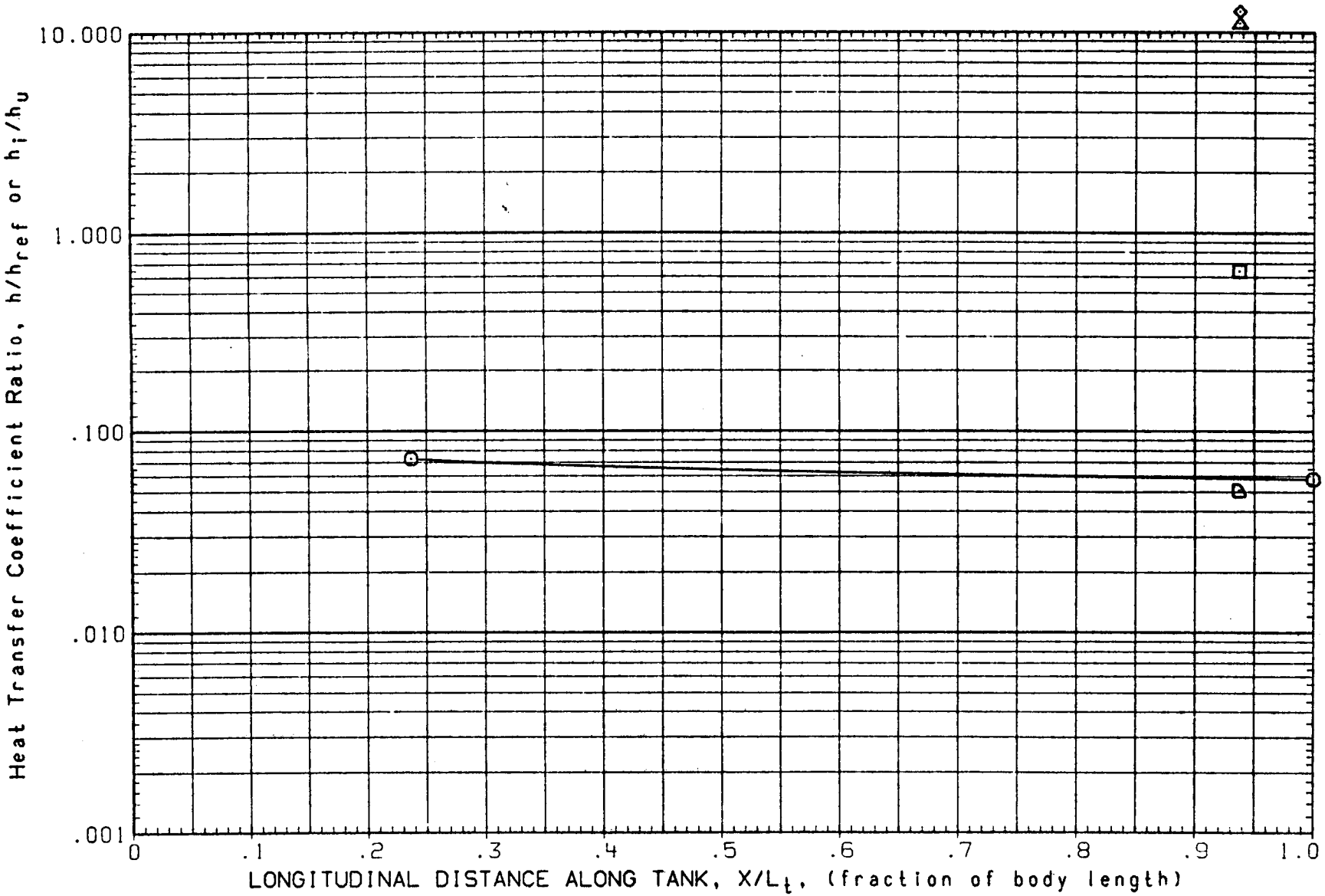

FIG. 4-8 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 352.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT40)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	4.500
(C9NT40)	⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	4.500
(V4LT34)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	4.500
(X4LT34)	◇	IH85 (W.L. TEST) OTS/ET = V4LT34/C9NT40=	HI/HU	4.020	.000	4.500
(Y4LT34)	△	IH85 (W.L. THEORY) OTS/ET = V4LT34/A9NT40=	HI/HU	4.020	.000	4.500

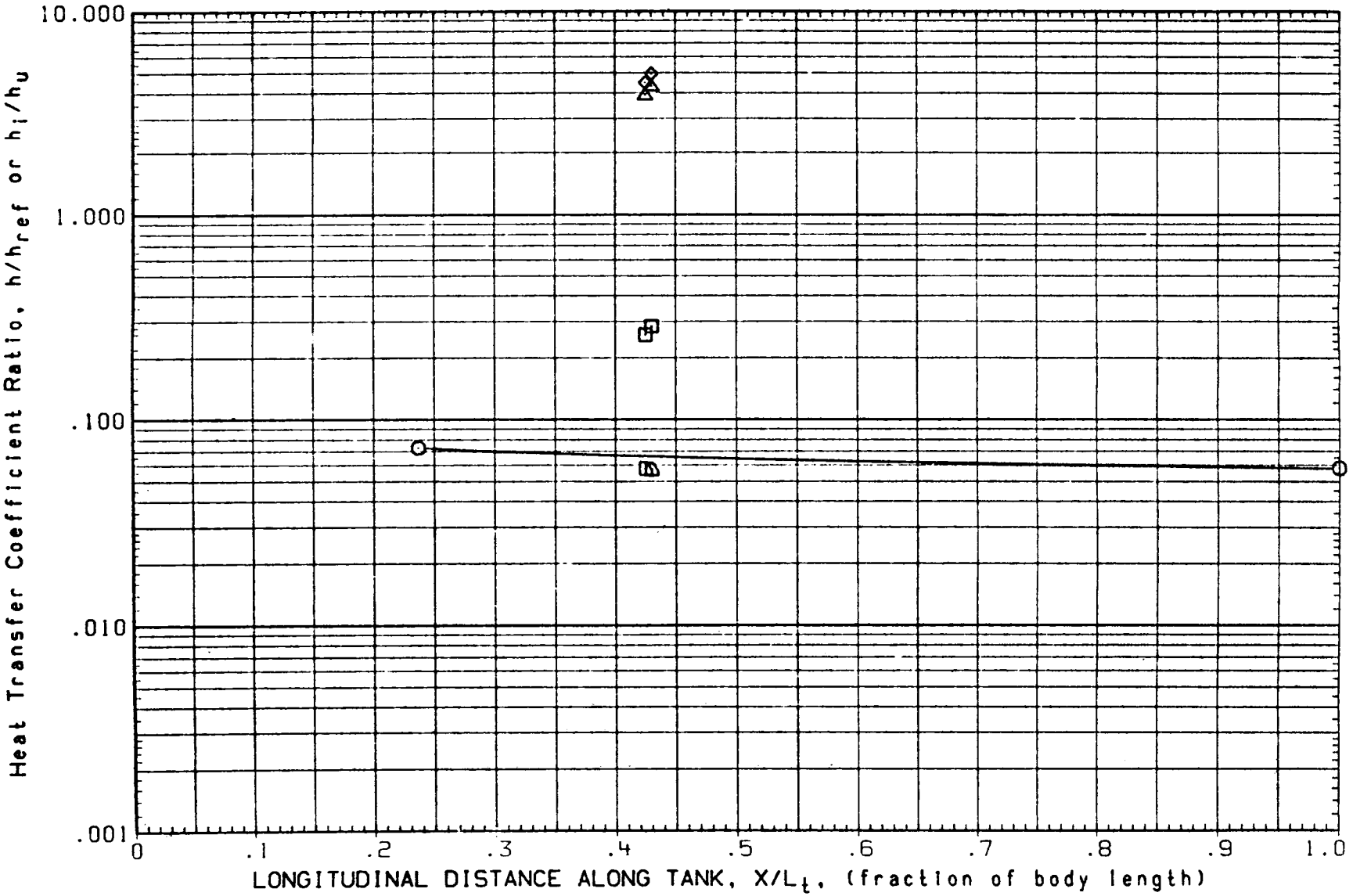

FIG. 4-8 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 354.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT40)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	4.500
(C9NT40)	⌂	DATA NOT AVAILABLE		4.020	.000	4.500
(V4LT34)	□	DATA NOT AVAILABLE		4.020	.000	4.500
(X4LT34)	◇	DATA NOT AVAILABLE		4.020	.000	4.500
(Y4LT34)	△	DATA NOT AVAILABLE		4.020	.000	4.500

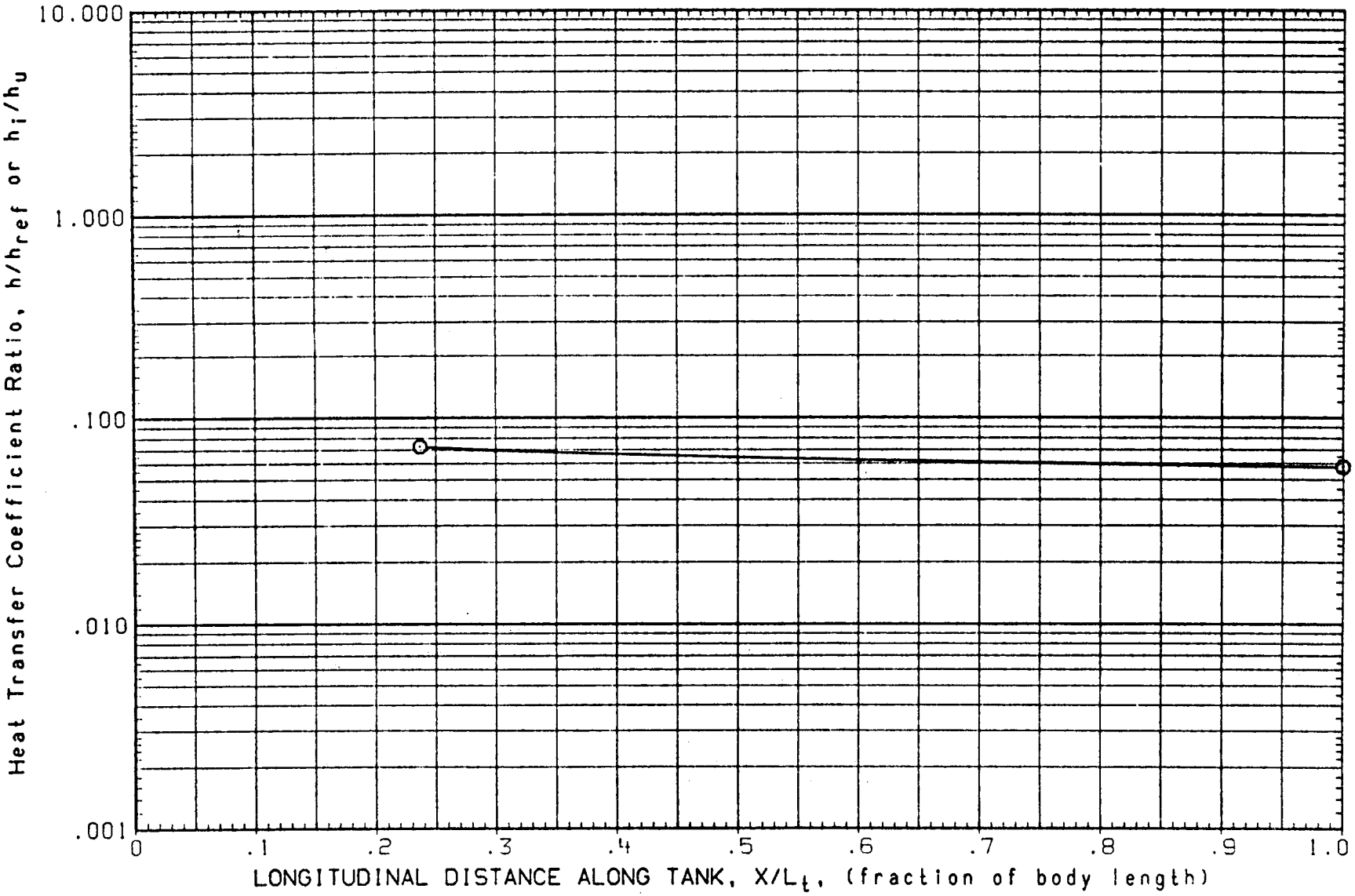

FIG. 4-8 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 355.160

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT40)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	4.500
(C9NT40)	◻	DATA NOT AVAILABLE		4.020	.000	4.500
(V4LT34)	◻	DATA NOT AVAILABLE		4.020	.000	4.500
(X4LT34)	◇	DATA NOT AVAILABLE		4.020	.000	4.500
(Y4LT34)	△	DATA NOT AVAILABLE		4.020	.000	4.500

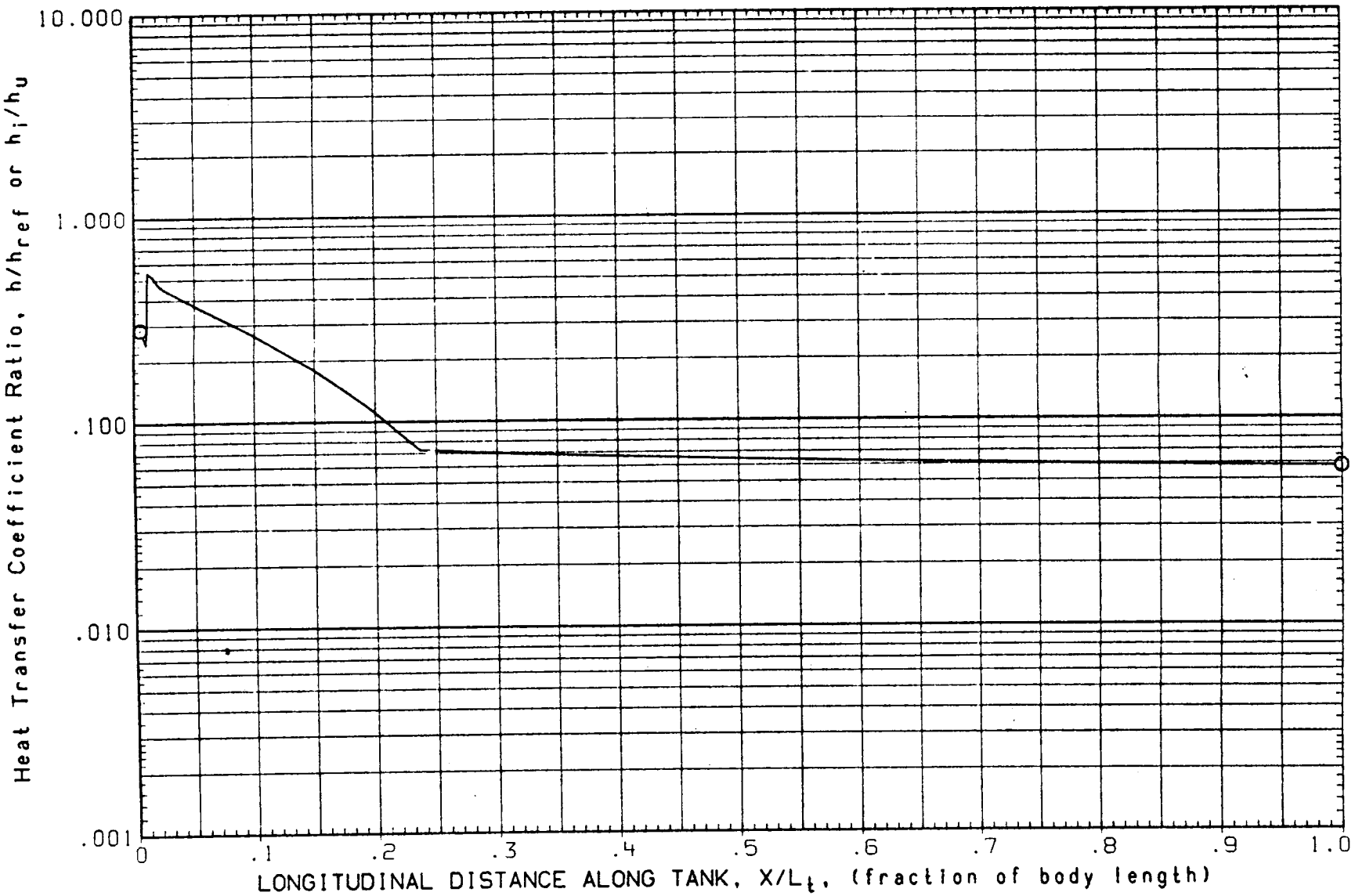

FIG. 4-8 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 360.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT42)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	7.500
(C9NT42)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	7.500
(V4LT36)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	7.500
(X4LT36)	◇	IH85 (W.L. TEST) OTS/ET = V4LT36/C9NT42=	HI/HU	4.020	.000	7.500
(Y4LT36)	△	IH85 (W.L. THEORY) OTS/ET = V4LT36/A9NT42=	HI/HU	4.020	.000	7.500

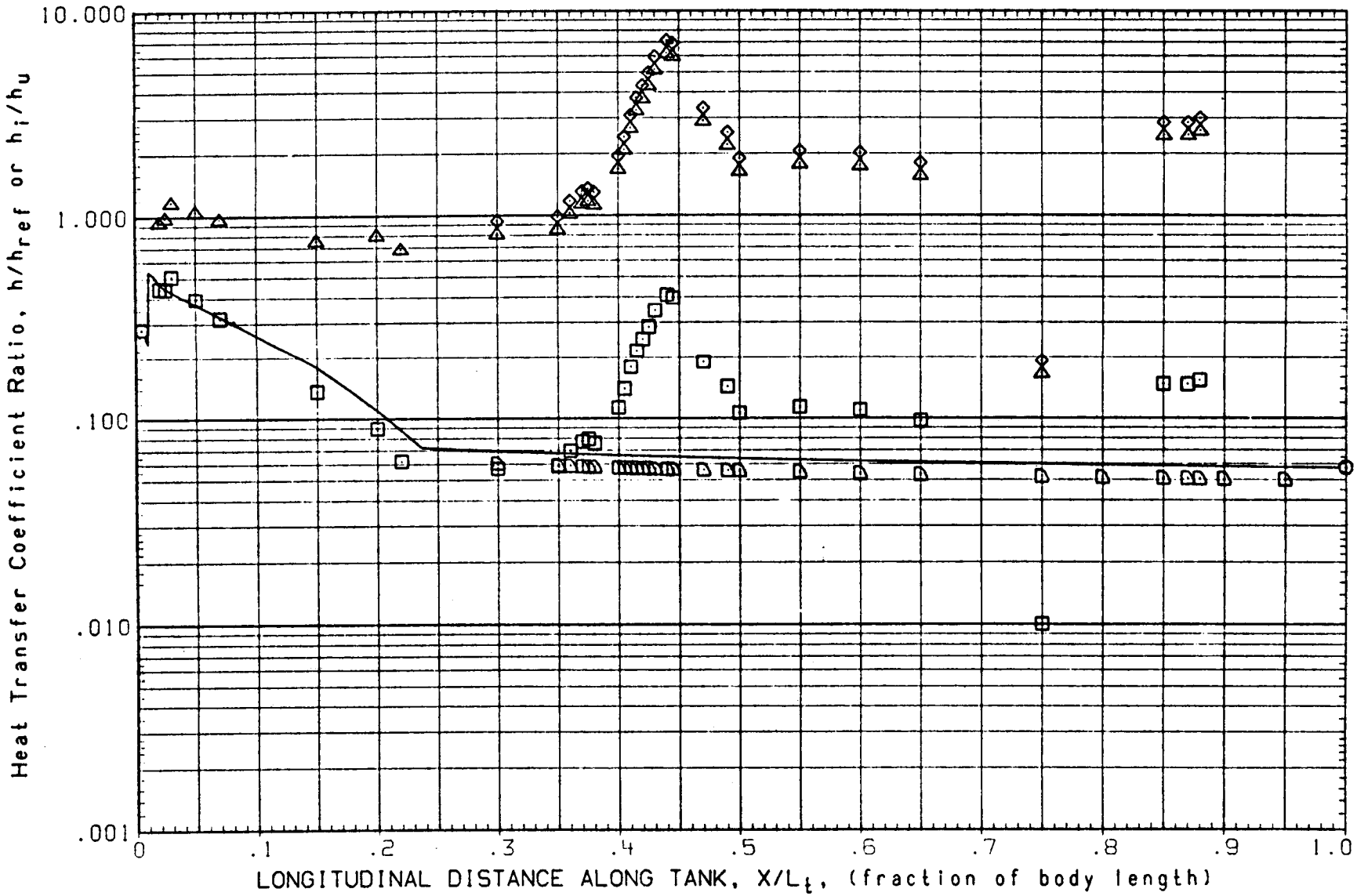

FIG. 4-9 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = .000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT42)	○	DATA NOT AVAILABLE	4.020	.000	7.500
(C9NT42)	◫	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	4.020	.000	7.500
(V4LT36)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	.000	7.500
(X4LT36)	◇	IH85 (W.L. TEST) OTS/ET = V4LT36/C9NT42= HI/HU	4.020	.000	7.500
(Y4LT36)	△	IH85 (W.L. THEORY) OTS/ET = V4LT36/A9NT42= HI/HU	4.020	.000	7.500

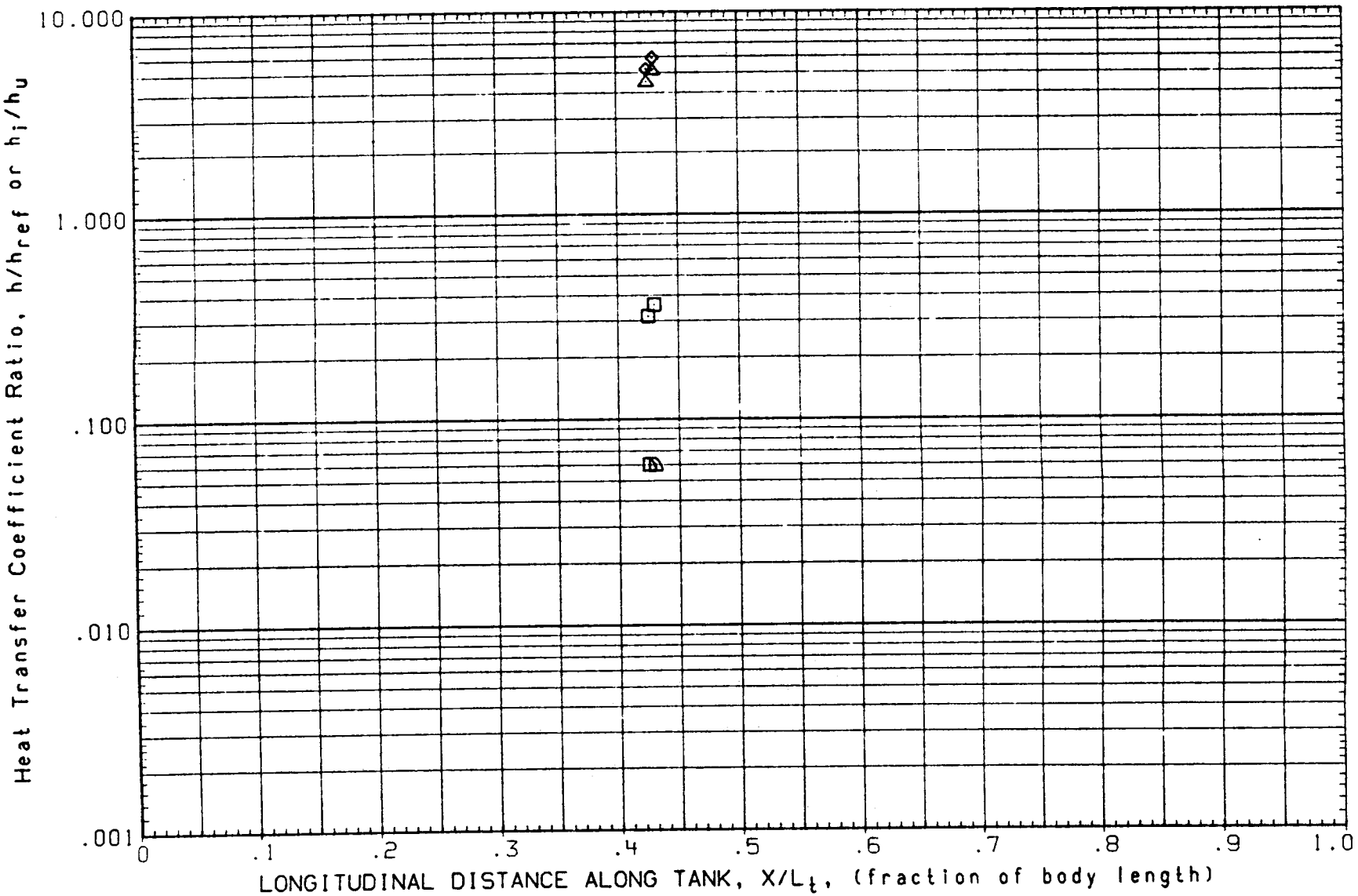

FIG. 4-9 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 5.625

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT42)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	7.500
(C9NT42)	⬠	DATA NOT AVAILABLE		4.020	.000	7.500
(V4LT36)	□	DATA NOT AVAILABLE		4.020	.000	7.500
(X4LT36)	◇	DATA NOT AVAILABLE		4.020	.000	7.500
(Y4LT36)	△	DATA NOT AVAILABLE		4.020	.000	7.500

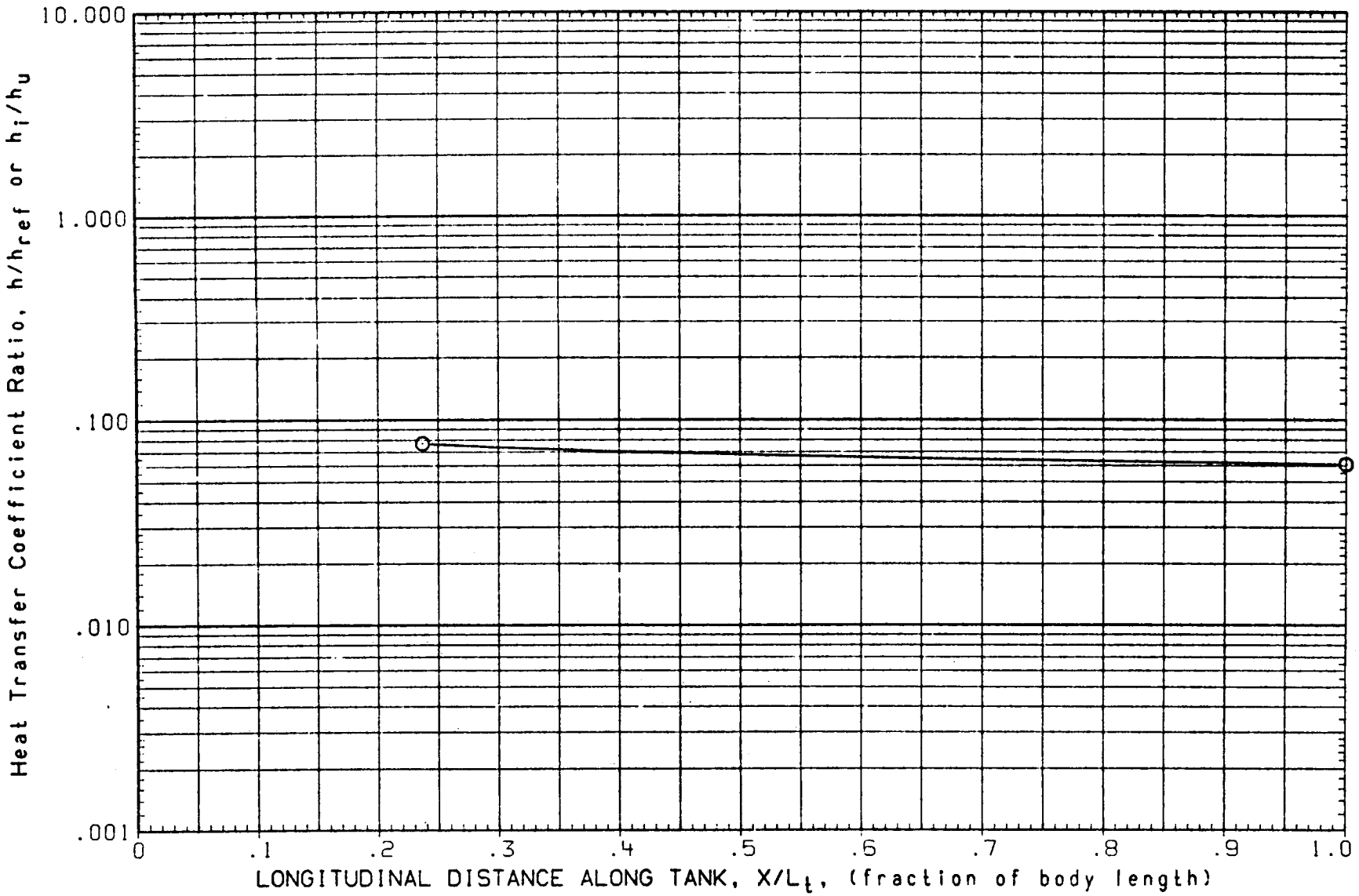

FIG. 4-9 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 5.630

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT42)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	4.020	.000	7.500
(C9NT42)	⬠	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	4.020	.000	7.500
(V4LT36)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	.000	7.500
(X4LT36)	◇	IH85 (W.L. TEST) OTS/ET = V4LT36/C9NT42= HI/HU	4.020	.000	7.500
(Y4LT36)	△	IH85 (W.L. THEORY) OTS/ET = V4LT36/A9NT42= HI/HU	4.020	.000	7.500

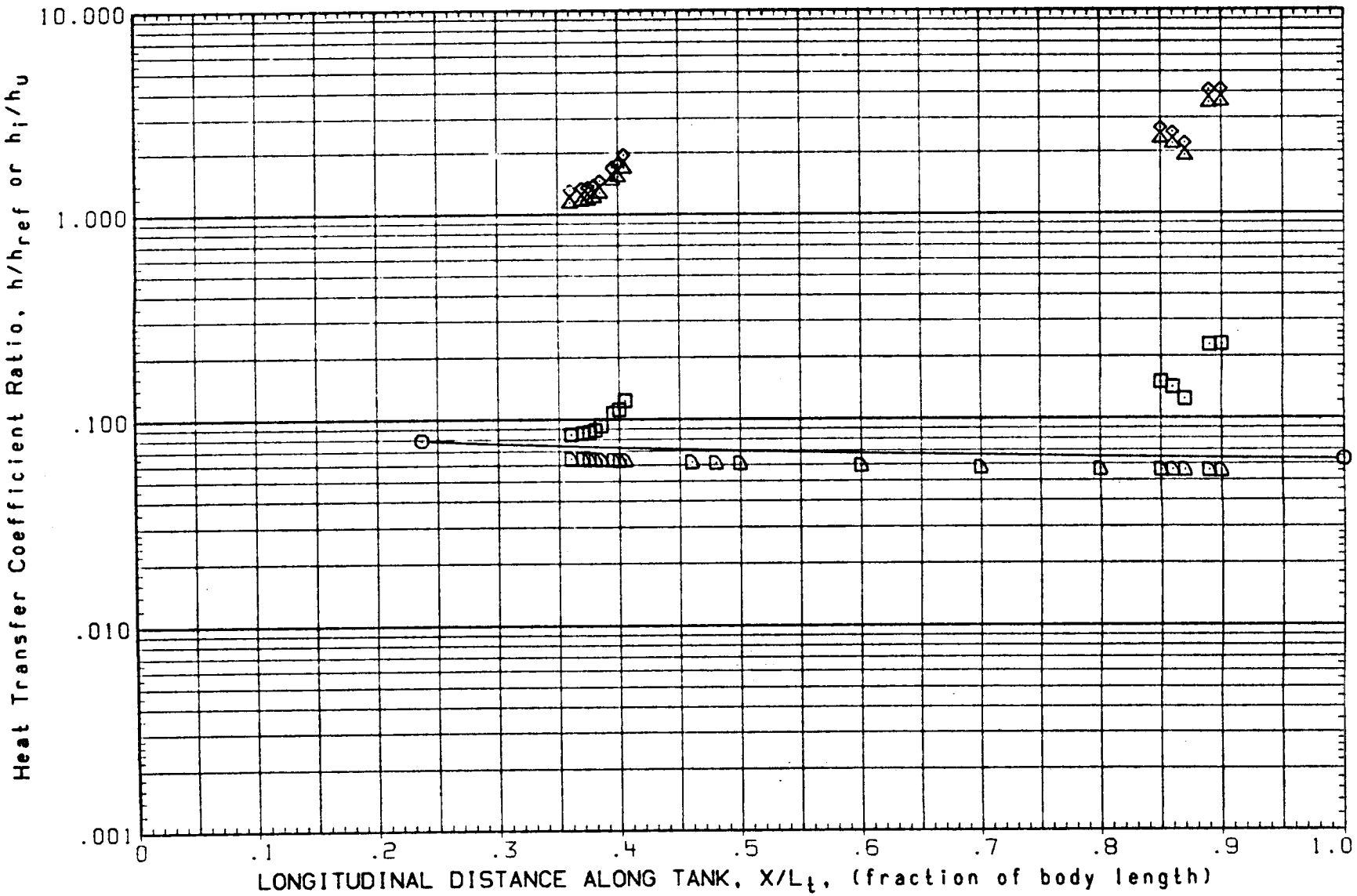

FIG. 4-9 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 11.250

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT42)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	7.500
(C9NT42)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	7.500
(V4LT36)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	7.500
(X4LT36)	◇	IH85 (W.L. TEST) OTS/ET = V4LT36/C9NT42=	HI/HU	4.020	.000	7.500
(Y4LT36)	△	IH85 (W.L. THEORY) OTS/ET = V4LT36/A9NT42=	HI/HU	4.020	.000	7.500

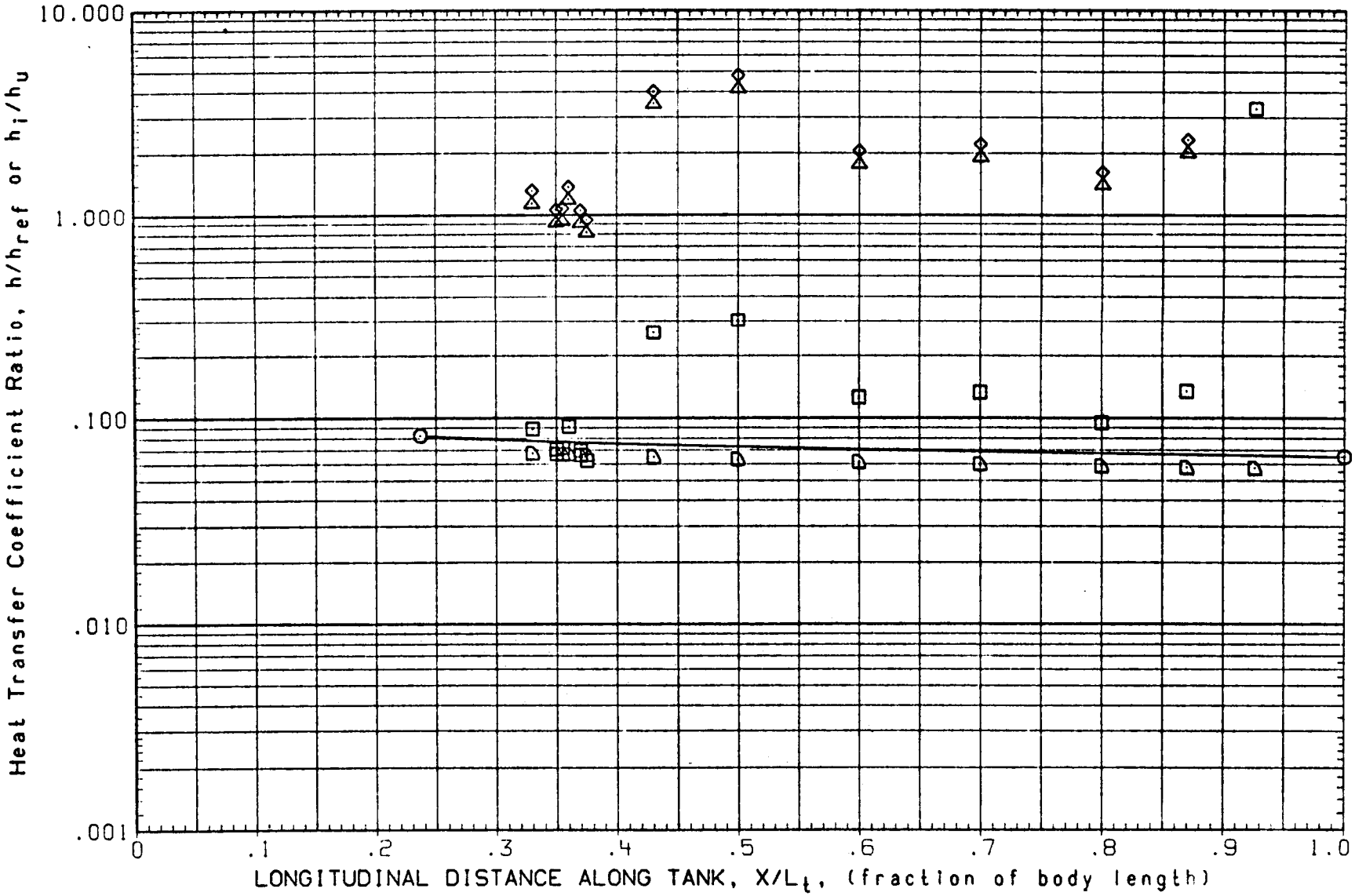

FIG. 4-9 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 17.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT42)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	7.500
(C9NT42)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	7.500
(V4LT36)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	7.500
(X4LT36)	◇	IH85 (W.L. TEST) OTS/ET = V4LT36/C9NT42=	HI/HU	4.020	.000	7.500
(Y4LT36)	△	IH85 (W.L. THEORY) OTS/ET = V4LT36/A9NT42=	HI/HU	4.020	.000	7.500

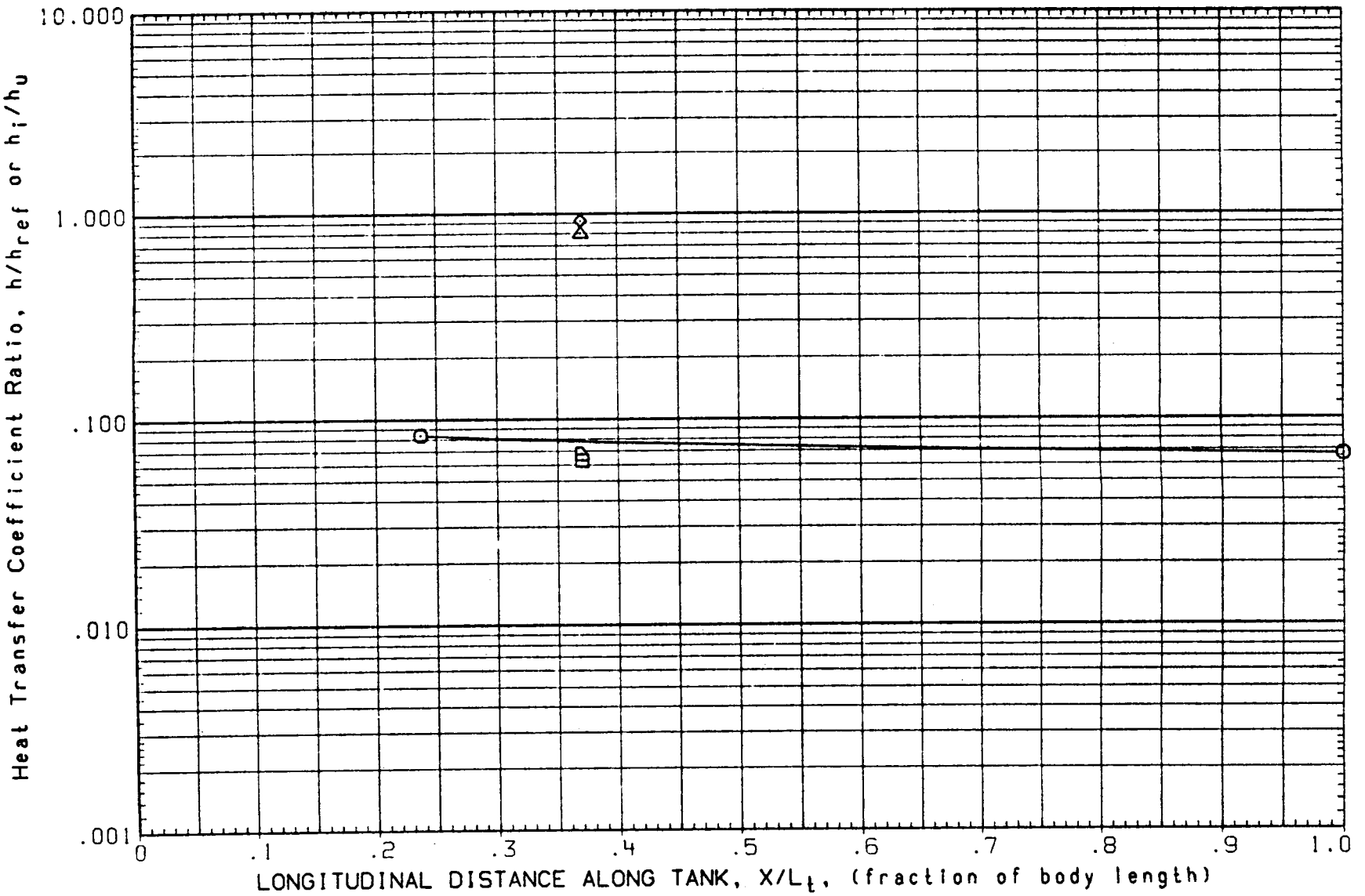

FIG. 4-9 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 20.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT42)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	7.500
(C9NT42)	⊏	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	7.500
(V4LT36)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	7.500
(X4LT36)	◇	IH85 (W.L. TEST) OTS/ET = V4LT36/C9NT42=	HI/HU	4.020	.000	7.500
(Y4LT36)	△	IH85 (W.L. THEORY) OTS/ET = V4LT36/A9NT42=	HI/HU	4.020	.000	7.500

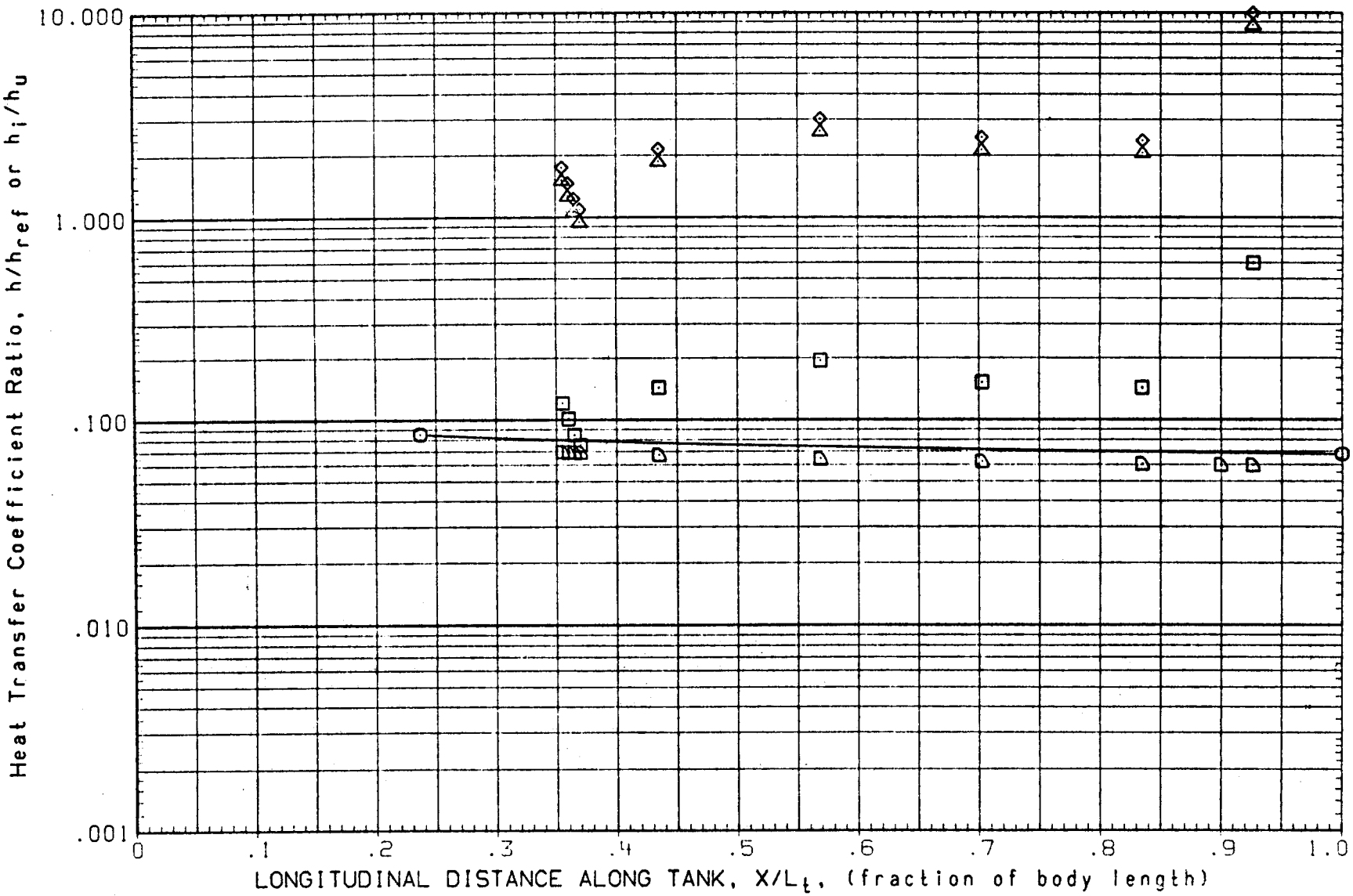

FIG. 4-9 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 23.070

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT42)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	7.500
(C9NT42)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	7.500
(V4LT36)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	7.500
(X4LT36)	◇	IH85 (W.L. TEST) OTS/ET = V4LT36/C9NT42=	HI/HU	4.020	.000	7.500
(Y4LT36)	△	IH85 (W.L. THEORY) OTS/ET = V4LT36/A9NT42=	HI/HU	4.020	.000	7.500

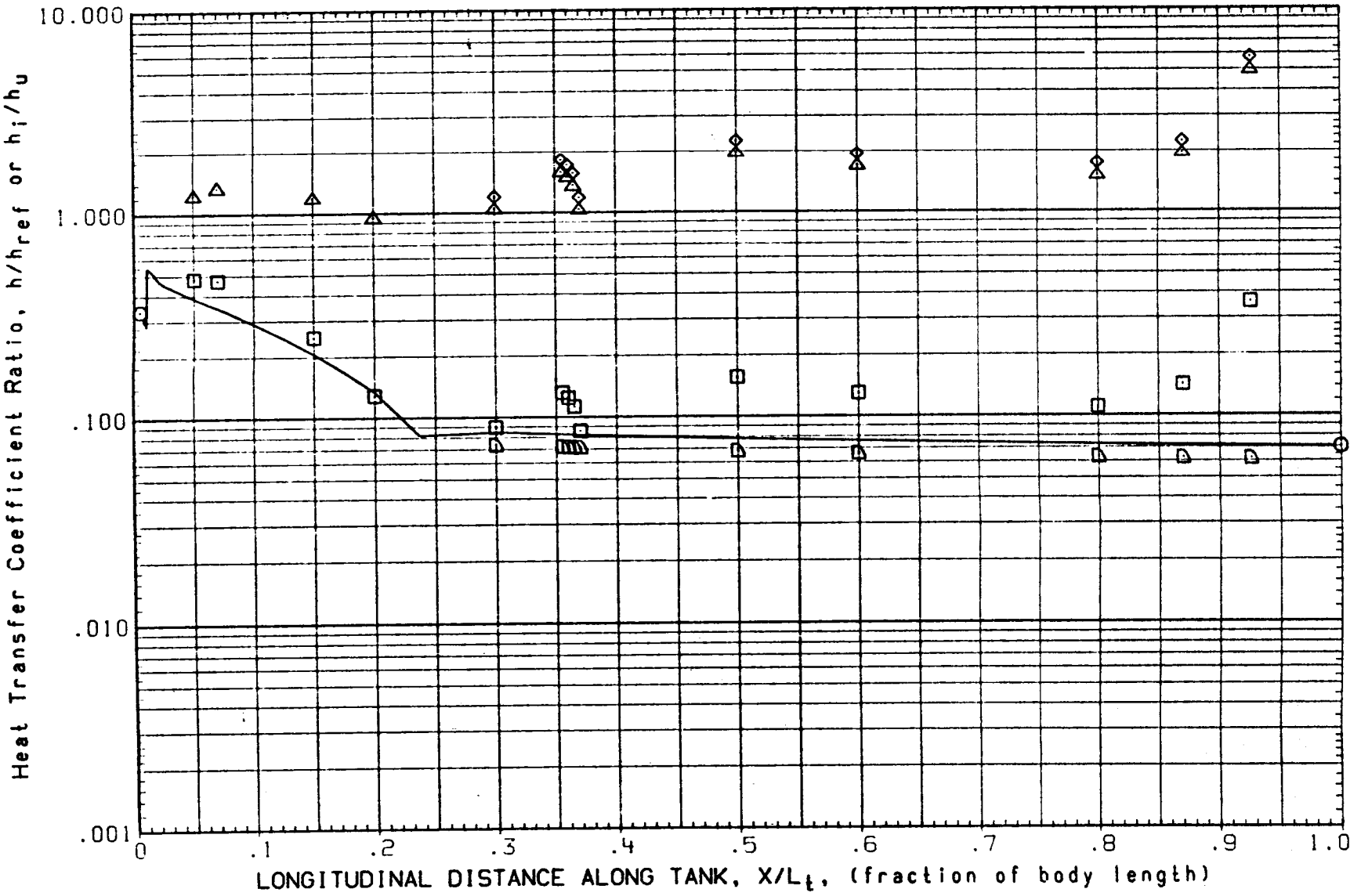

FIG. 4-9 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 29.800

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT42)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	7.500
(C9NT42)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	7.500
(V4LT36)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	7.500
(X4LT36)	◇	IH85 (W.L. TEST) OTS/ET = V4LT36/C9NT42=	HI/HU	4.020	.000	7.500
(Y4LT36)	△	IH85 (W.L. THEORY) OTS/ET = V4LT36/A9NT42=	HI/HU	4.020	.000	7.500

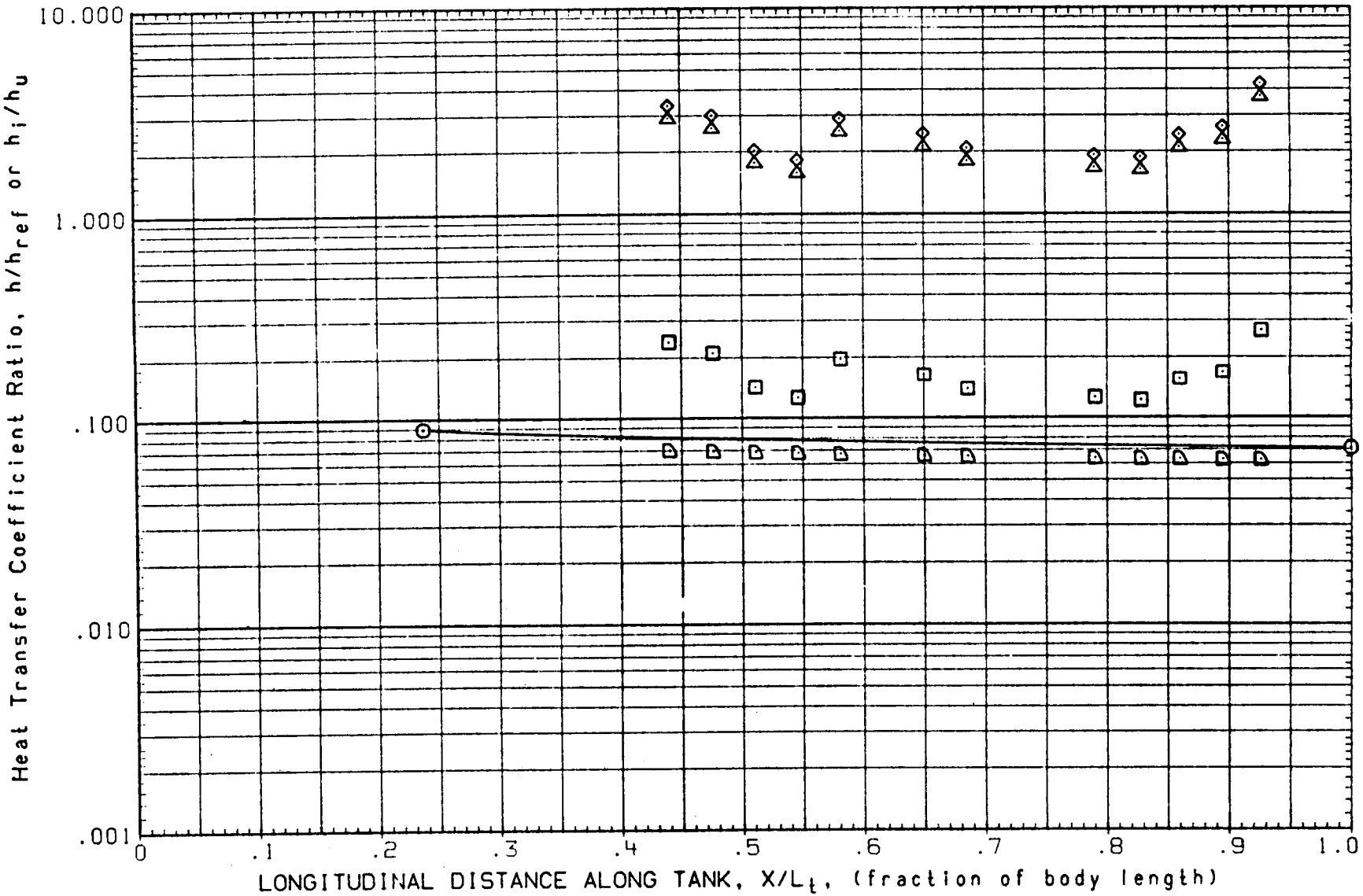

FIG. 4-9 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 31.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT42)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	7.500
(C9NT42)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	7.500
(V4LT36)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	7.500
(X4LT36)	◇	IH85 (W.L. TEST) OTS/ET = V4LT36/C9NT42=	HI/HU	4.020	.000	7.500
(Y4LT36)	△	IH85 (W.L. THEORY) OTS/ET = V4LT36/A9NT42=	HI/HU	4.020	.000	7 500

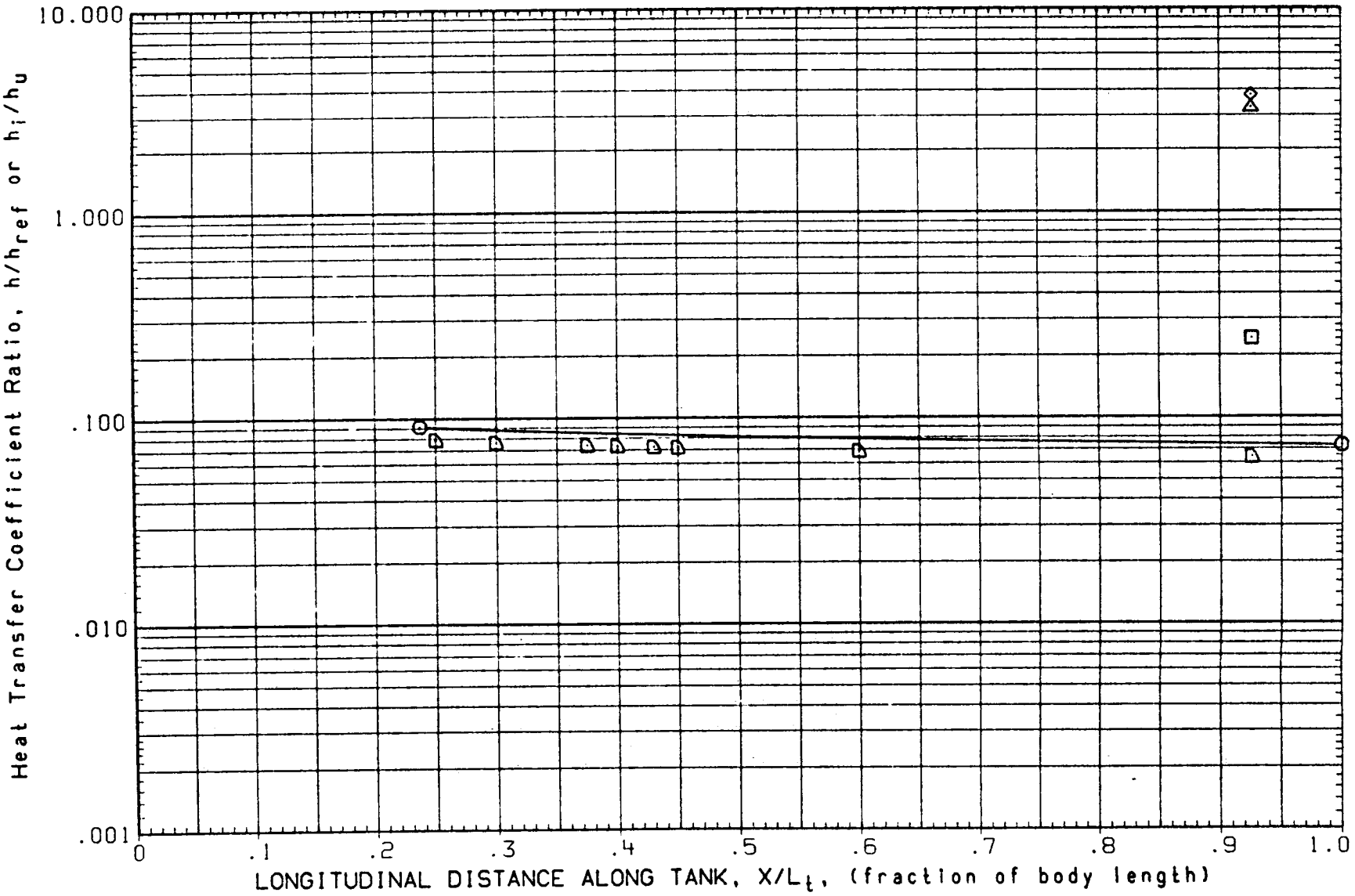

FIG. 4-9 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 33.750

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT42)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	7.500
(C9NT42)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	7.500
(V4LT36)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	7.500
(X4LT36)	◇	IH85 (W.L. TEST) OTS/ET = V4LT36/C9NT42=	HI/HU	4.020	.000	7.500
(Y4LT36)	△	IH85 (W.L. THEORY) OTS/ET = V4LT36/A9NT42=	HI/HU	4.020	.000	7.500

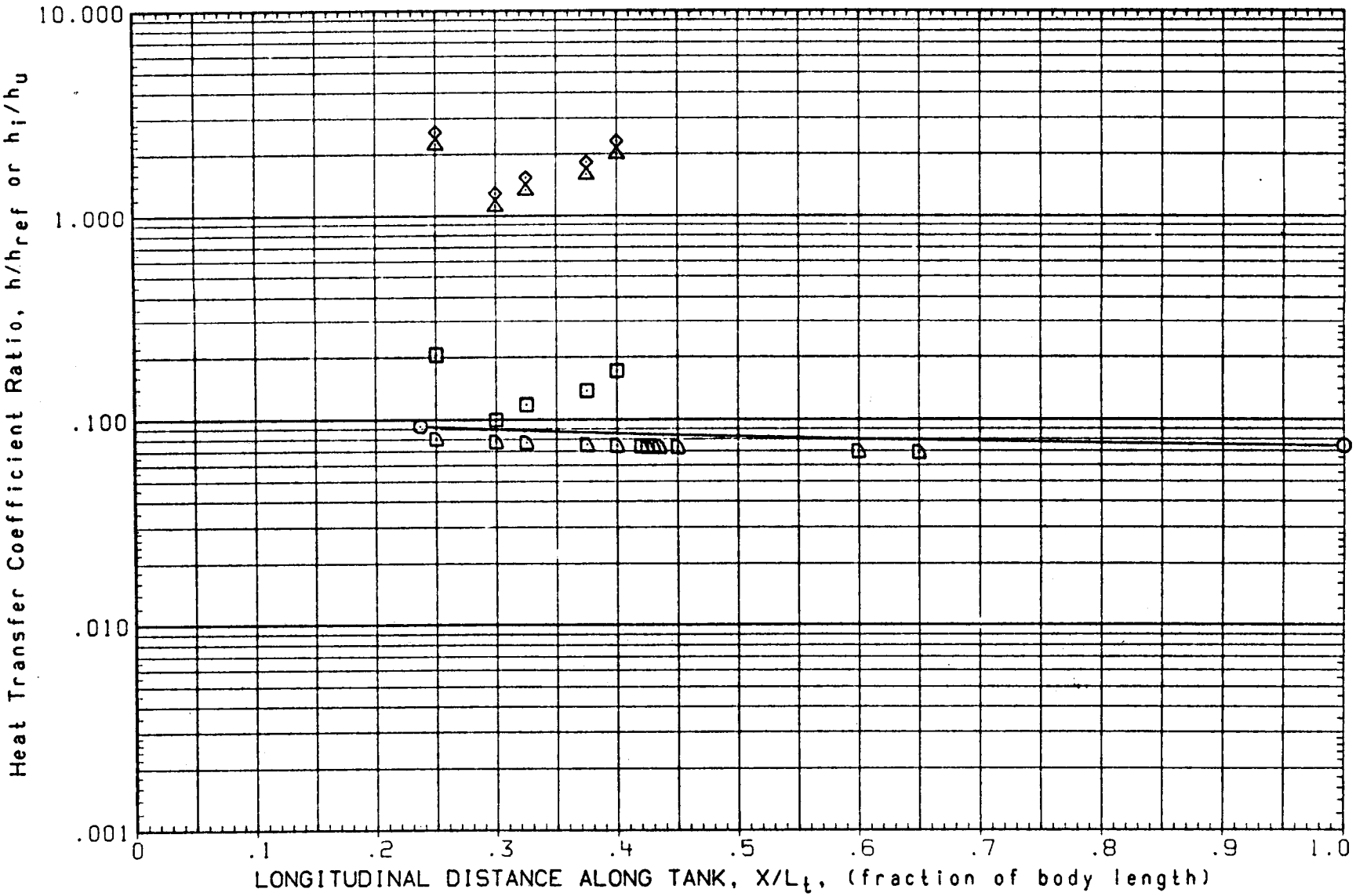

FIG. 4-9 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 36.320

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(CSNT42)	○	EXTERNAL TANK THEORY, N.S., TURBULENT	HW/HREF	4.020	.000	7.500
(CSNT42)		TANK ALONE CREATED DATA ((.87 * THEORY))	HW/HREF	4.020	.000	7.500
(VALT36)	□	H65, AEDC VAHA-W5, CONFIGURATION 0 (T) S		4.020	.000	7.500
(VALT36)	◇	H65 (W.L. TEST) OTS/ET = VALT36/CSNT42=	HI/HW	4.020	.000	7.500
(VALT36)	△	H65 (W.L. THEORY) OTS/ET = VALT36/ASNT42=	HI/HW	4.020	.000	7.500

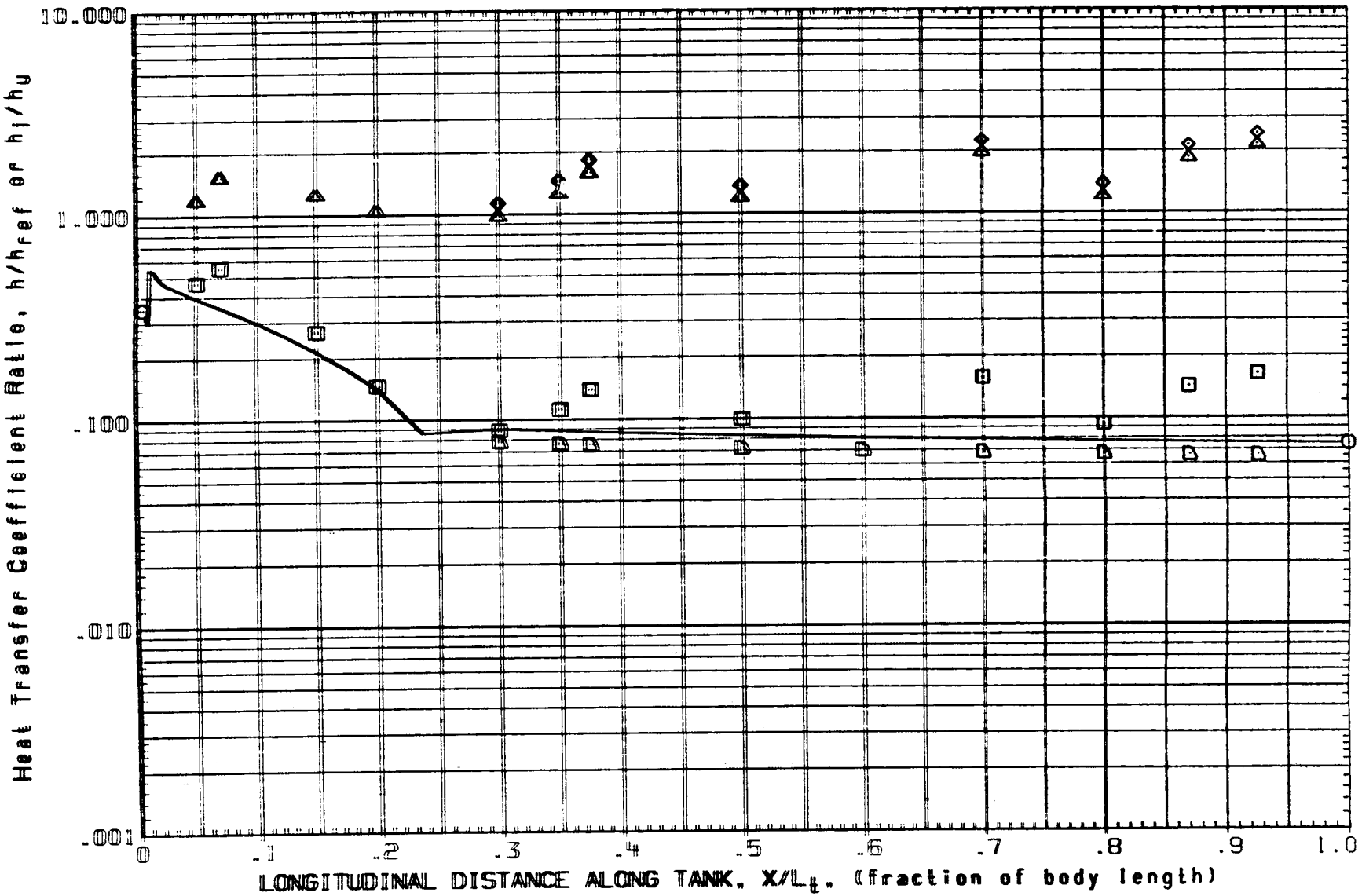

FIG. 4-9 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 37.700

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT42)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	7.500
(C9NT42)	⌂	DATA NOT AVAILABLE		4.020	.000	7.500
(V4LT36)	□	DATA NOT AVAILABLE		4.020	.000	7.500
(X4LT36)	◇	DATA NOT AVAILABLE		4.020	.000	7.500
(Y4LT36)	△	DATA NOT AVAILABLE		4.020	.000	7.500

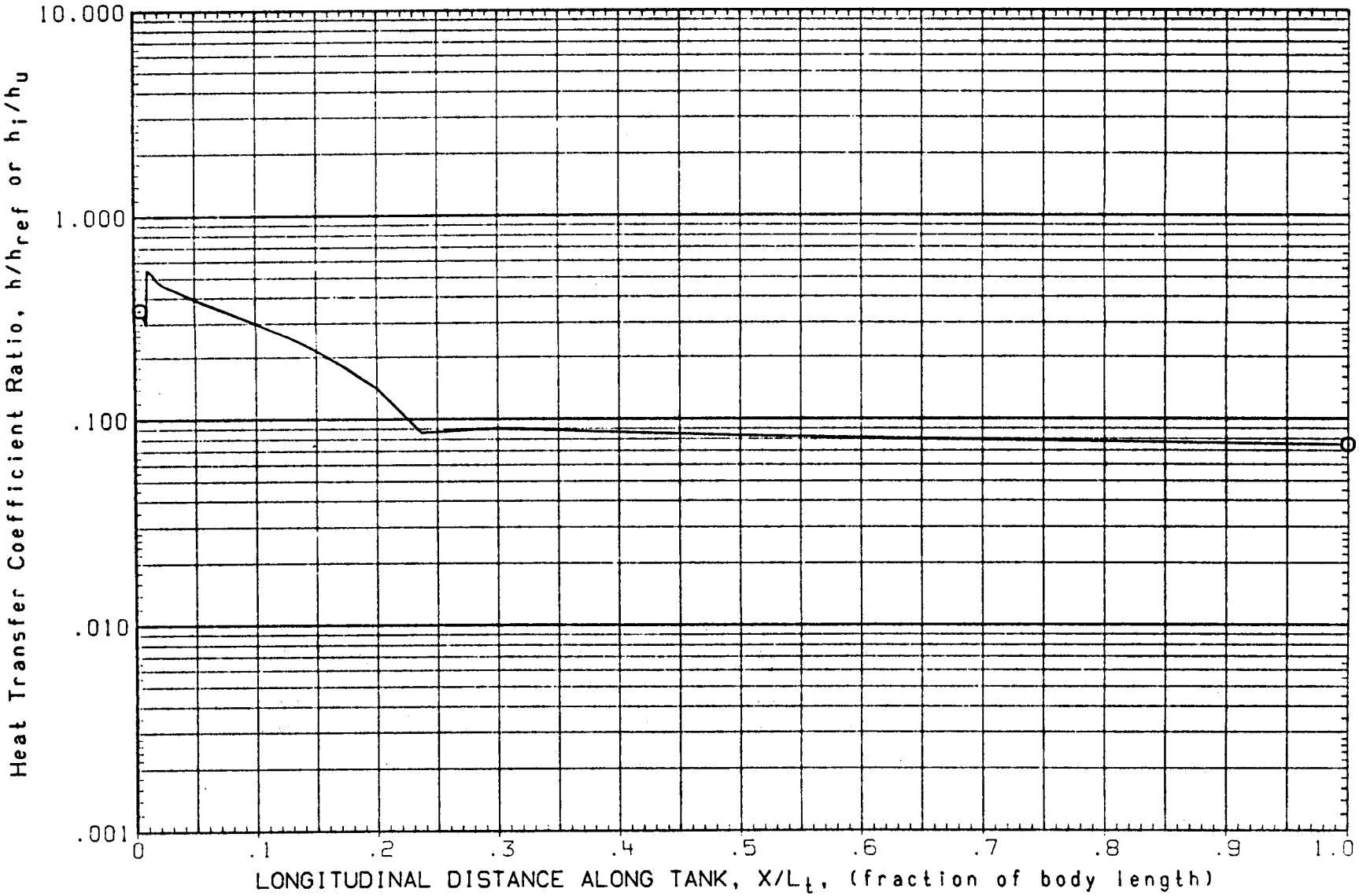

FIG. 4-9 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 39.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT42)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	7.500
(C9NT42)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	7.500
(V4LT36)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	7.500
(X4LT36)	◇	IH85 (W.L. TEST) OTS/ET = V4LT36/C9NT42=	HI/HU	4.020	.000	7.500
(Y4LT36)	△	IH85 (W.L. THEORY) OTS/ET = V4LT36/A9NT42=	HI/HU	4.020	.000	7.500

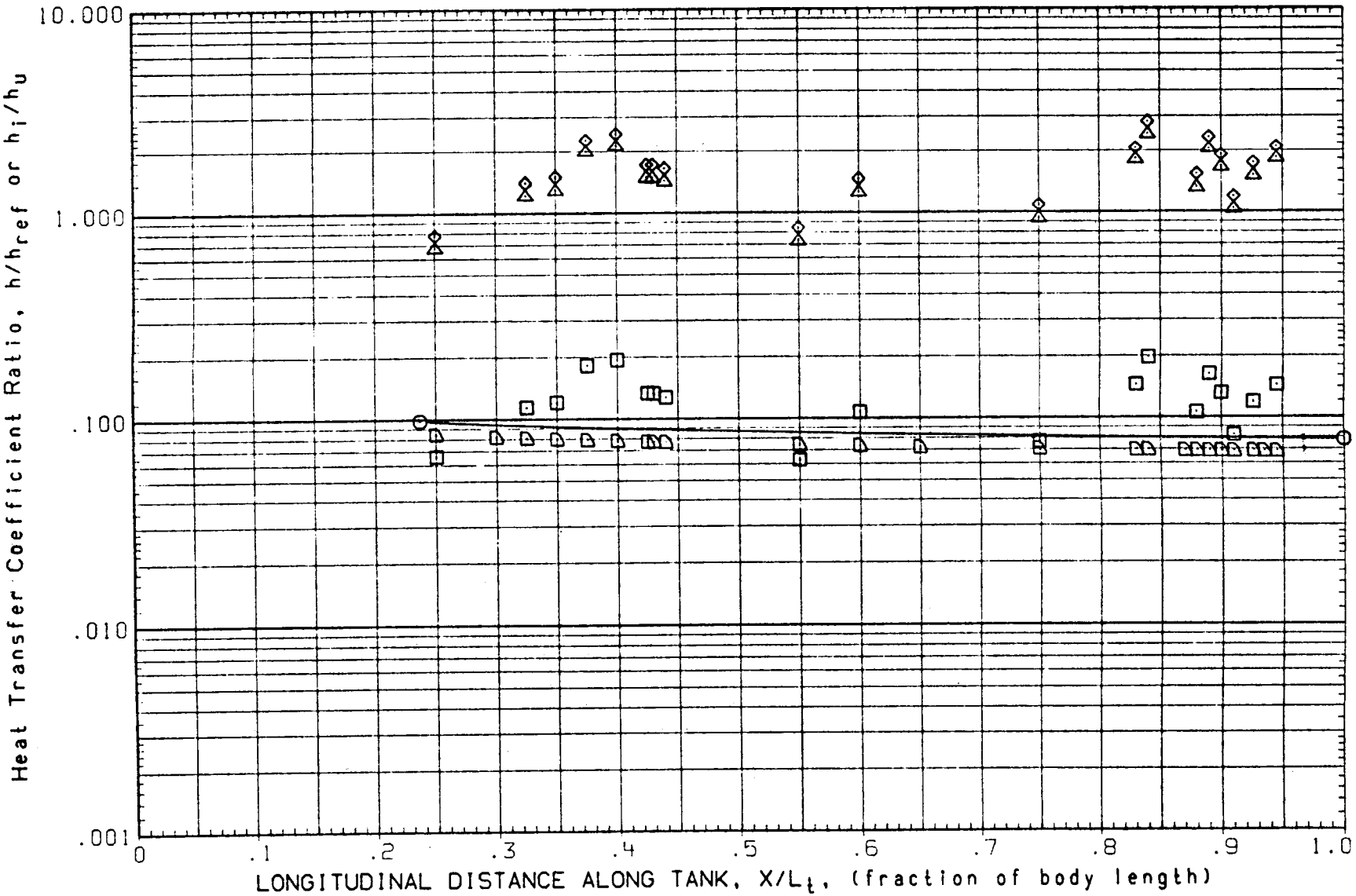

FIG. 4-9 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 45.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT42)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	7.500
(C9NT42)	⊏	DATA NOT AVAILABLE		4.020	.000	7.500
(V4LT36)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	7.500
(X4LT36)	◇	DATA NOT AVAILABLE		4.020	.000	7.500
(Y4LT36)	△	IH85 (W.L. THEORY) OTS/ET = V4LT36/A9NT42= HI/HU		4.020	.000	7.500

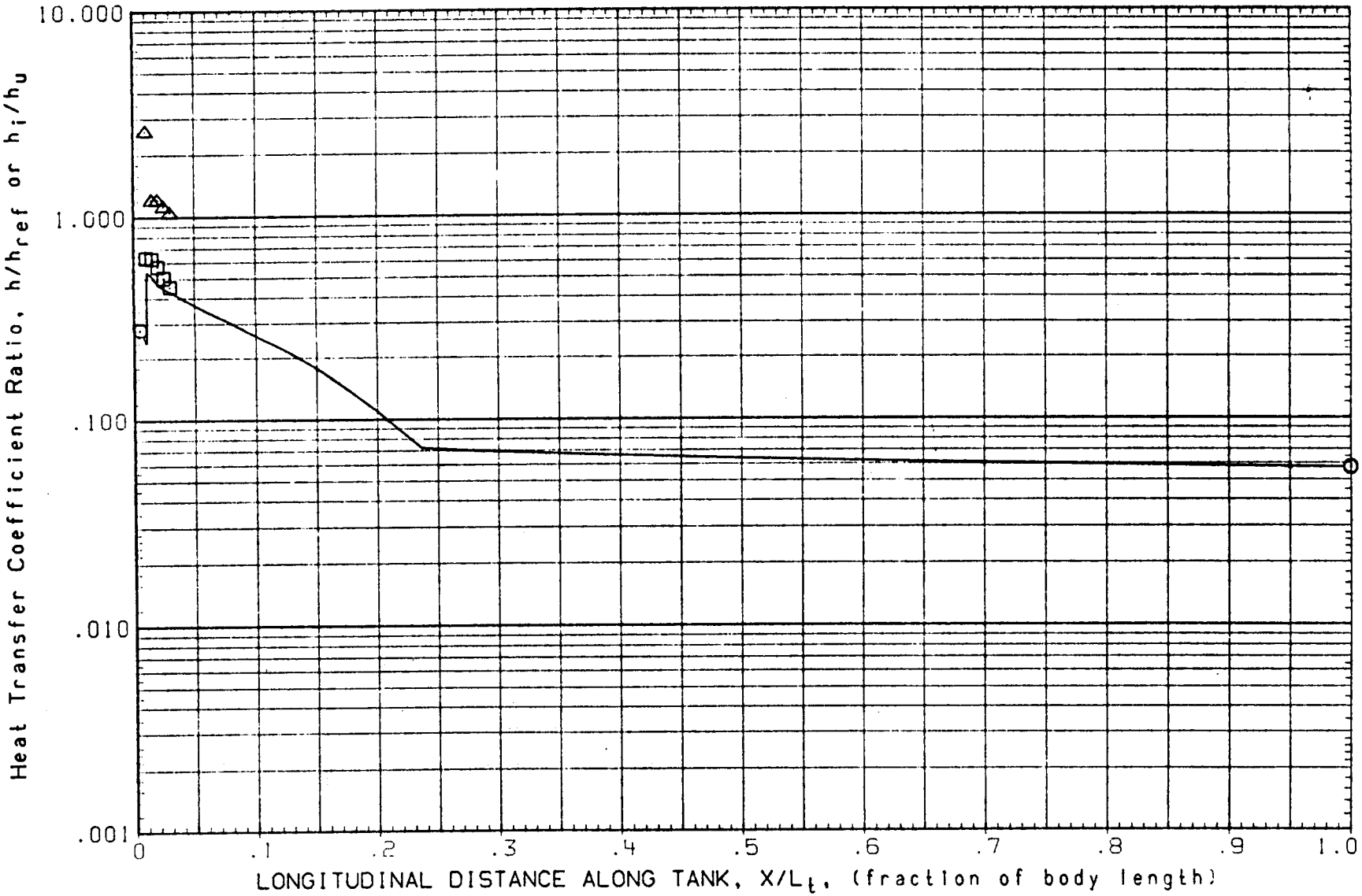

FIG. 4-9 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 180.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT42)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	7.500
(C9NT42)	⬠	DATA NOT AVAILABLE		4.020	.000	7.500
(Y4LT36)	□	DATA NOT AVAILABLE		4.020	.000	7.500
(X4LT36)	◇	DATA NOT AVAILABLE		4.020	.000	7.500
(Y4LT36)	△	DATA NOT AVAILABLE		4.020	.000	7.500

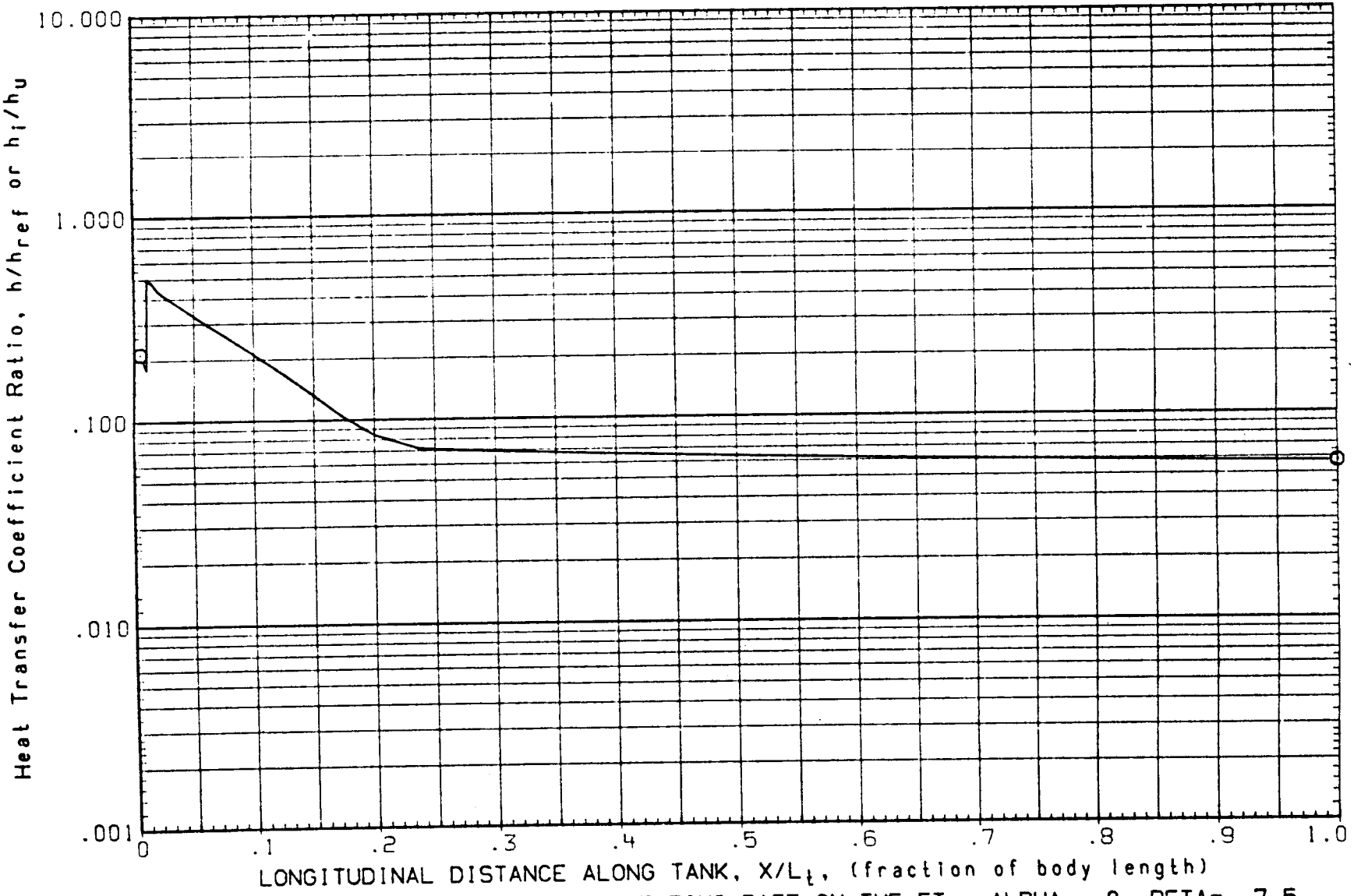

FIG. 4-9 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 235.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT42)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	7.500
(C9NT42)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	7.500
(V4LT36)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	7.500
(X4LT36)	◇	IH85 (W.L. TEST) OTS/ET = V4LT36/C9NT42=	HI/HU	4.020	.000	7.500
(Y4LT36)	△	IH85 (W.L. THEORY) OTS/ET = V4LT36/A9NT42=	HI/HU	4.020	.000	7.500

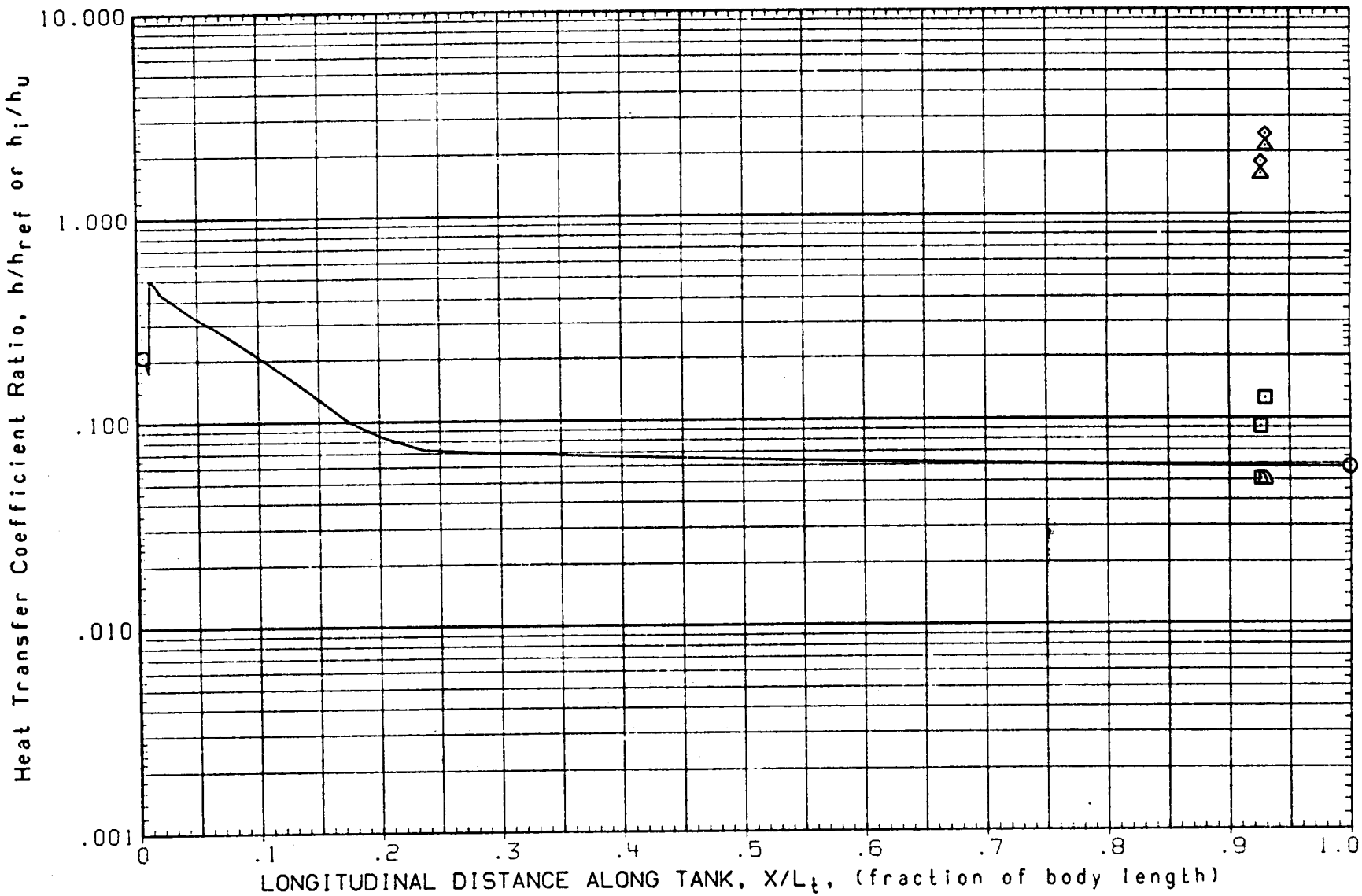

FIG. 4-9 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 247.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT42)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	7.500
(C9NT42)	⌂	DATA NOT AVAILABLE		4.020	.000	7.500
(V4LT36)	□	DATA NOT AVAILABLE		4.020	.000	7.500
(X4LT36)	◇	DATA NOT AVAILABLE		4.020	.000	7.500
(Y4LT36)	△	DATA NOT AVAILABLE		4.020	.000	7.500

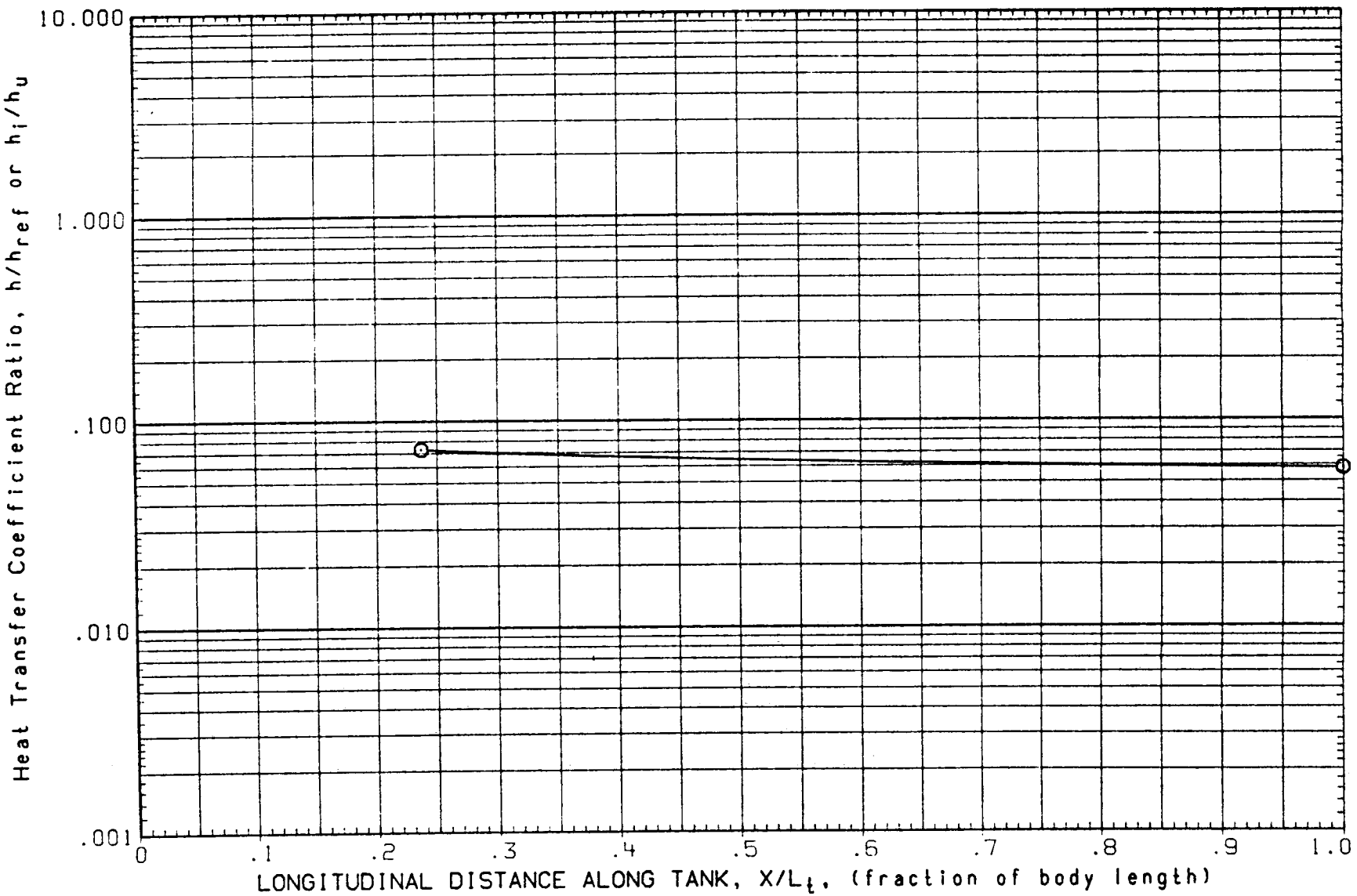

FIG. 4-9 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 247.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT42)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	7.500
(C9NT42)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	7.500
(V4LT36)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)	S	4.020	.000	7.500
(X4LT36)	◇	IH85 (W.L. TEST) OTS/ET = V4LT36/C9NT42=	HI/HU	4.020	.000	7.500
(Y4LT36)	△	IH85 (W.L. THEORY) OTS/ET = V4LT36/A9NT42=	HI/HU	4.020	.000	7.500

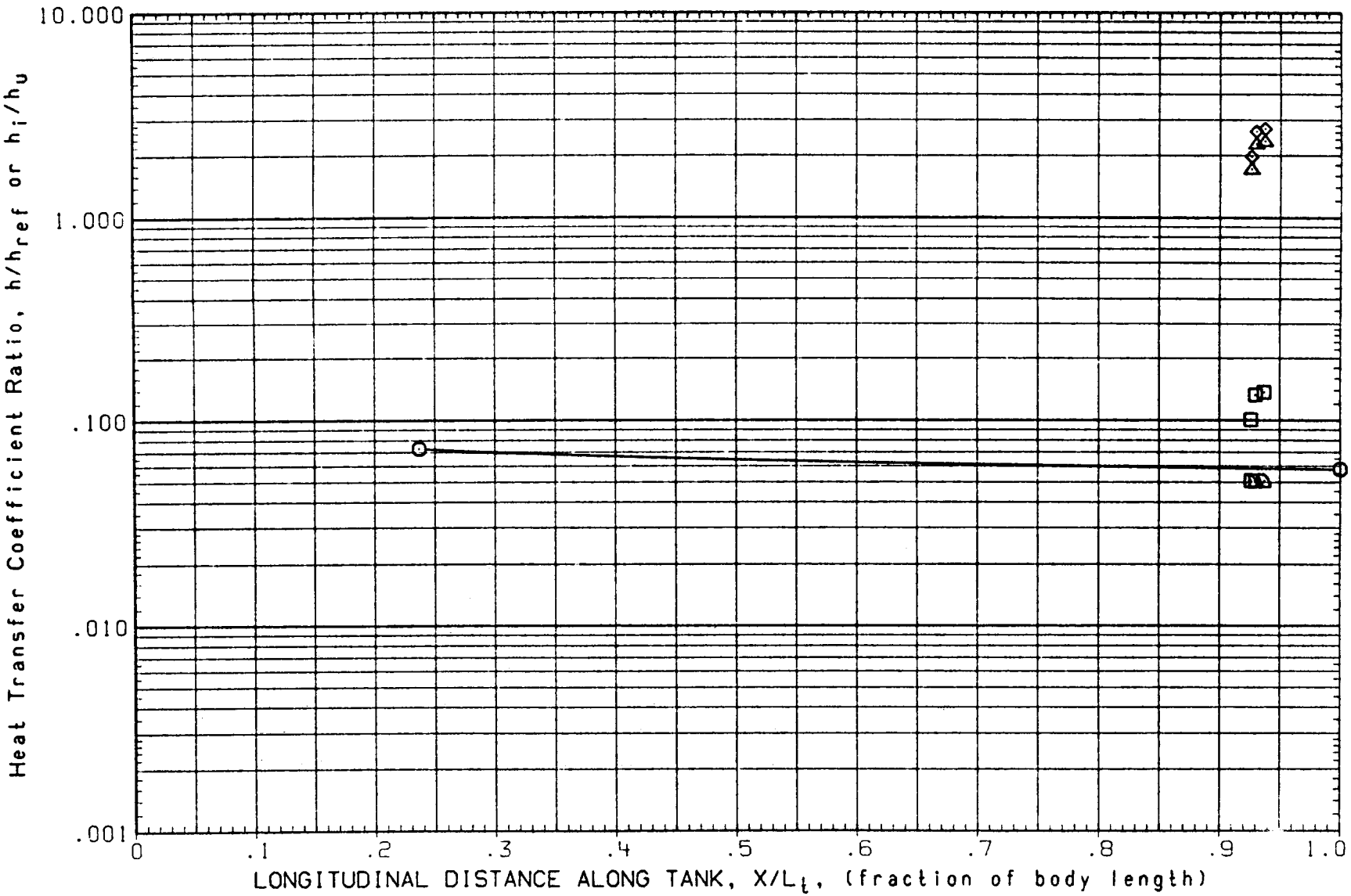

FIG. 4-9 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 250.570

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT42)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	7.500
(C9NT42)	◐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	7.500
(V4LT36)	□	IH85, AEDC V41A-W5, CONFIGURATION O (T) S		4.020	.000	7.500
(X4LT36)	◇	IH85 (W.L. TEST) OTS/ET = V4LT36/C9NT42=	HI/HU	4.020	.000	7.500
(Y4LT36)	△	IH85 (W.L. THEORY) OTS/ET = V4LT36/A9NT42=	HI/HU	4.020	.000	7.500

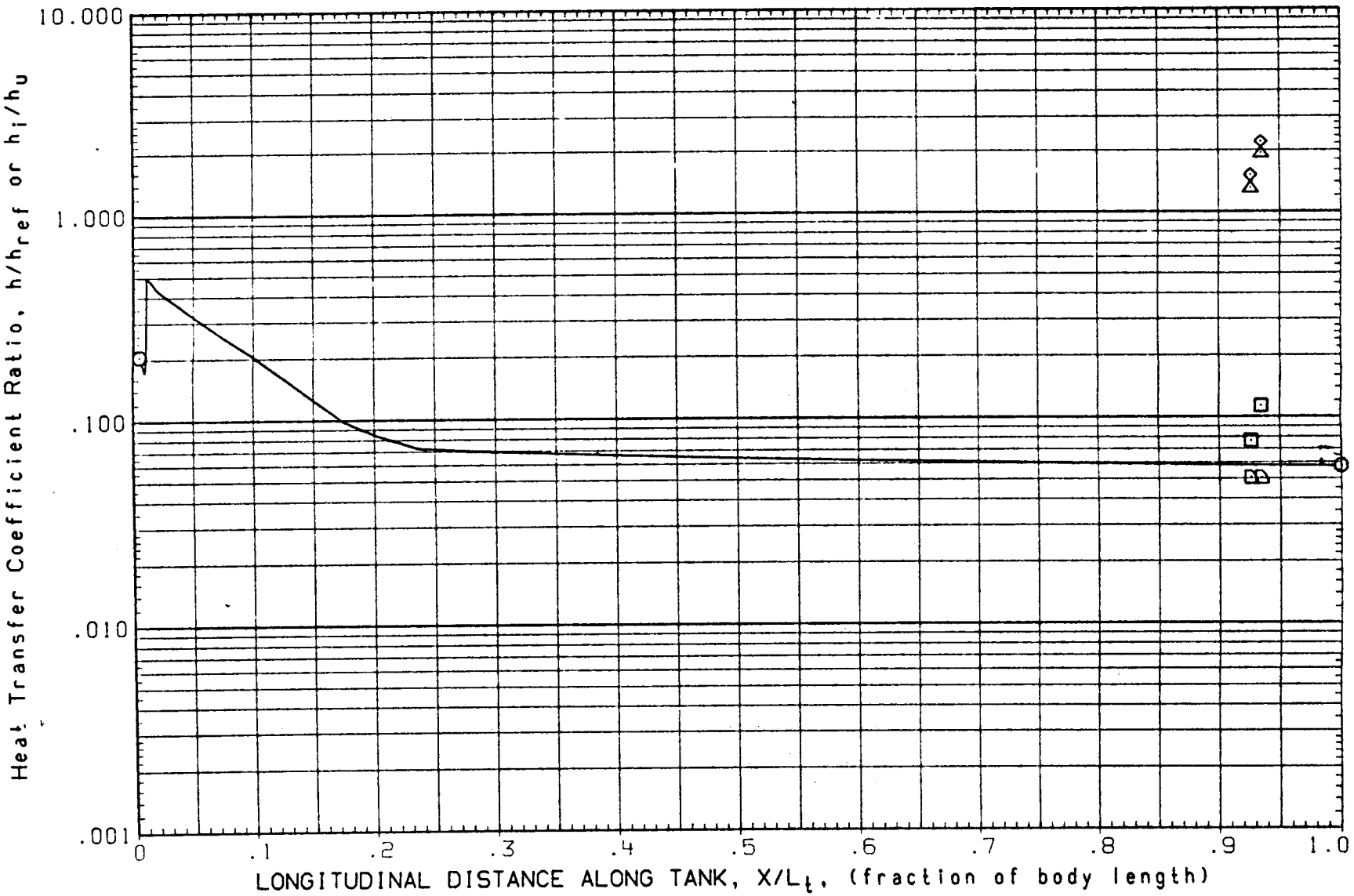

FIG. 4-9 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 258.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT42)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	7.500
(C9NT42)	D	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	7.500
(V4LT36)	□	IH85, AEDC V4IA-W5, CONFIGURATION 0 (T) S		4.020	.000	7.500
(X4LT36)	◇	IH85 (W.L. TEST) OTS/ET = V4LT36/C9NT42=	HI/HU	4.020	.000	7.500
(Y4LT36)	△	IH85 (W.L. THEORY) OTS/ET = V4LT36/A9NT42=	HI/HU	4.020	.000	7.500

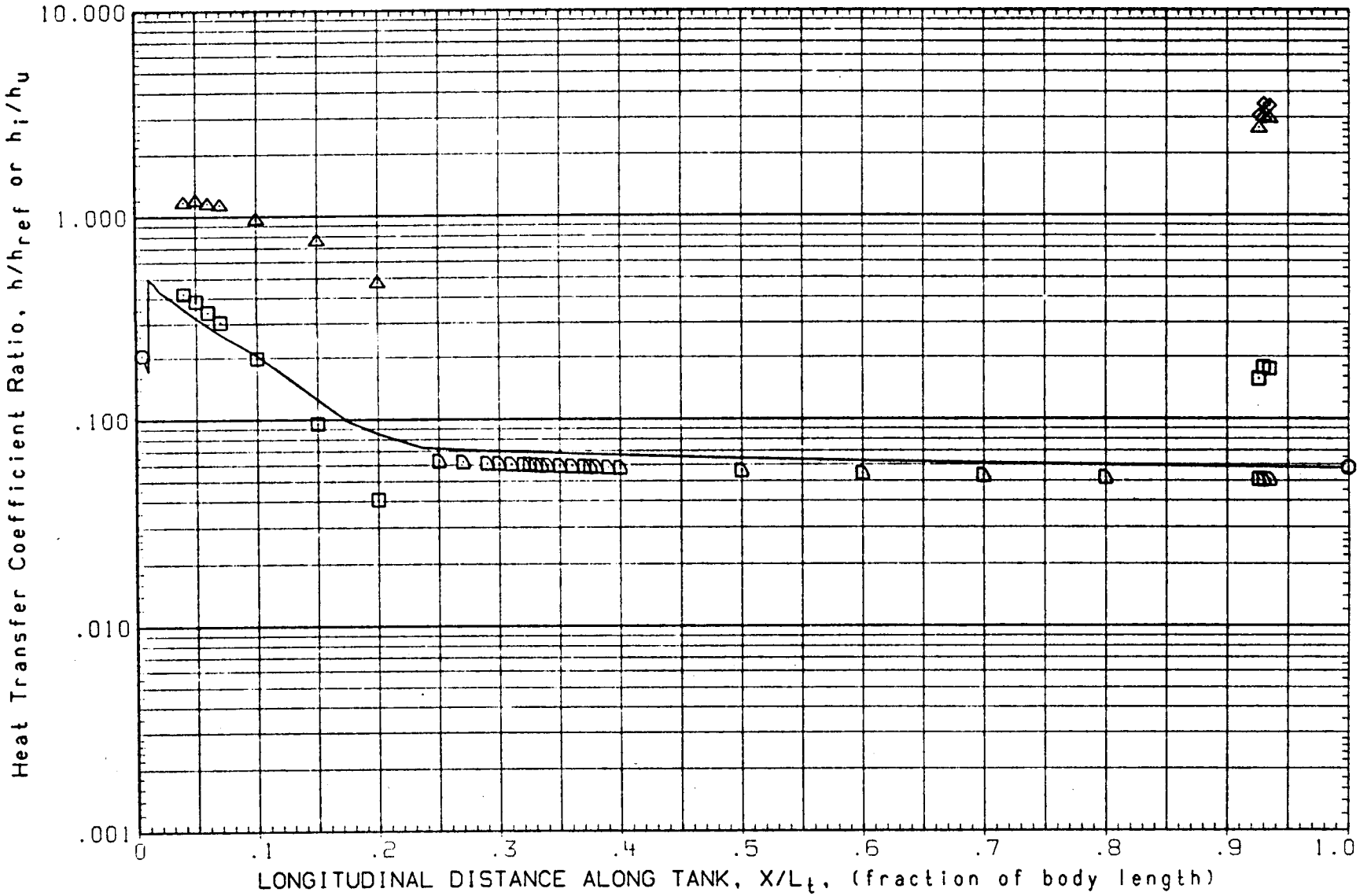

FIG. 4-9 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 270.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT42)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	7.500
(C9NT42)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	7.500
(V4LT36)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	7.500
(X4LT36)	◇	IH85 (W.L. TEST) OTS/ET = V4LT36/C9NT42=	HI/HU	4.020	.000	7.500
(Y4LT36)	△	IH85 (W.L. THEORY) OTS/ET = V4LT36/A9NT42=	HI/HU	4.020	.000	7.500

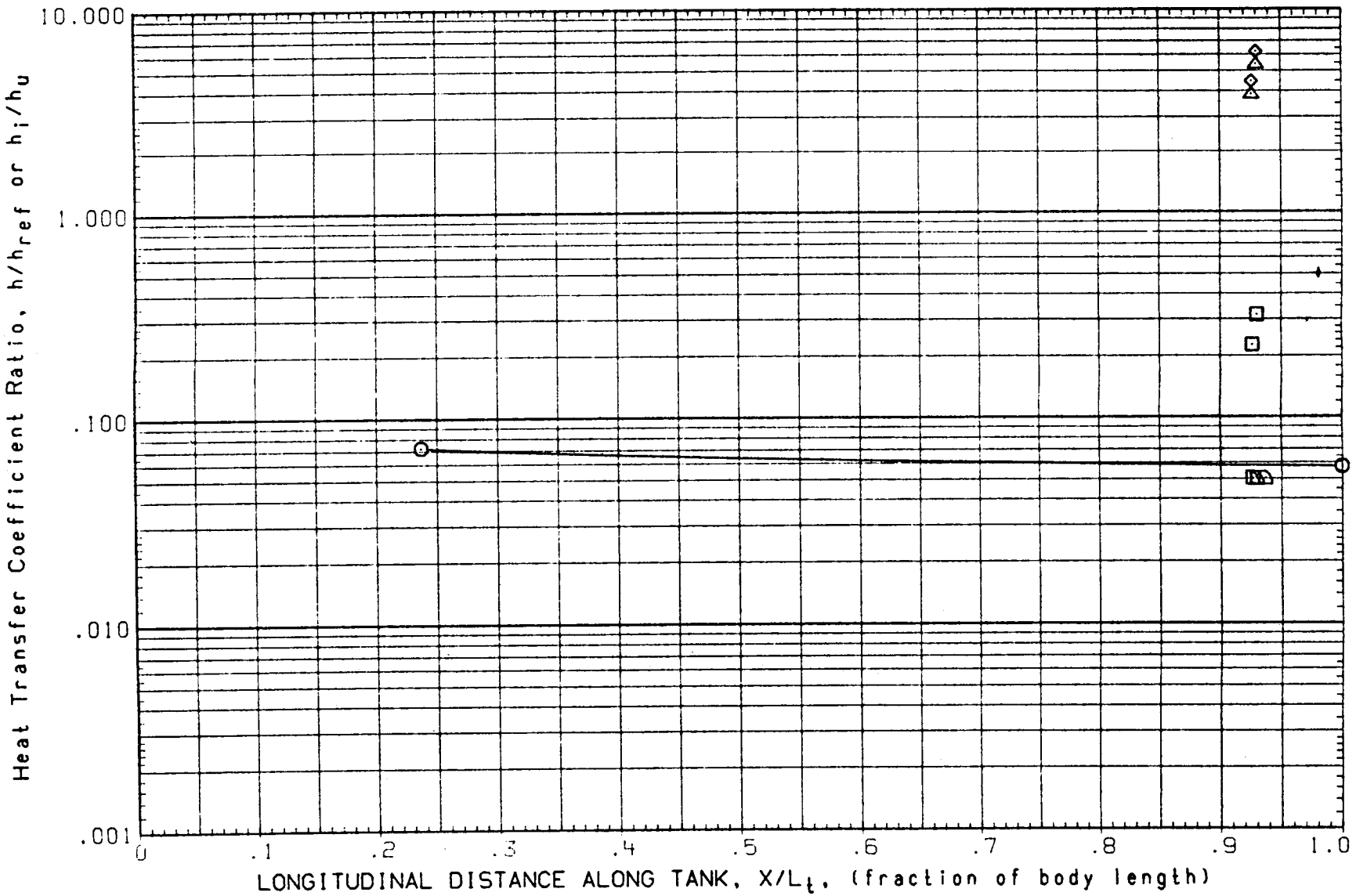

FIG. 4-9 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 289.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT42)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	7.500
(C9NT42)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	7.500
(V4LT36)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	7.500
(X4LT36)	◇	IH85 (W.L. TEST) OTS/ET = V4LT36/C9NT42=	HI/HU	4.020	.000	7.500
(Y4LT36)	△	IH85 (W.L. THEORY) OTS/ET = V4LT36/A9NT42=	HI/HU	4.020	.000	7.500

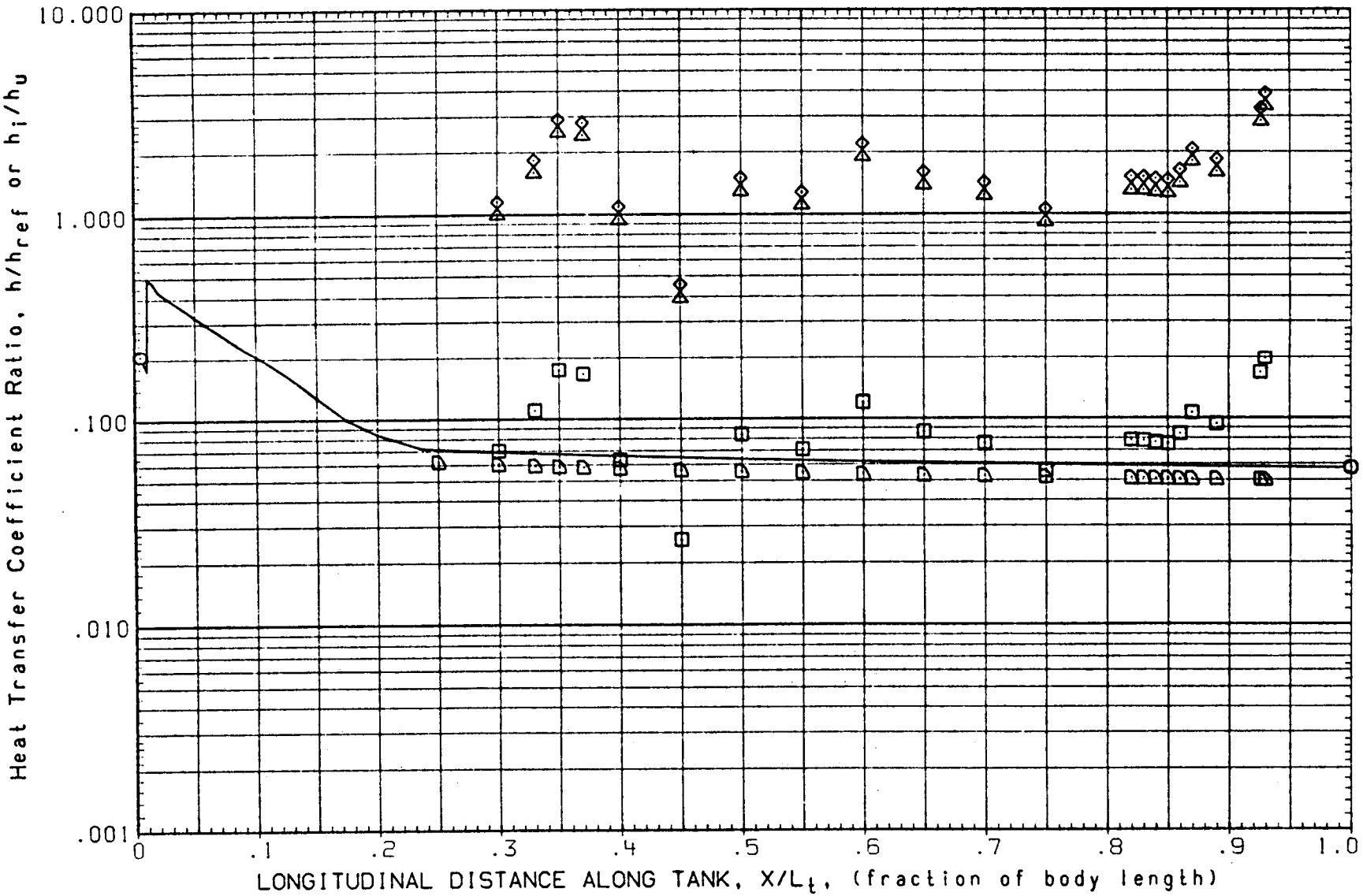

FIG. 4-9 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 292.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT42)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	7.500
(C9NT42)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	7.500
(V4LT36)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	7.500
(X4LT36)	◇	IH85 (W.L. TEST) OTS/ET = V4LT36/C9NT42=	HI/HU	4.020	.000	7.500
(Y4LT36)	△	IH85 (W.L. THEORY) OTS/ET = V4LT36/A9NT42=	HI/HU	4.020	.000	7.500

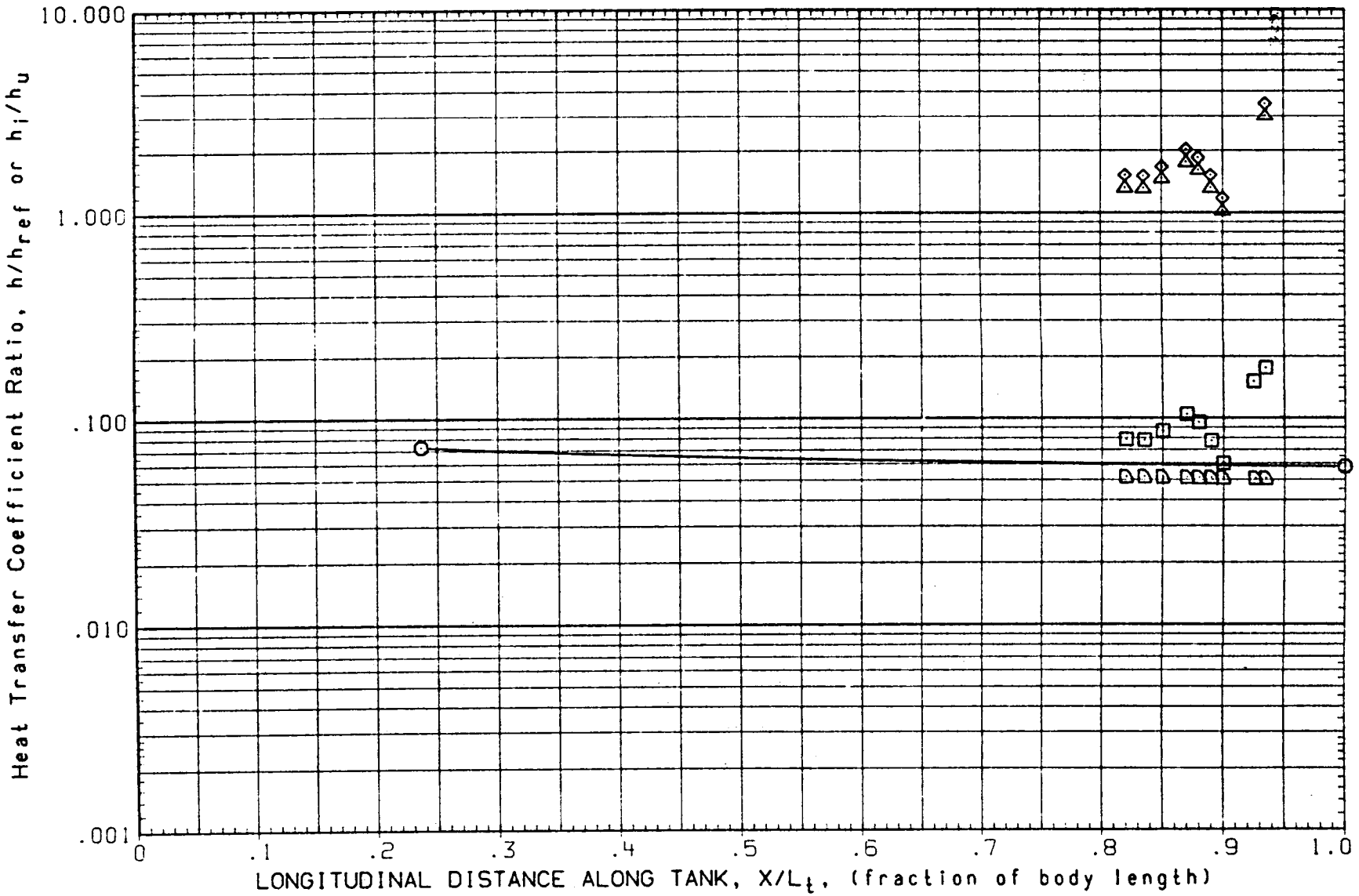

FIG. 4-9 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 301.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT42)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	7.500
(C9NT42)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	7.500
(V4LT36)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	7.500
(X4LT36)	◇	IH85 (W.L. TEST) OTS/ET = V4LT36/C9NT42=	HI/HU	4.020	.000	7.500
(Y4LT36)	△	IH85 (W.L. THEORY) OTS/ET = V4LT36/A9NT42=	HI/HU	4.020	.000	7.500

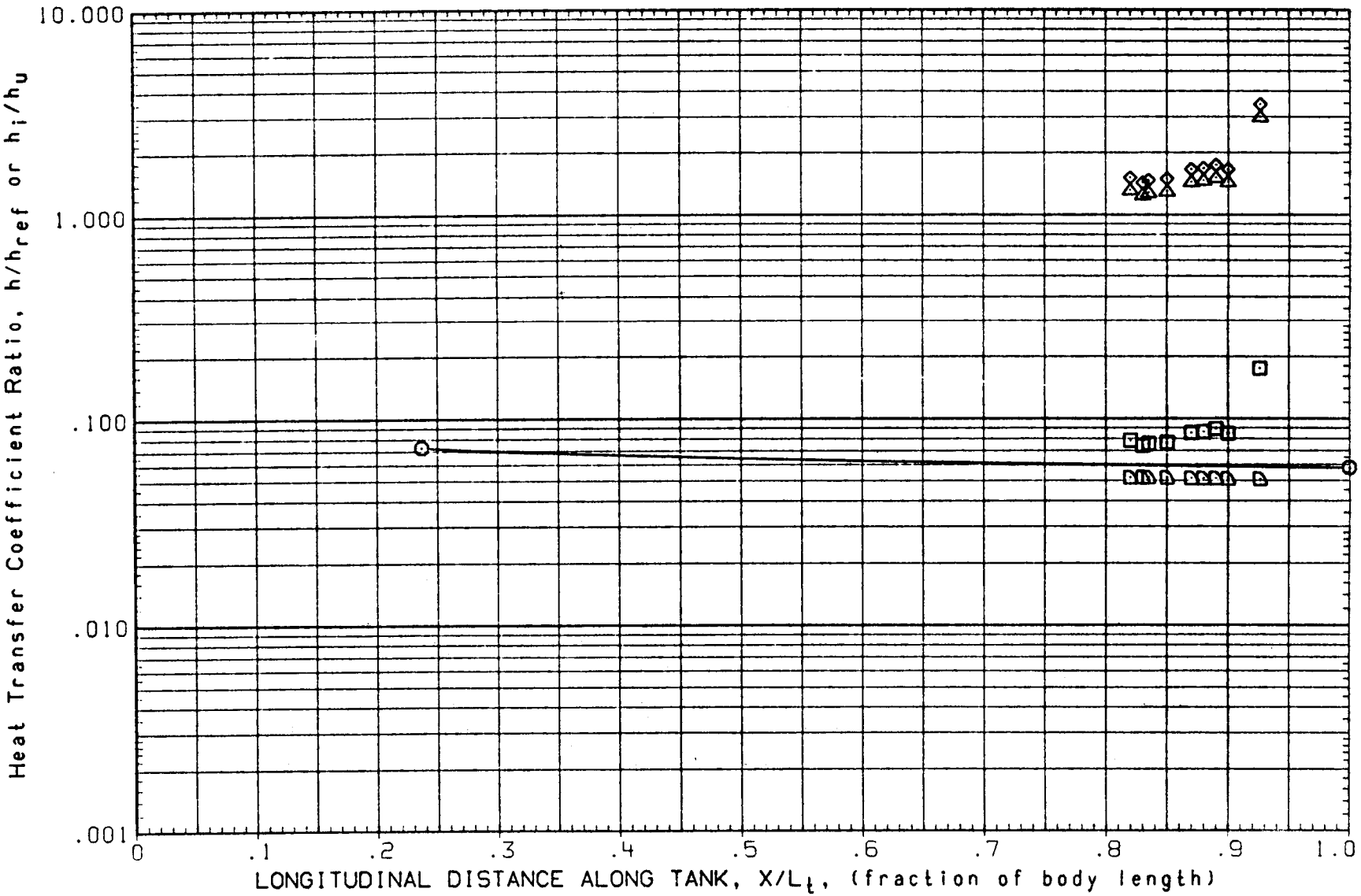

FIG. 4-9 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 305.400

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT42)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	7.500
(C9NT42)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	7.500
(V4LT36)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	7.500
(X4LT36)	◇	IH85 (W.L. TEST) OTS/ET = V4LT36/C9NT42=	HI/HU	4.020	.000	7.500
(Y4LT36)	△	IH85 (W.L. THEORY) OTS/ET = V4LT36/A9NT42=	HI/HU	4.020	.000	7.500

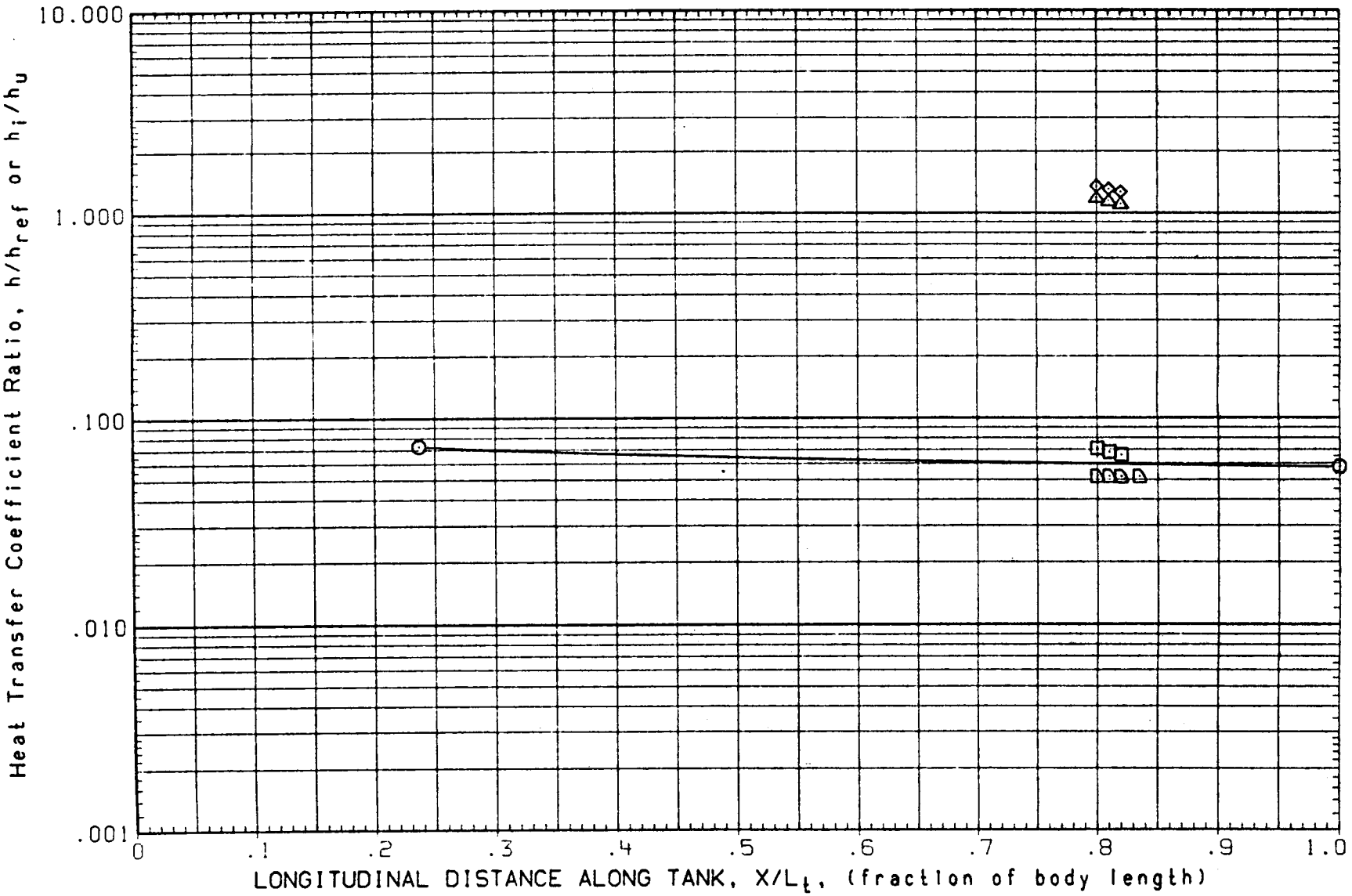

FIG. 4-9 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 309.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT42)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	7.500
(C9NT42)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	7.500
(V4LT36)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	7.500
(X4LT36)	◇	IH85 (W.L. TEST) OTS/ET = V4LT36/C9NT42=	HI/HU	4.020	.000	7.500
(Y4LT36)	△	IH85 (W.L. THEORY) OTS/ET = V4LT36/A9NT42=	HI/HU	4.020	.000	7.500

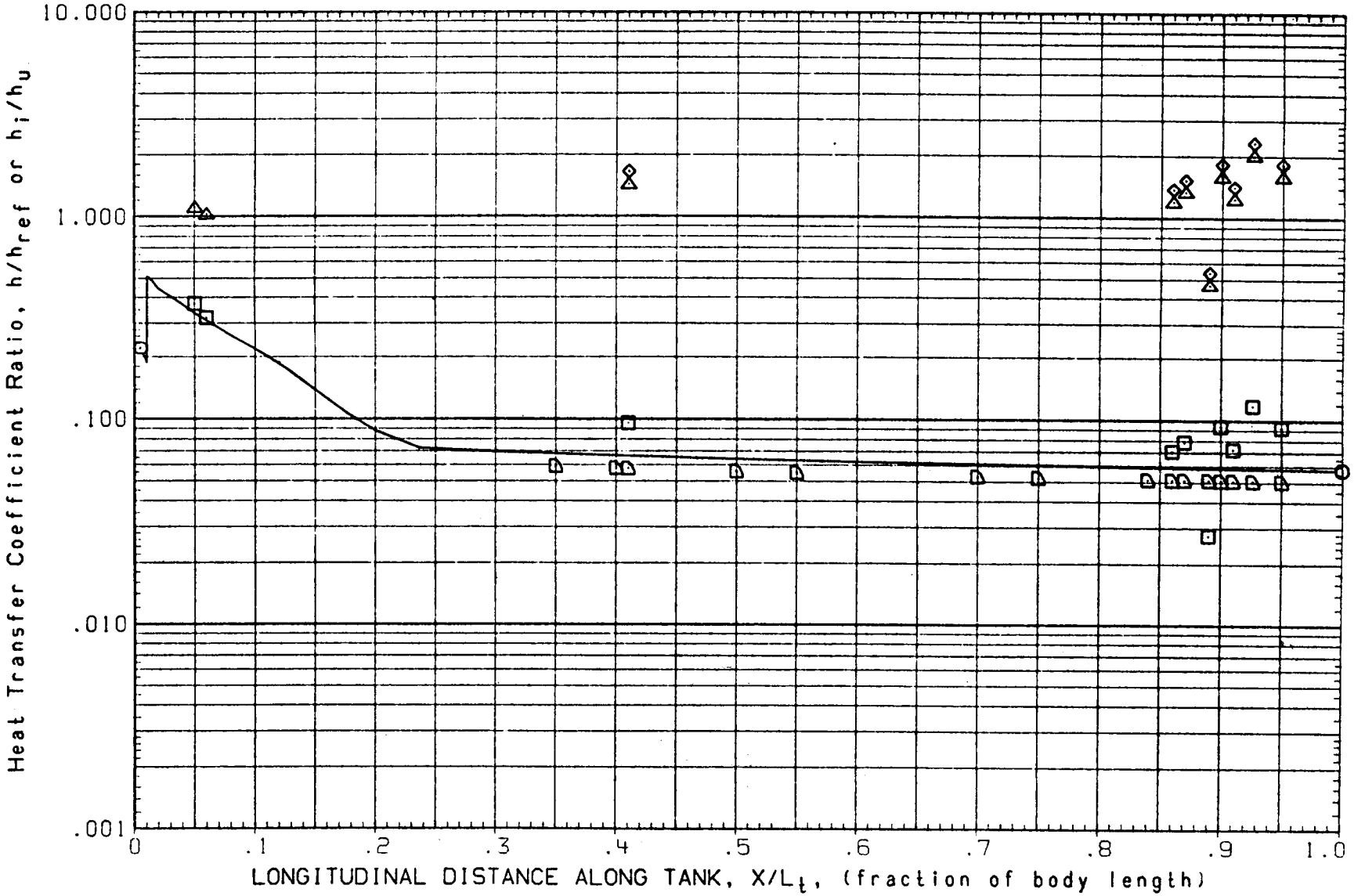

FIG. 4-9 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 315.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT42)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	7.500
(C9NT42)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	7.500
(V4LT36)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	7.500
(X4LT36)	◇	IH85 (W.L. TEST) OTS/ET = V4LT36/C9NT42=	HI/HU	4.020	.000	7.500
(Y4LT36)	△	IH85 (W.L. THEORY) OTS/ET = V4LT36/A9NT42=	HI/HU	4.020	.000	7.500

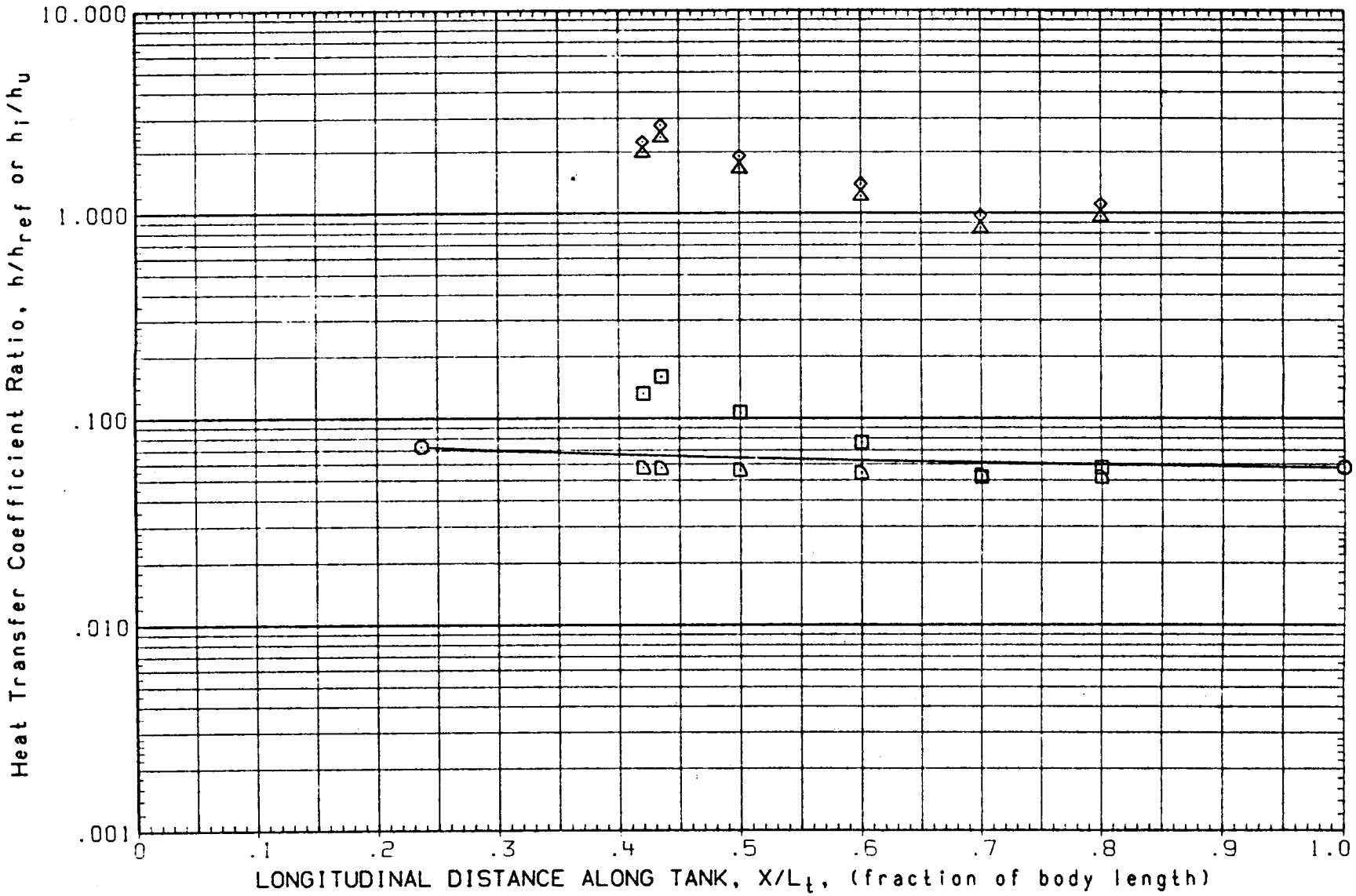

FIG. 4-9 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 322.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT42)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	4.020	.000	7.500
(C9NT42)	⬠	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	4.020	.000	7.500
(V4LT36)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	.000	7.500
(X4LT36)	◇	IH85 (W.L. TEST) OTS/ET = V4LT36/C9NT42= HI/HU	4.020	.000	7.500
(Y4LT36)	△	IH85 (W.L. THEORY) OTS/ET = V4LT36/A9NT42= HI/HU	4.020	.000	7.500

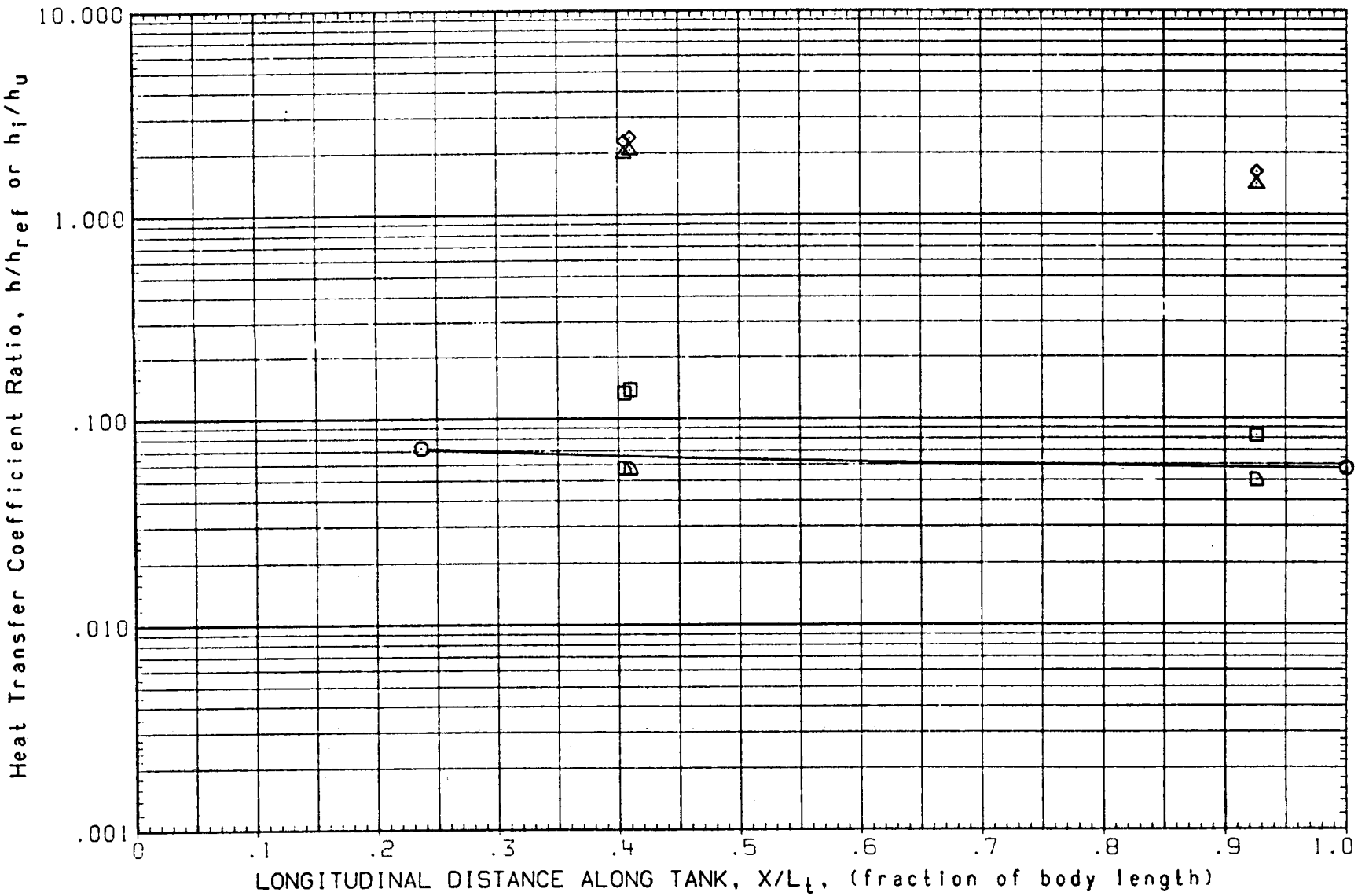

FIG. 4-9 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 324.450

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT42)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	7.500
(C9NT42)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	7.500
(V4LT36)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	7.500
(X4LT36)	◇	IH85 (W.L. TEST) OTS/ET = V4LT36/C9NT42=	HI/HU	4.020	.000	7.500
(Y4LT36)	△	IH85 (W.L. THEORY) OTS/ET = V4LT36/A9NT42=	HI/HU	4.020	.000	7.500

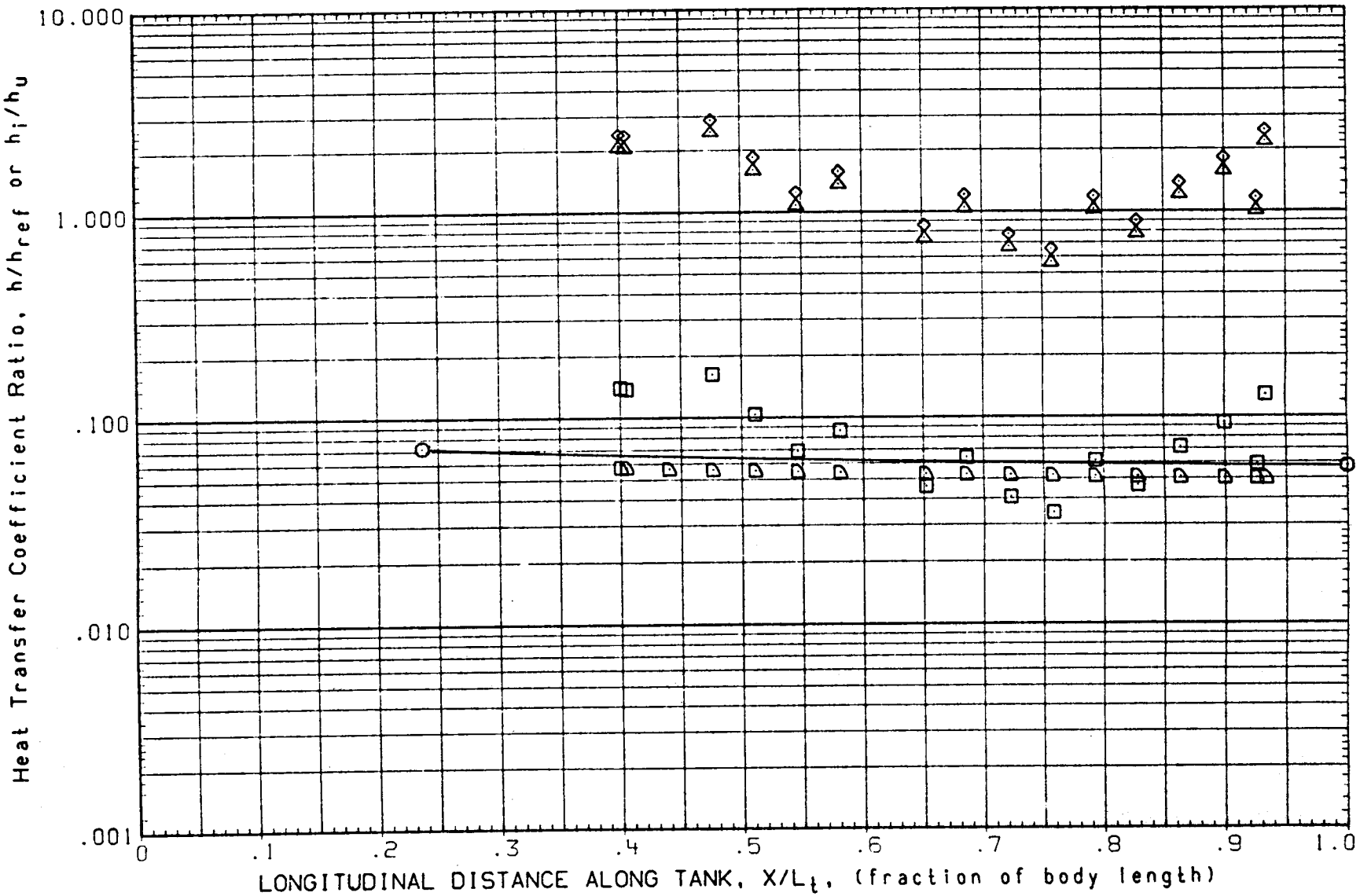

FIG. 4-9 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 326.850

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT42)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	7.500
(C9NT42)	⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	7.500
(V4LT36)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	7.500
(X4LT36)	◇	IH85 (W.L. TEST) OTS/ET = V4LT36/C9NT42=	HI/HU	4.020	.000	7.500
(Y4LT36)	△	IH85 (W.L. THEORY) OTS/ET = V4LT36/A9NT42=	HI/HU	4.020	.000	7.500

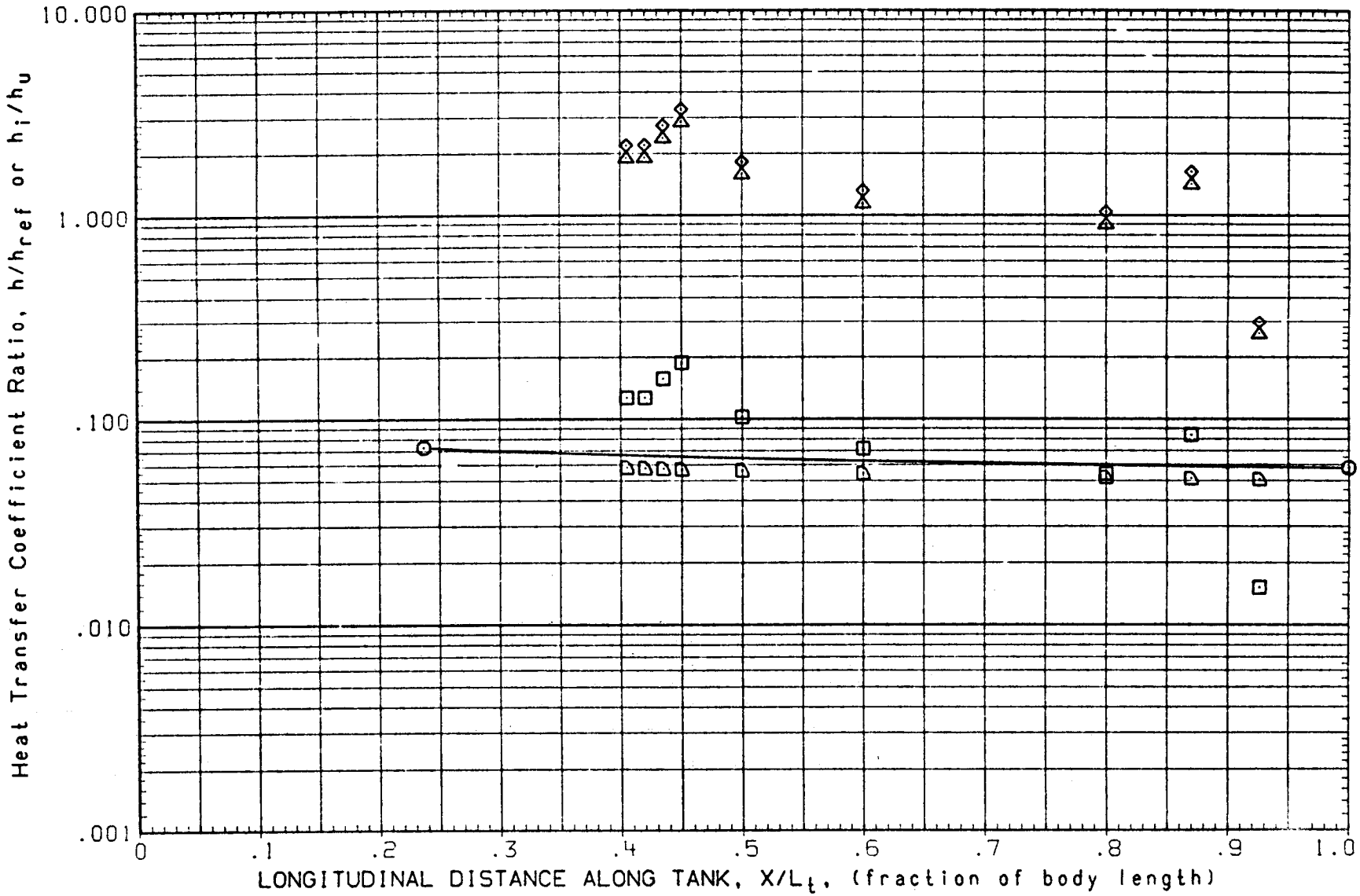

FIG. 4-9 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 330.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT42)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	7.500
(C9NT42)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	7.500
(V4LT36)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	7.500
(X4LT36)	◇	IH85 (W.L. TEST) OTS/ET = V4LT36/C9NT42=	HI/HU	4.020	.000	7.500
(Y4LT36)	△	IH85 (W.L. THEORY) OTS/ET = V4LT36/A9NT42=	HI/HU	4.020	.000	7.500

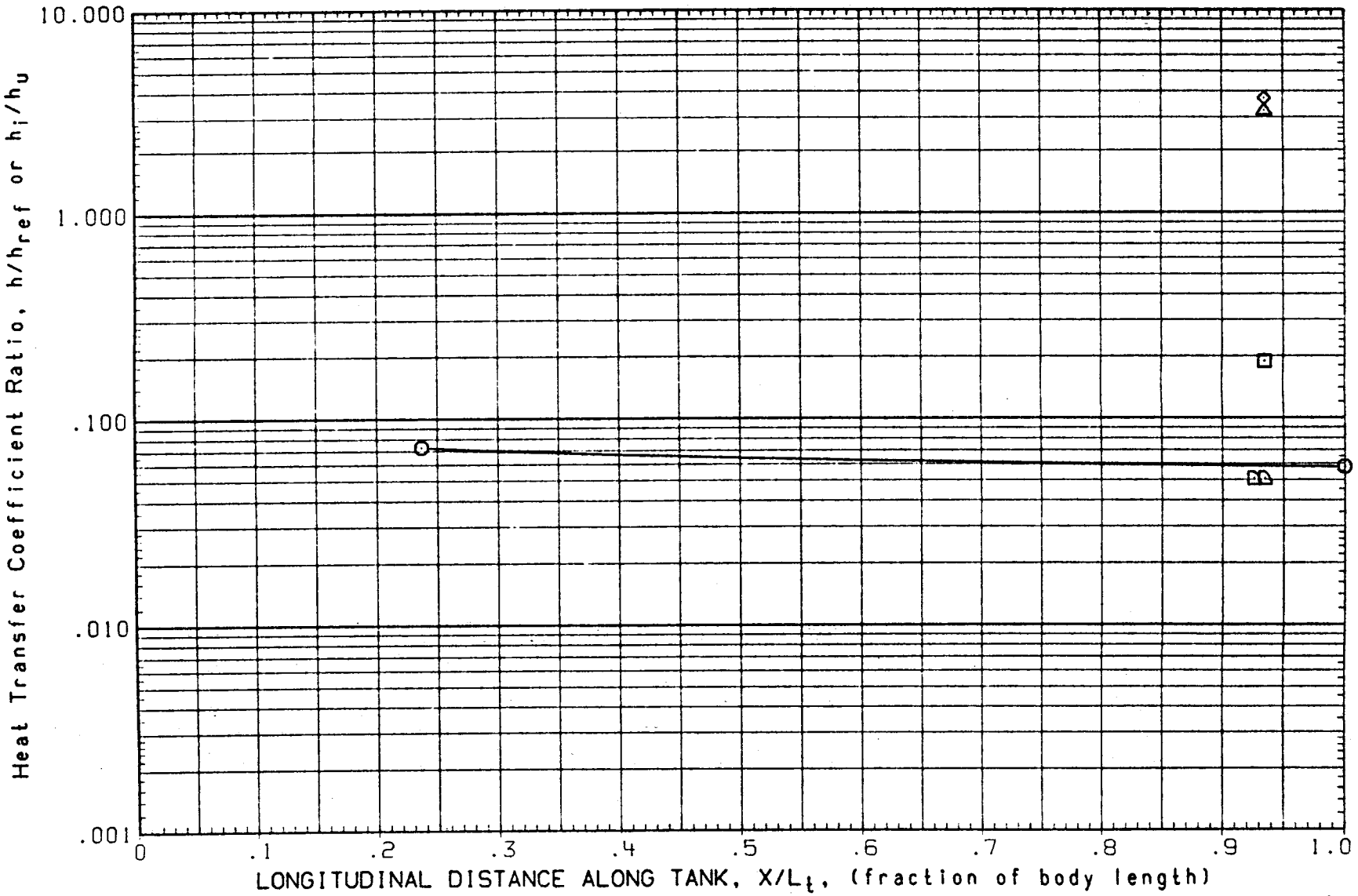

FIG. 4-9 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 334.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT42)	○	EXTERNAL TANK THEORY, .1.S.,TURBULENT	HU/HREF	4.020	.000	7.500
(C9NT42)	◻	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	7.500
(V4LT36)	□	IH85, AEDC V4!A-W5, CONF!GURATION 0 (T) S		4.020	.000	7.500
(X4LT36)	◇	IH85 (W.L. TEST) OTS/ET = V4LT36/C9NT42= HI/HU		4.020	.000	7.500
(Y4LT36)	△	IH85 (W.L. THEORY) OTS/ET = V4LT36/A9NT42= HI/HU		4.020	.000	7.500

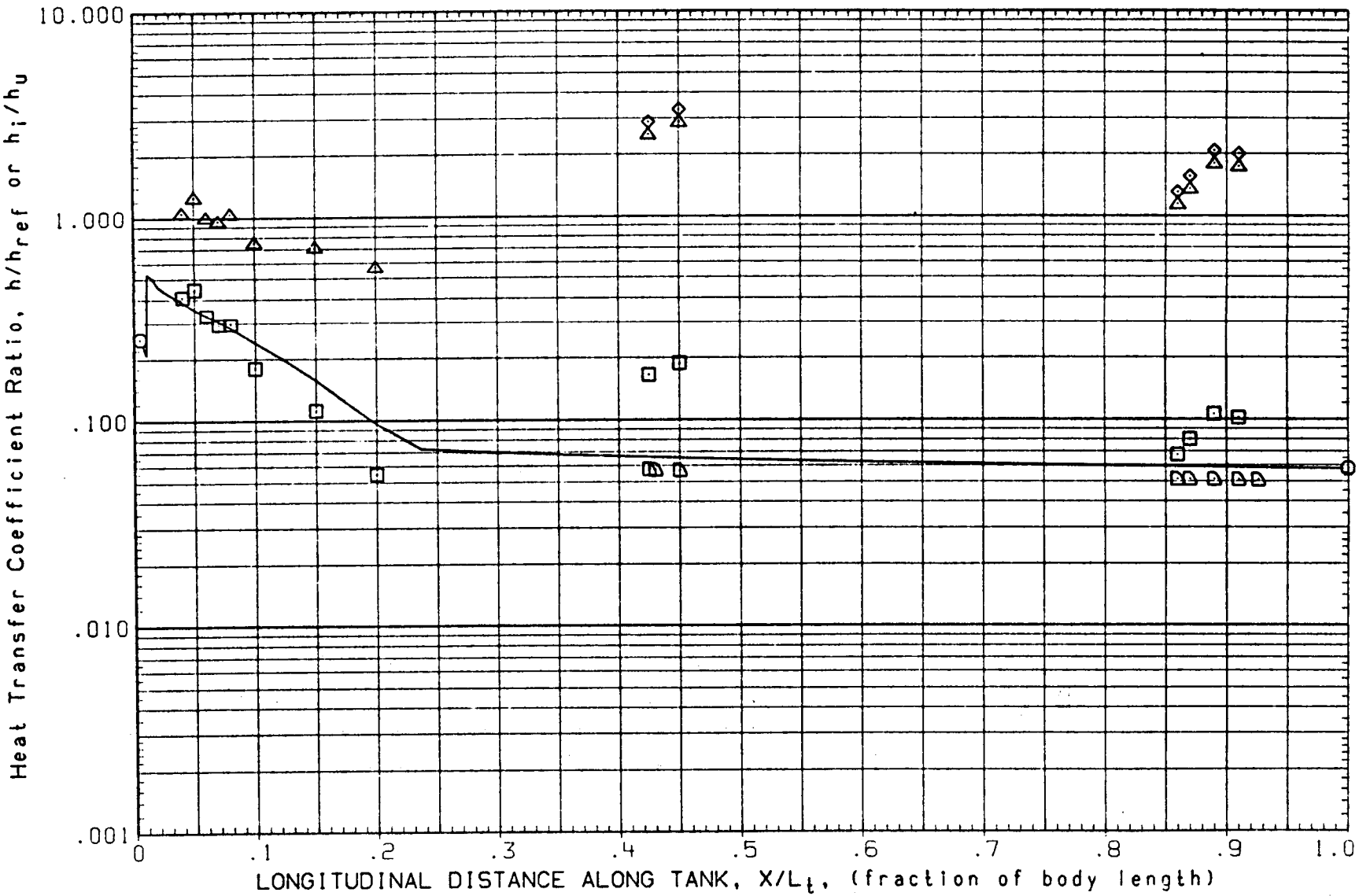

FIG. 4-9 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 337.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT42)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	7.500
(C9NT42)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	7.500
(V4LT36)	□	DATA NOT AVAILABLE		4.020	.000	7.500
(X4LT36)	◇	DATA NOT AVAILABLE		4.020	.000	7.500
(Y4LT36)	△	DATA NOT AVAILABLE		4.020	.000	7.500

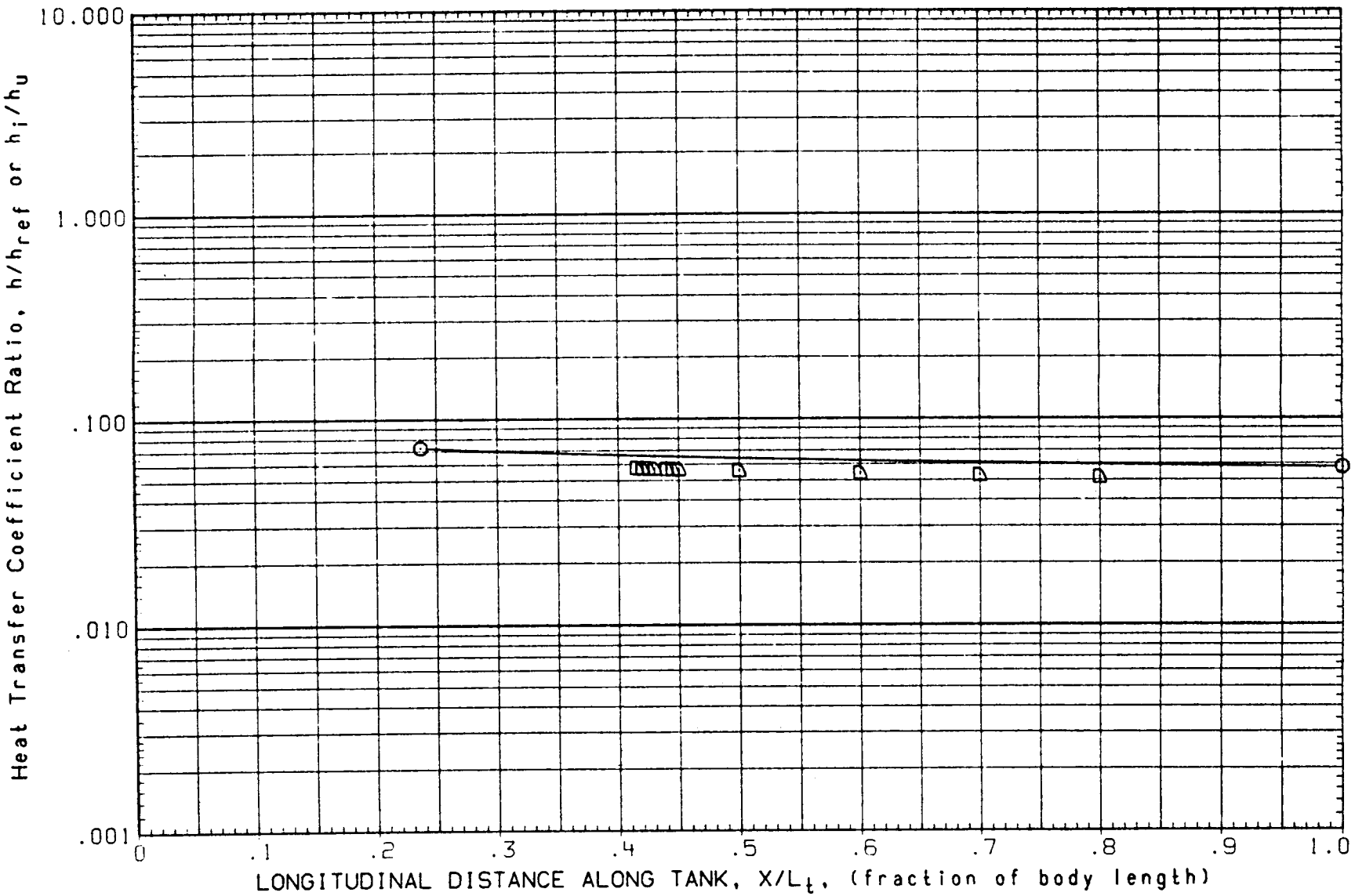

FIG. 4-9 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 343.120

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT42)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	7.500
(C9NT42)	⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	7.500
(V4LT36)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	7.500
(X4LT36)	◇	IH85 (W.L. TEST) OTS/ET = V4LT36/C9NT42= HI/HU		4.020	.000	7.500
(Y4LT36)	△	IH85 (W.L. THEORY) OTS/ET = V4LT36/A9NT42= HI/HU		4.020	.000	7.500

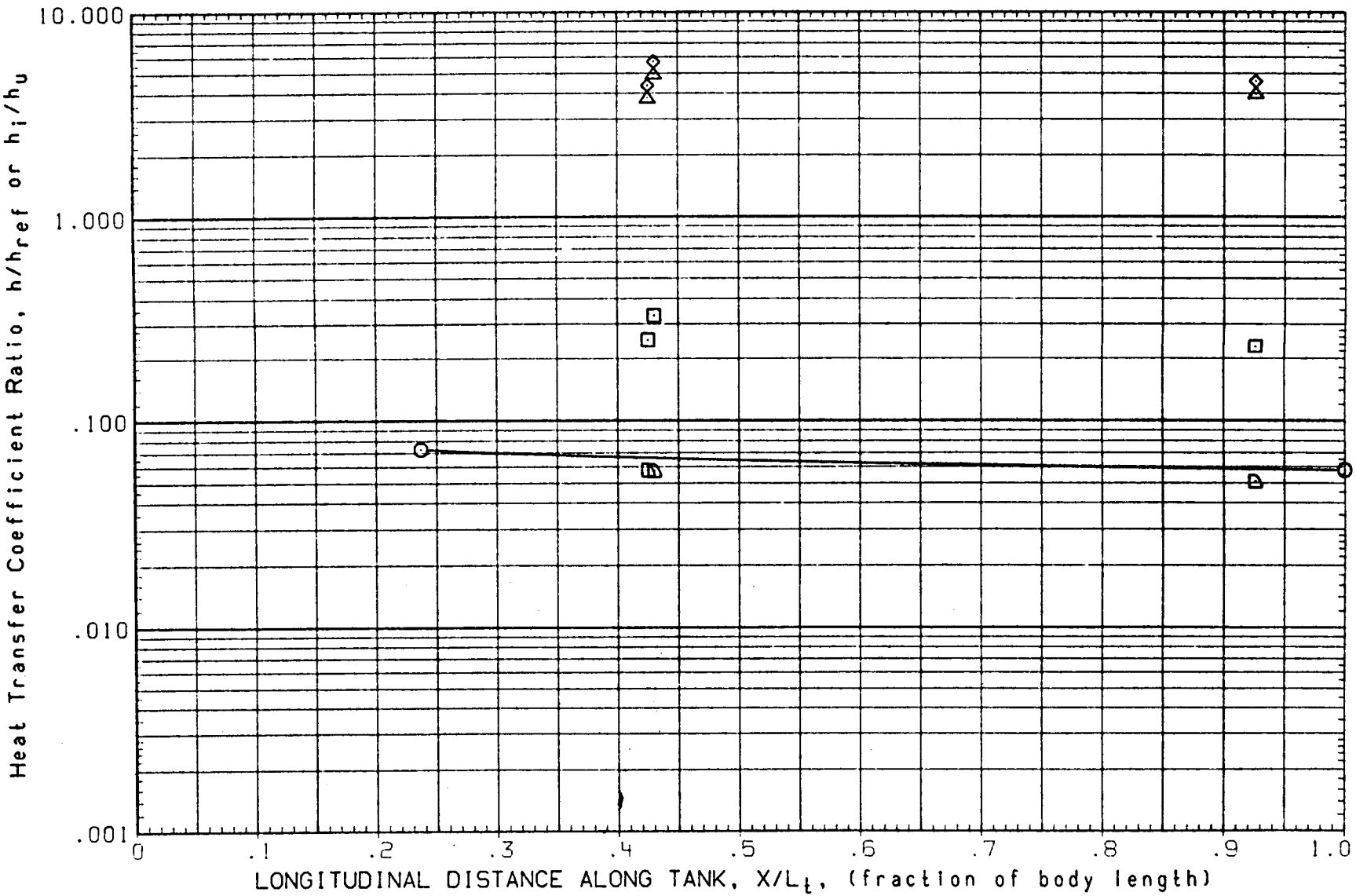

FIG. 4-9 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 345.560

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT42)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	7.500
(C9NT42)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	7.500
(V4LT36)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	7.500
(X4LT36)	◇	IH85 (W.L. TEST) OTS/ET = V4LT36/C9NT42=	HI/HU	4.020	.000	7.500
(Y4LT36)	△	IH85 (W.L. THEORY) OTS/ET = V4LT36/A9NT42=	HI/HU	4.020	.000	7.500

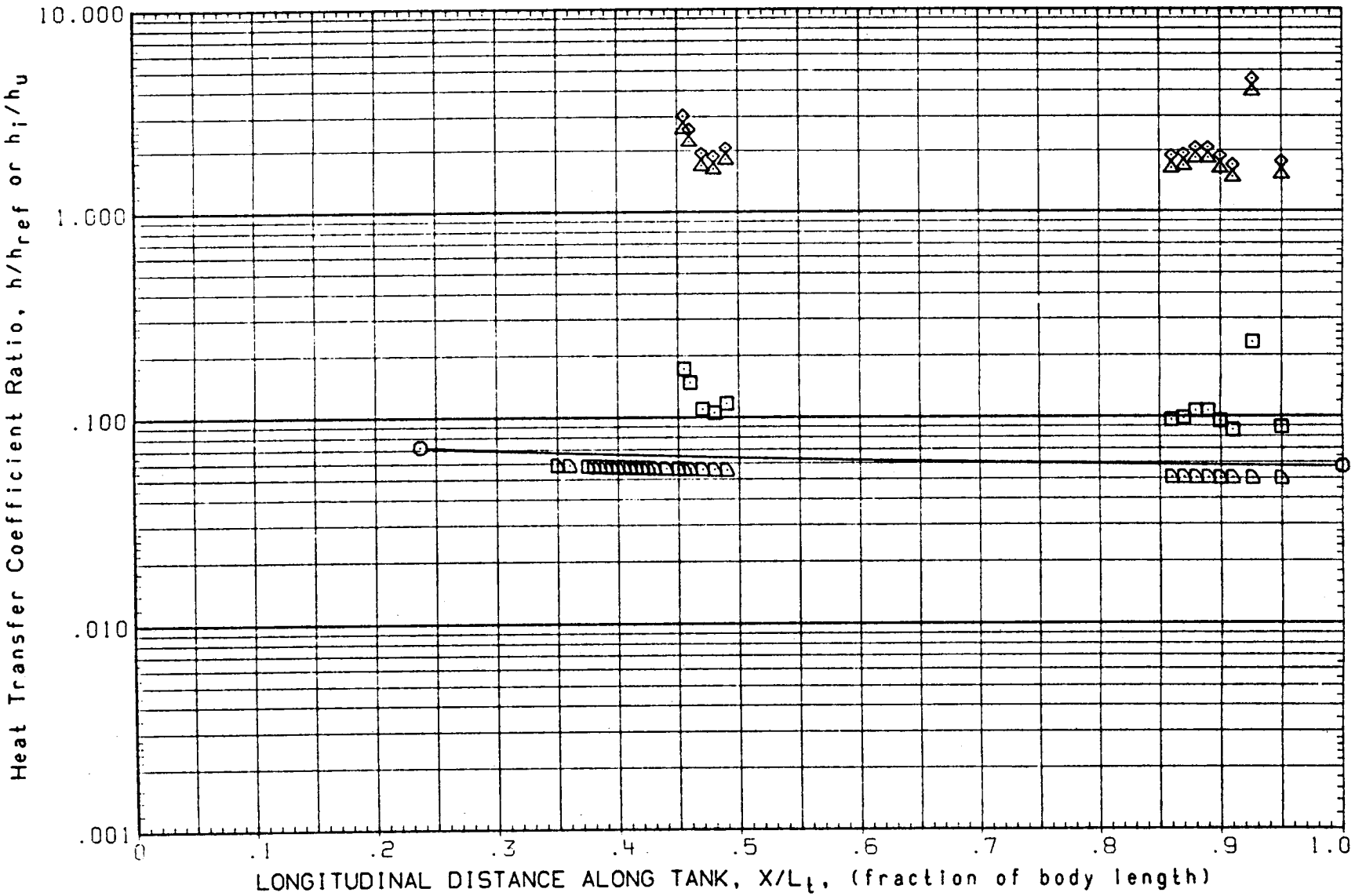

FIG. 4-9 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 348.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT42)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	7.500
(C9NT42)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	7.500
(V4LT36)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	7.500
(X4LT36)	◇	IH85 (W.L. TEST) OTS/ET = V4LT36/C9NT42=	HI/HU	4.020	.000	7.500
(Y4LT36)	△	IH85 (W.L. THEORY) OTS/ET = V4LT36/A9NT42=	HI/HU	4.020	.000	7.500

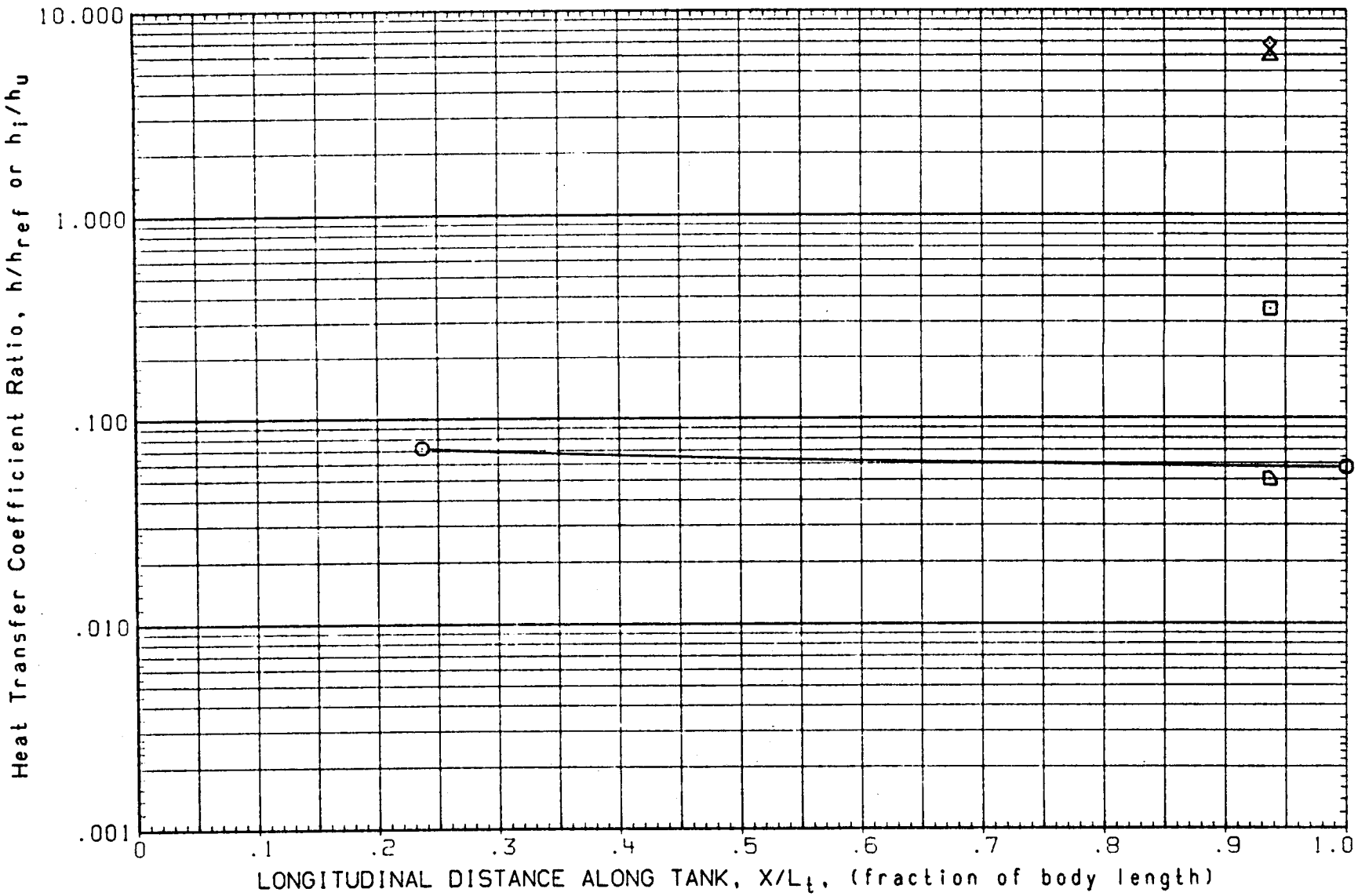

FIG. 4-9 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 352.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT42)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	7.500
(C9NT42)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	.000	7.500
(V4LT36)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	.000	7.500
(X4LT36)	◇	IH85 (W.L. TEST) OTS/ET = V4LT36/C9NT42=	HI/HU	4.020	.000	7.500
(Y4LT36)	△	IH85 (W.L. THEORY) OTS/ET = V4LT36/A9NT42=	HI/HU	4.020	.000	7.500

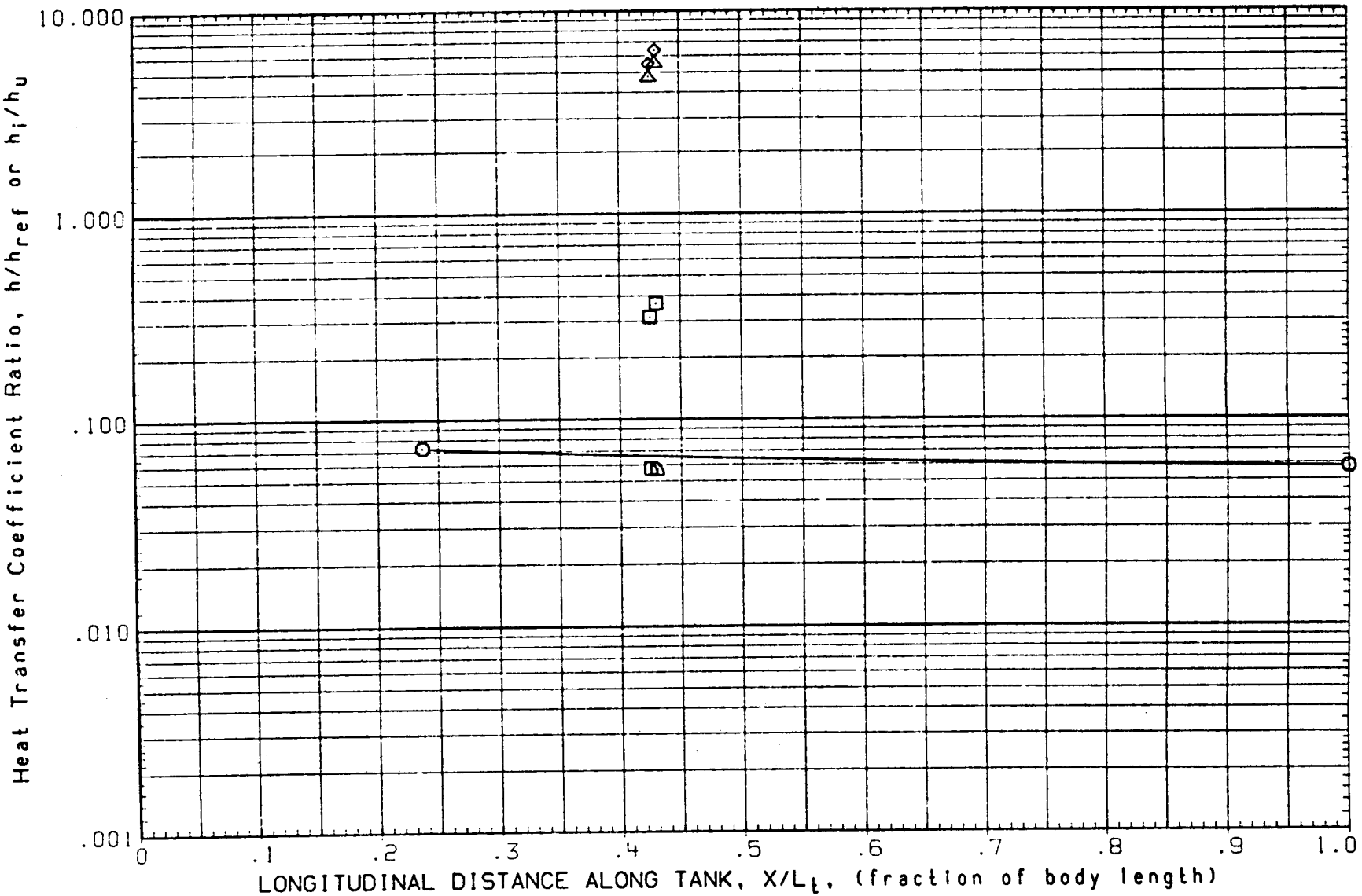

FIG. 4-9 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 354.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT42)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	7.500
(C9NT42)	⬠	DATA NOT AVAILABLE		4.020	.000	7.500
(V4LT36)	□	DATA NOT AVAILABLE		4.020	.000	7.500
(X4LT36)	◇	DATA NOT AVAILABLE		4.020	.000	7.500
(Y4LT36)	△	DATA NOT AVAILABLE		4.020	.000	7.500

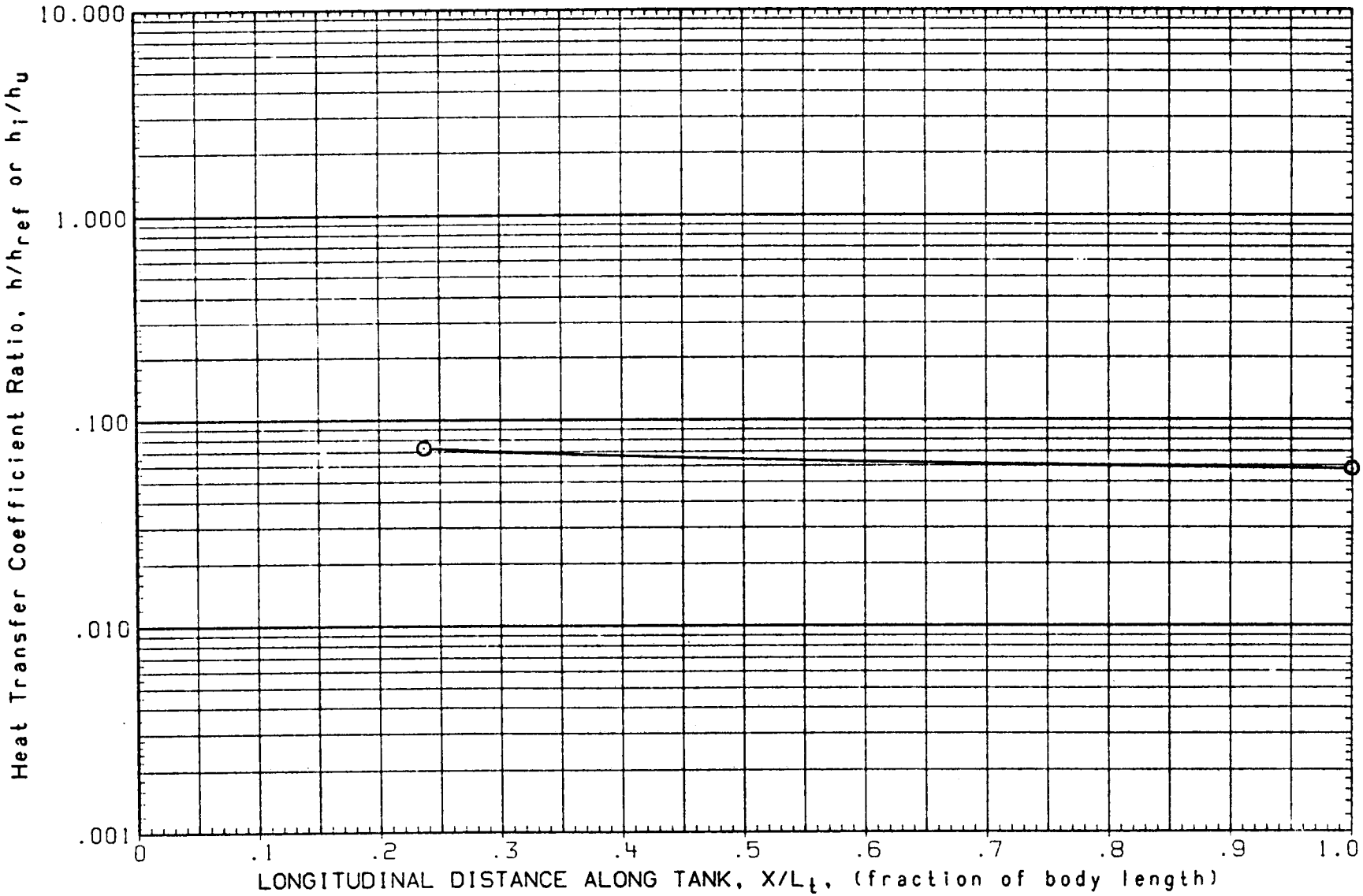

FIG. 4-9 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 355.160

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT42)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	.000	7.500
(C9NT42)	⬠	DATA NOT AVAILABLE		4.020	.000	7.500
(V4LT36)	□	DATA NOT AVAILABLE		4.020	.000	7.500
(X4LT36)	◇	DATA NOT AVAILABLE		4.020	.000	7.500
(Y4LT36)	△	DATA NOT AVAILABLE		4.020	.000	7.500

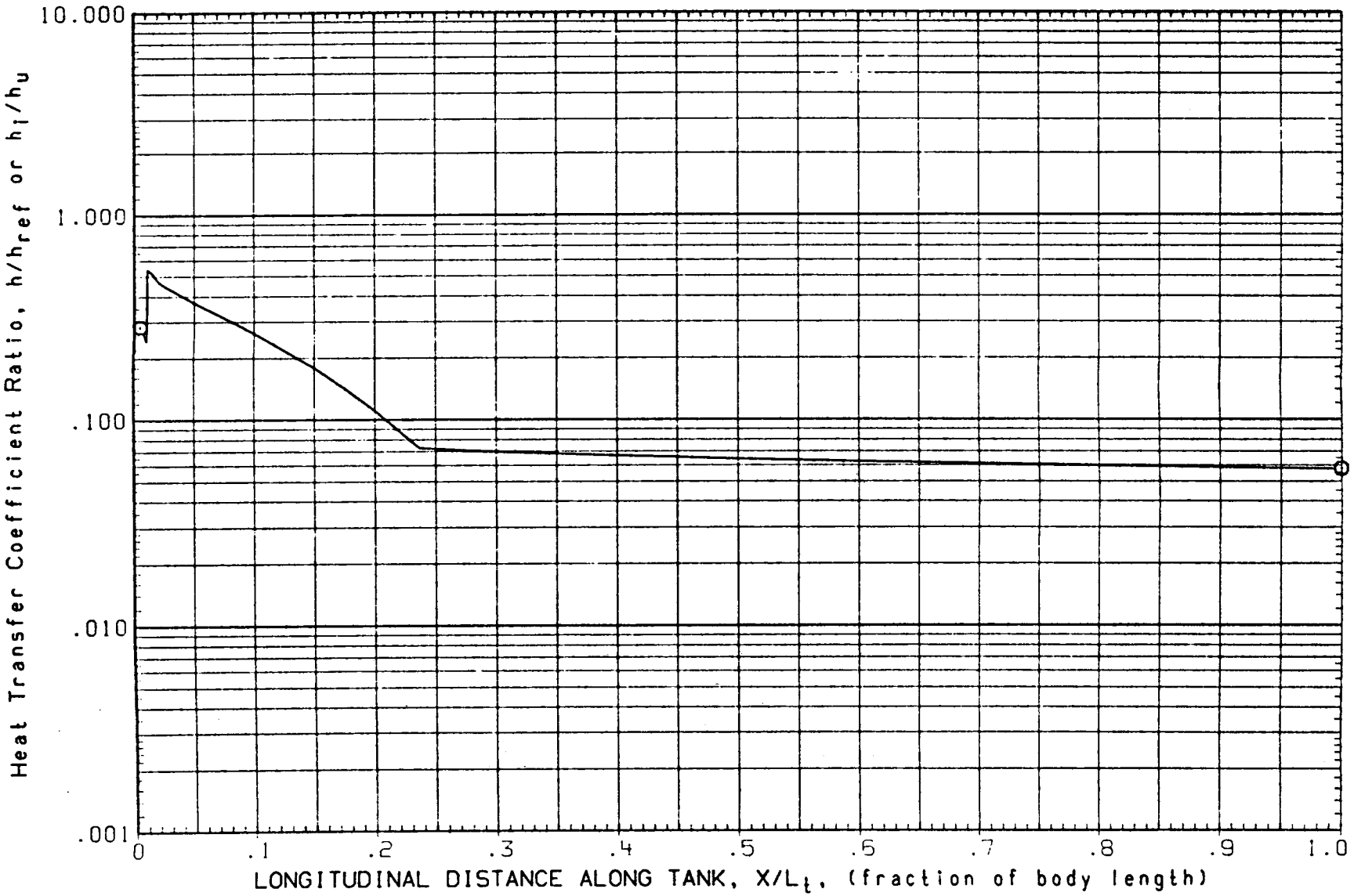

FIG. 4-9 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = .000 PHI = 360.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT18)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-7.500
(C9NT18)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-7.500
(V4LT39)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-7.500
(X4LT39)	◇	IH85 (W.L. TEST) OTS/ET = V4LT39/C9NT18=	HI/HU	4.020	-5.000	-7.500
(Y4LT39)	△	IH85 (W.L. THEORY) OTS/ET = V4LT39/A9NT18=	HI/HU	4.020	-5.000	-7.500

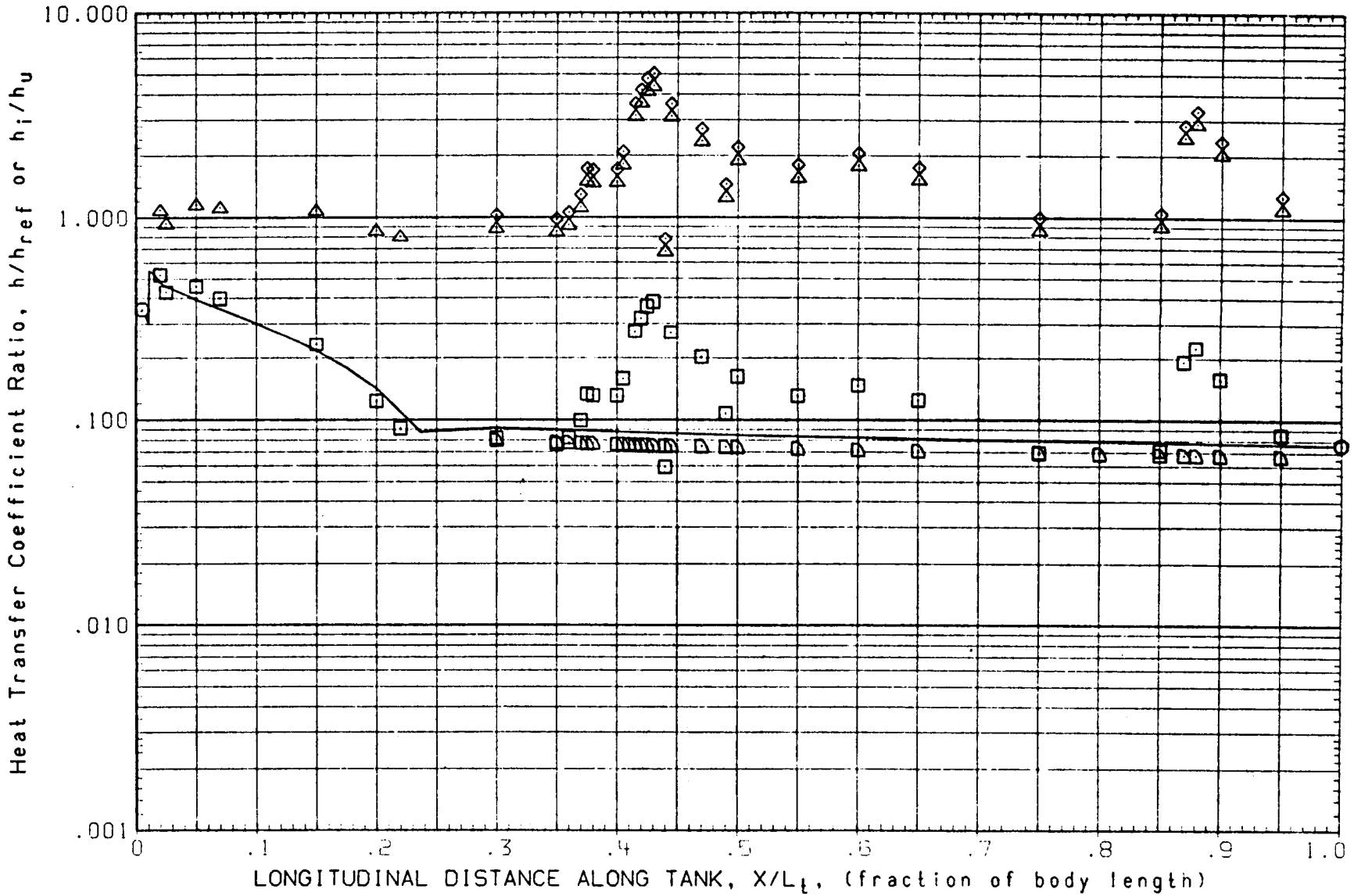

FIG. 4-10 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = .000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT18)	○	DATA NOT AVAILABLE	4.020	-5.000	-7.500
(C9NT18)	⬡	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	4.020	-5.000	-7.500
(V4LT39)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	-5.000	-7.500
(X4LT39)	◇	IH85 (W.L. TEST) OTS/ET = V4LT39/C9NT18= HI/HU	4.020	-5.000	-7.500
(Y4LT39)	△	IH85 (W.L. THEORY) OTS/ET = V4LT39/A9NT18= HI/HU	4.020	-5.000	-7.500

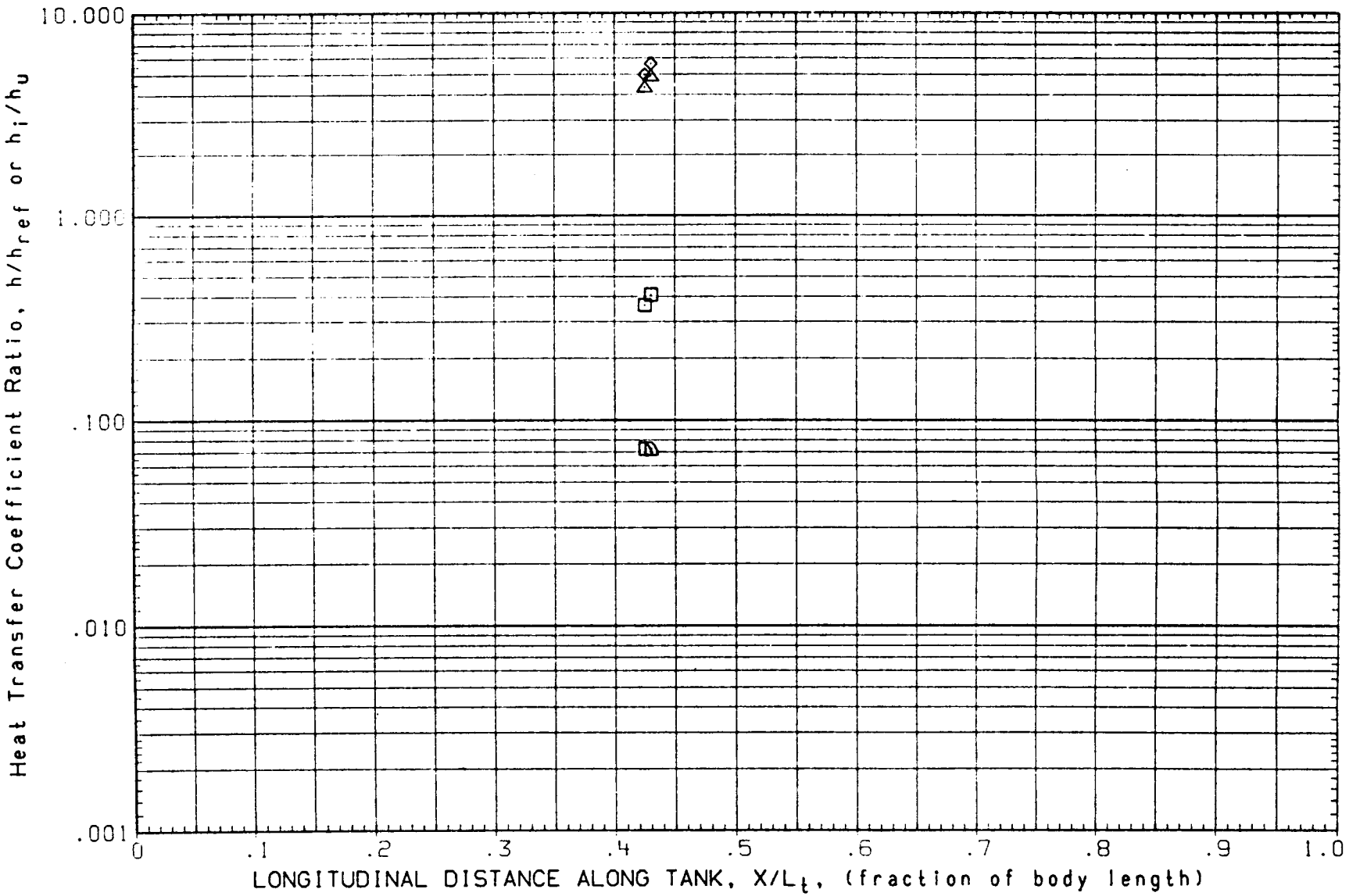

FIG. 4-10 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 5.625

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT18)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-7.500
(C9NT18)	⬡	DATA NOT AVAILABLE		4.020	-5.000	-7.500
(V4LT39)	⬚	DATA NOT AVAILABLE		4.020	-5.000	-7.500
(X4LT39)	◇	DATA NOT AVAILABLE		4.020	-5.000	-7.500
(Y4LT39)	△	DATA NOT AVAILABLE		4.020	-5.000	-7.500

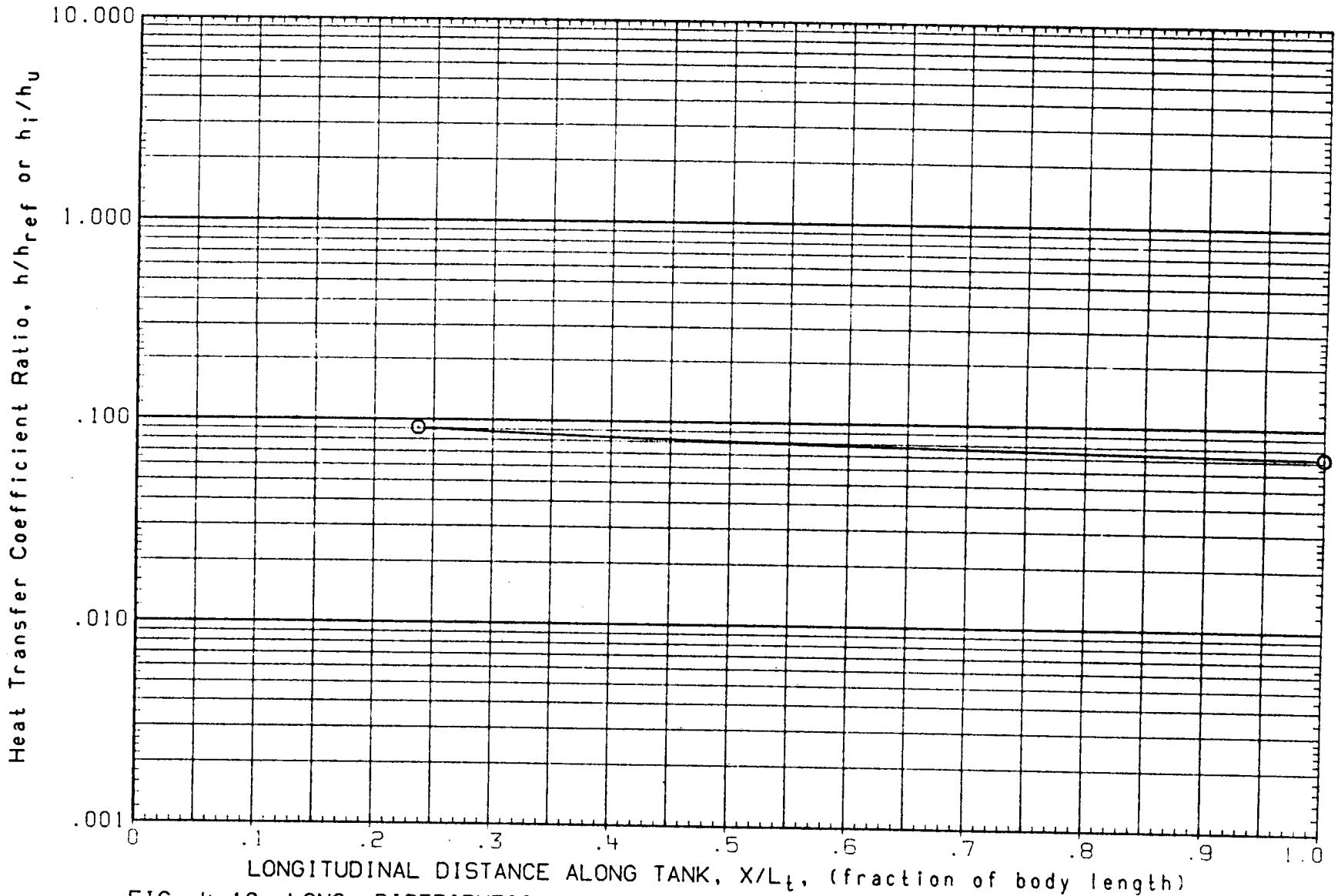

FIG. 4-10 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 5.630

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT18)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-7.500
(C9NT18)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-7.500
(V4LT39)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-7.500
(X4LT39)	◇	IH85 (W.L. TEST) OTS/ET = V4LT39/C9NT18=	HI/HU	4.020	-5.000	-7.500
(Y4LT39)	△	IH85 (W.L. THEORY) OTS/ET = V4LT39/A9NT18=	HI/HU	4.020	-5.000	-7.500

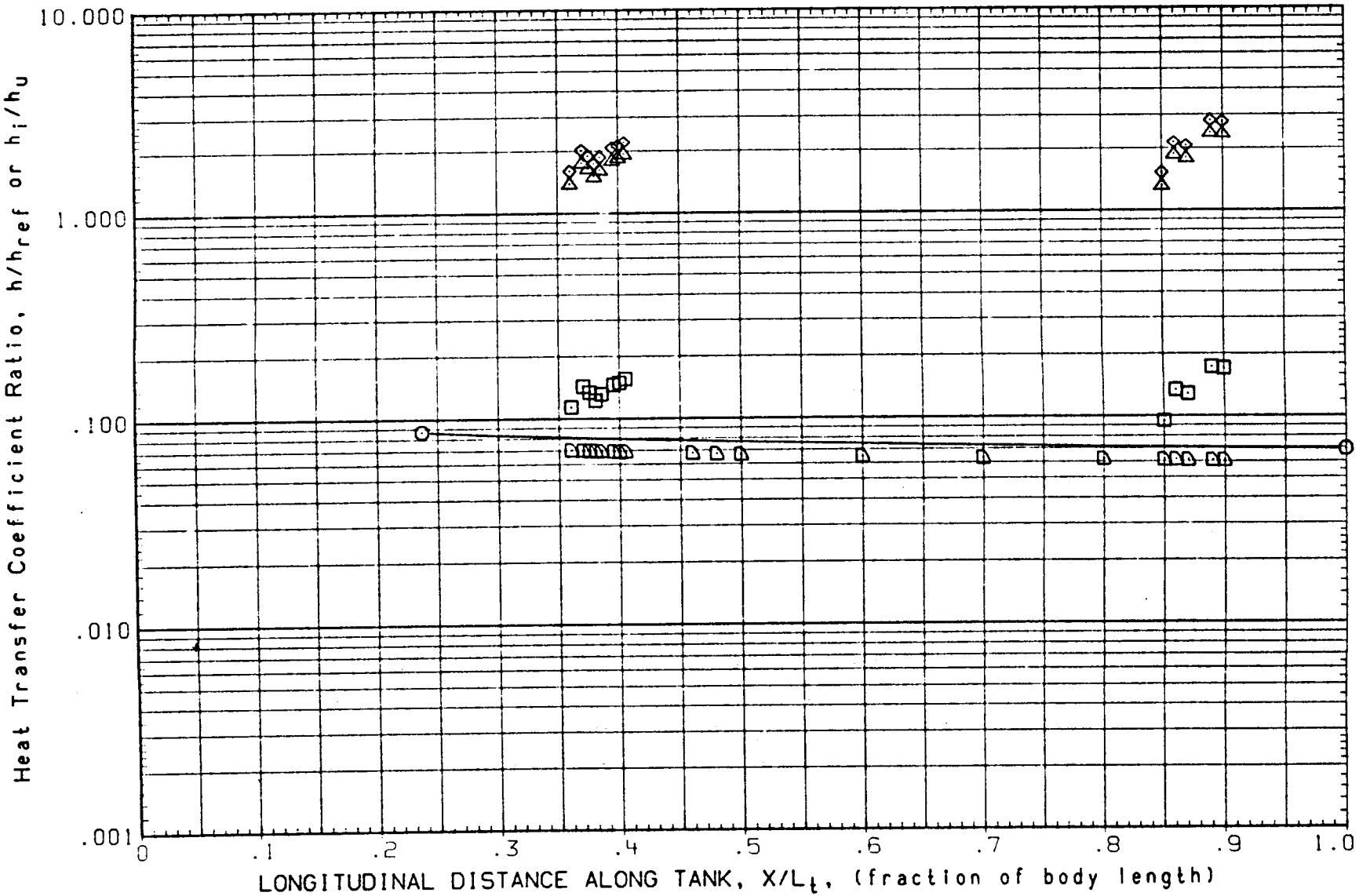

FIG. 4-10 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 11.250

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT18)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-7.500
(C9NT18)	⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-7.500
(V4LT39)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-7.500
(X4LT39)	◇	IH85 (W.L. TEST) OTS/ET = V4LT39/C9NT18=	HI/HU	4.020	-5.000	-7.500
(Y4LT39)	△	IH85 (W.L. THEORY) OTS/ET = V4LT39/A9NT18=	HI/HU	4.020	-5.000	-7.500

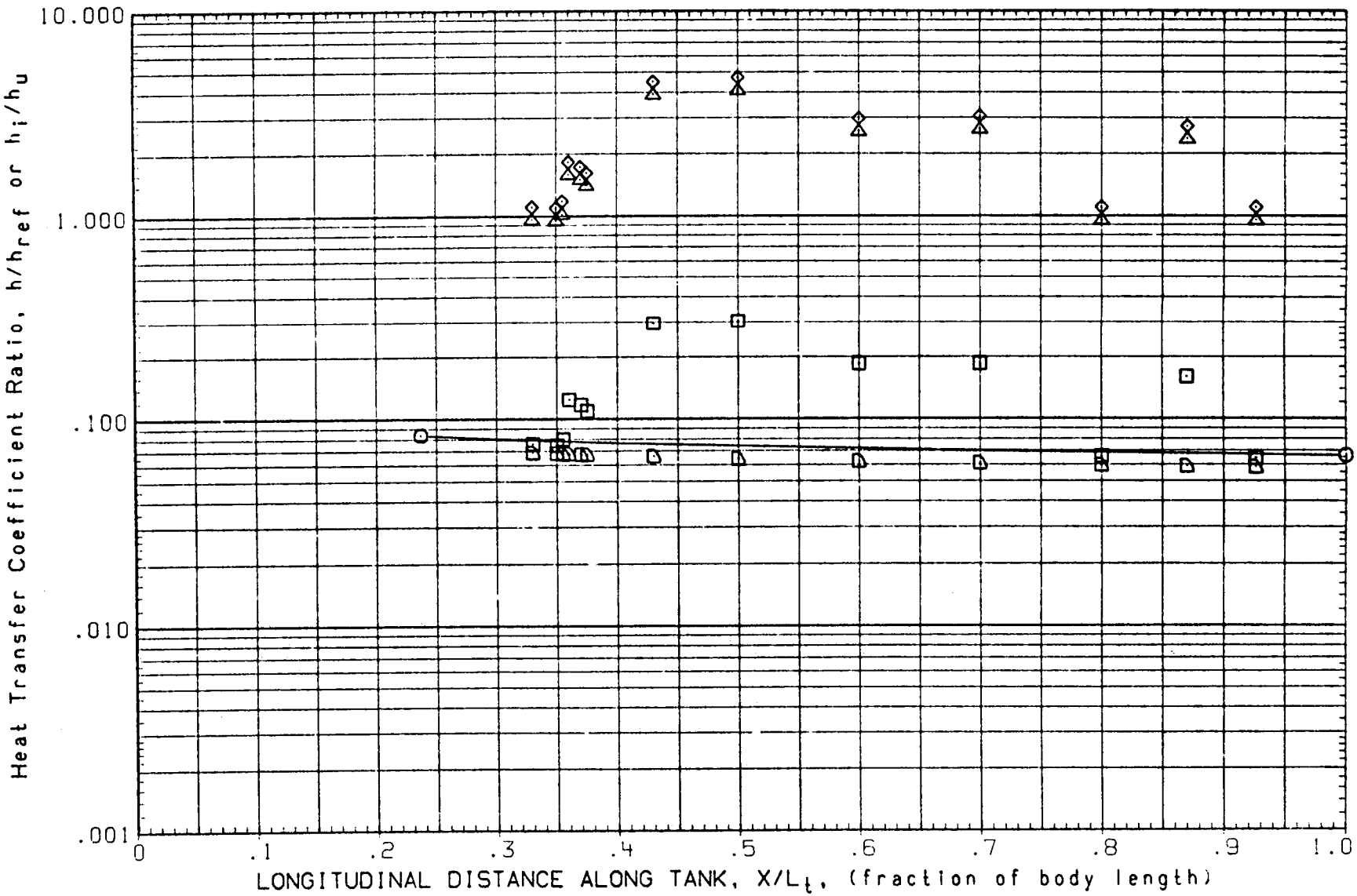

FIG. 4-10 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 17.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT18)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-7.500
(C9NT18)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-7.500
(V4LT39)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-7.500
(X4LT39)	◇	IH85 (W.L. TEST) OTS/ET = V4LT39/C9NT18=	HI/HU	4.020	-5.000	-7.500
(Y4LT39)	△	IH85 (W.L. THEORY) OTS/ET = V4LT39/A9NT18=	HI/HU	4.020	-5.000	-7.500

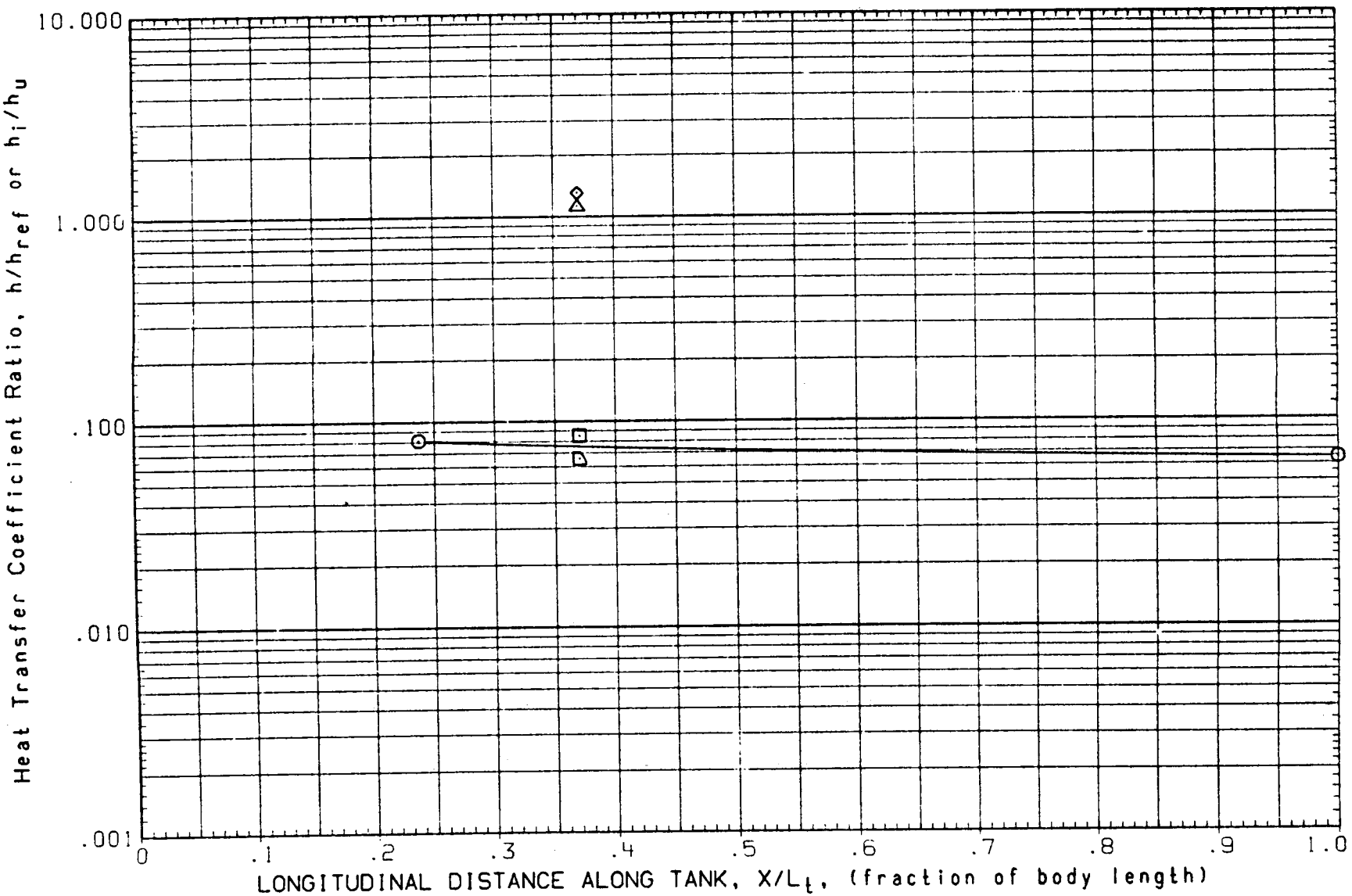

FIG. 4-10 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 20.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT18)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-7.500
(C9NT18)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-7.500
(V4LT39)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-7.500
(X4LT39)	◇	IH85 (W.L. TEST) OTS/ET = V4LT39/C9NT18=	HI/HU	4.020	-5.000	-7.500
(Y4LT39)	△	IH85 (W.L. THEORY) OTS/ET = V4LT39/A9NT18=	HI/HU	4.020	-5.000	-7.500

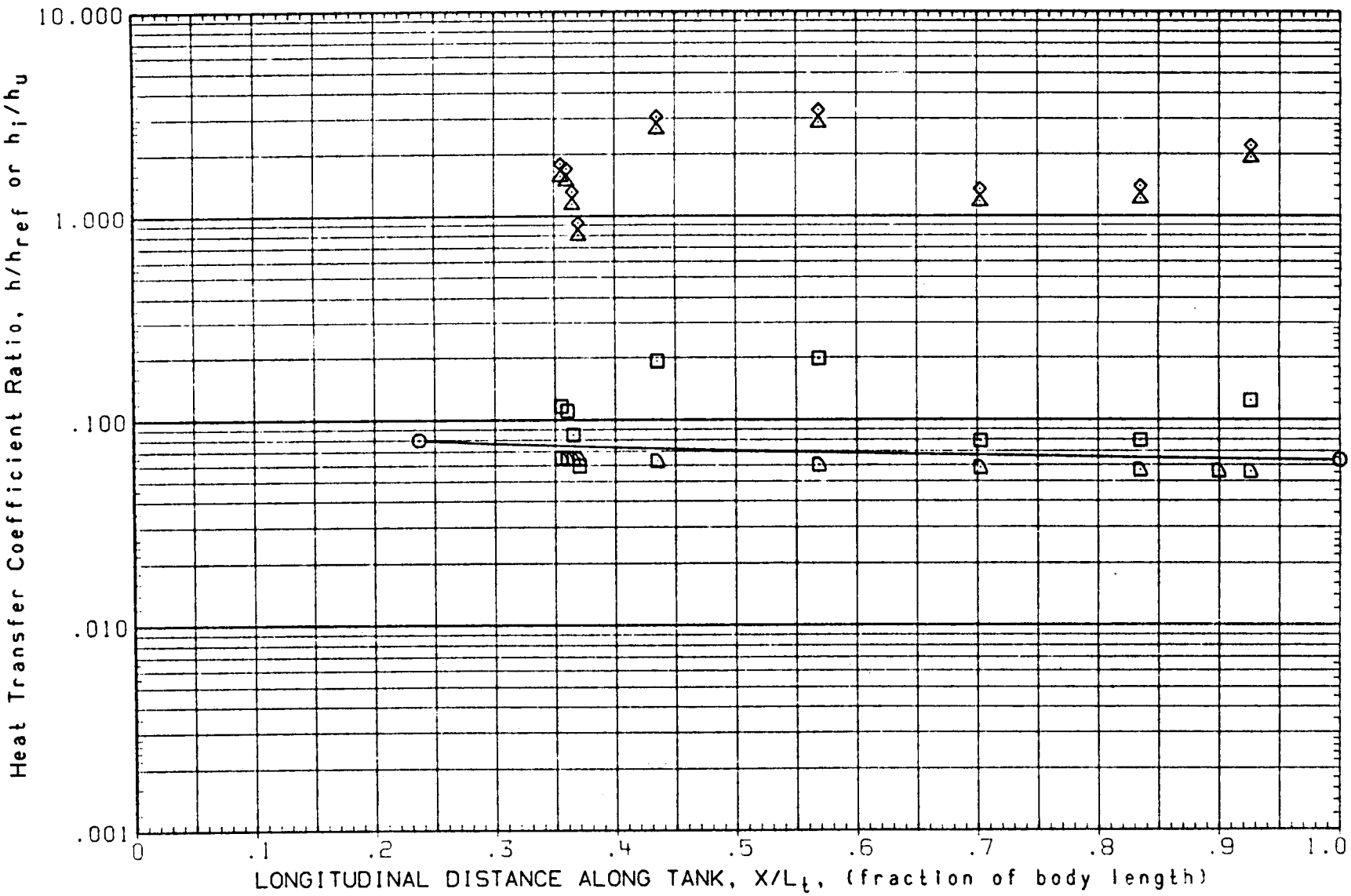

FIG. 4-10 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 23.070

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT18)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-7.500
(C9NT18)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-7.500
(V4LT39)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) 5		4.020	-5.000	-7.500
(X4LT39)	◇	IH85 (W.L. TEST) OTS/ET = V4LT39/C9NT18= HI/HU		4.020	-5.000	-7.500
(Y4LT39)	△	IH85 (W.L. THEORY) OTS/ET = V4LT39/A9NT18= HI/HU		4.020	-5.000	-7.500

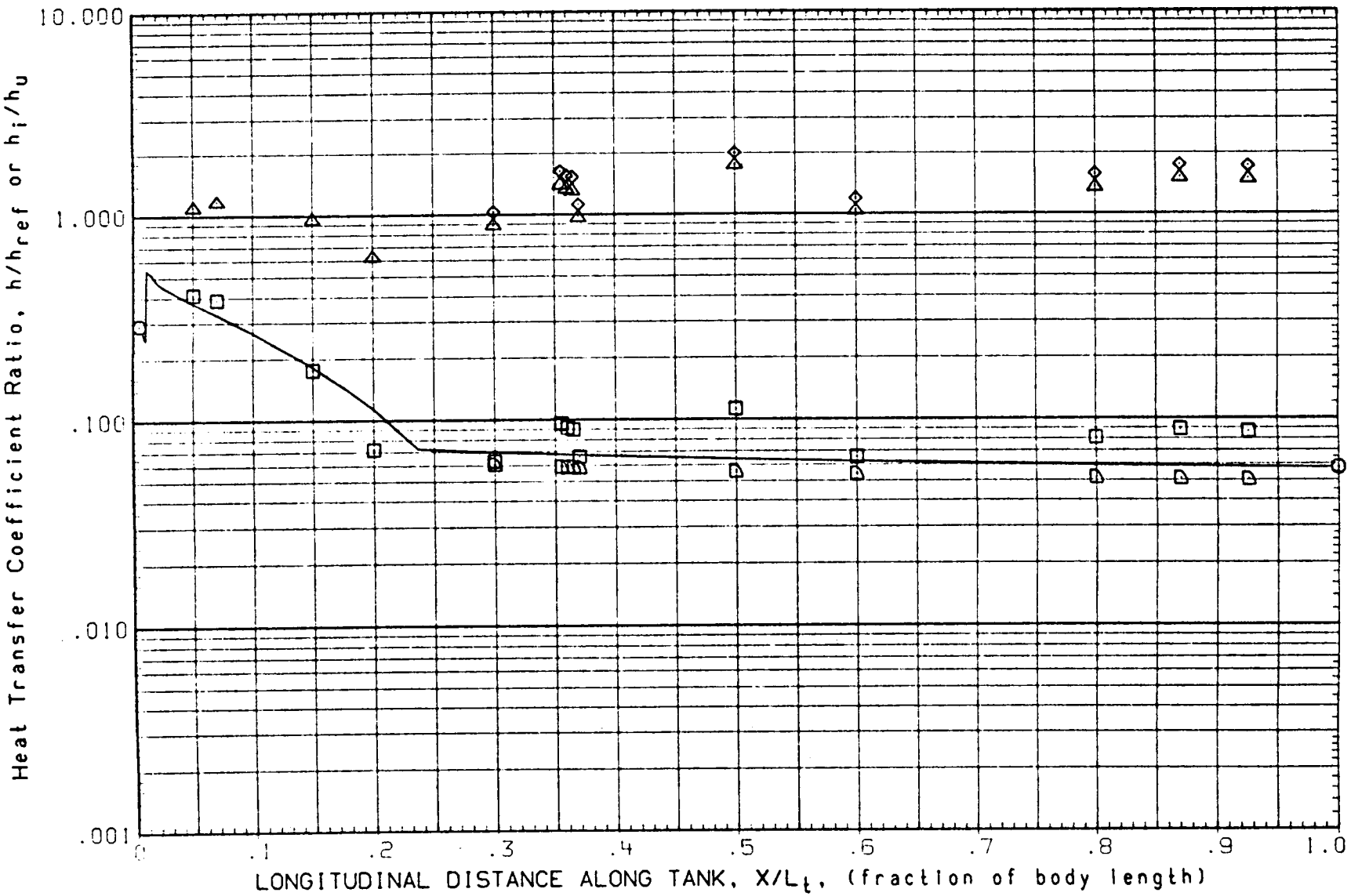

FIG. 4-10 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 29.800

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT18)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-7.500
(C9NT18)	⊘	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-7.500
(V4LT39)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-7.500
(X4LT39)	◇	IH85 (W.L. TEST) OTS/ET = V4LT39/C9NT18= HI/HU		4.020	-5.000	-7.500
(Y4LT39)	△	IH85 (W.L. THEORY) OTS/ET = V4LT39/A9NT18= HI/HU		4.020	-5.000	-7.500

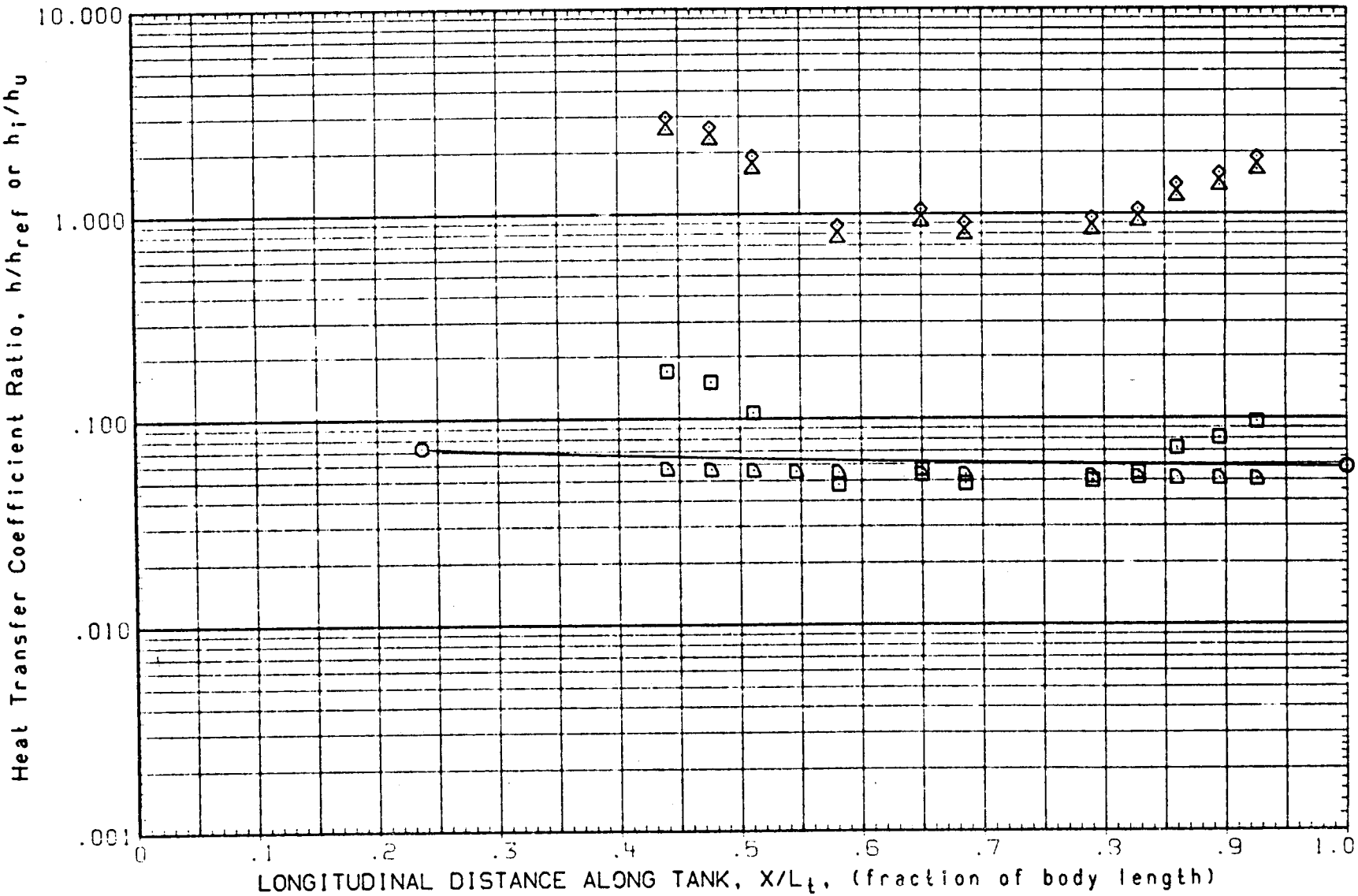

FIG. 4-10 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 31.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT18)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-7.500
(C9NT18)	□	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-7.500
(V4LT39)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-7.500
(X4LT39)	◇	IH85 (W.L. TEST) OTS/ET = V4LT39/C9NT18=	HI/HU	4.020	-5.000	-7.500
(Y4LT39)	△	IH85 (W.L. THEORY) OTS/ET = V4LT39/A9NT18=	HI/HU	4.020	-5.000	-7.500

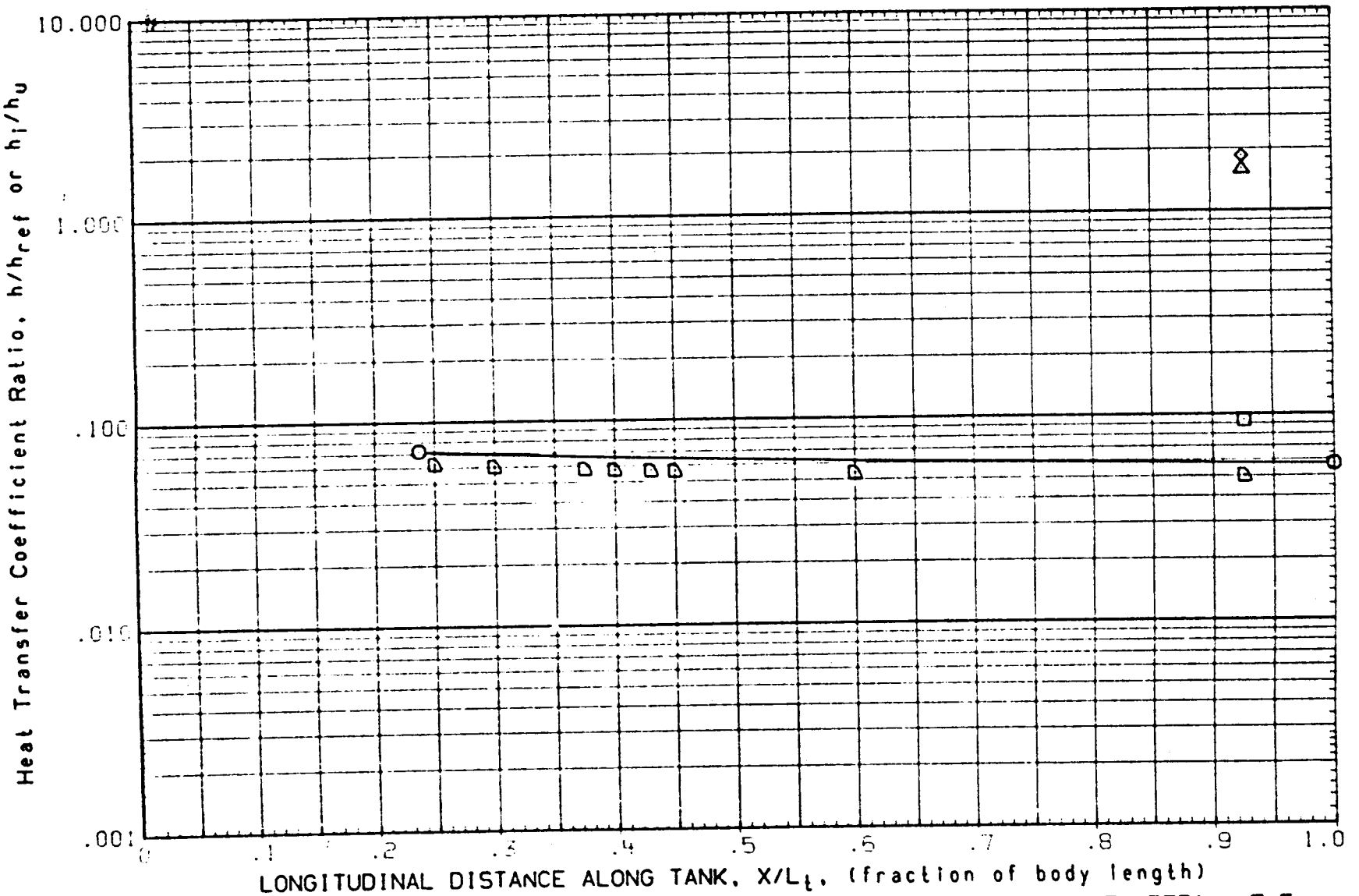

FIG. 4-10 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 33.750

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT18)	○	EXTERNAL TANK THEORY, N.S., TURBULENT	HU/HREF	4.020	-5.000	-7.500
(C9NT18)	□	TANK ALONE (HEATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-7.500
(V4LT39)	□	IH45, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-7.500
(X4LT39)	◇	IH45 (W.L. TEST) OTS/ET = V4LT39/C9NT18* HI/HU		4.020	-5.000	-7.500
(Y4LT39)	△	IH45 (W.L. THEORY) OTS/ET = V4LT39/A9NT18* HI/HU		4.020	-5.000	-7.500

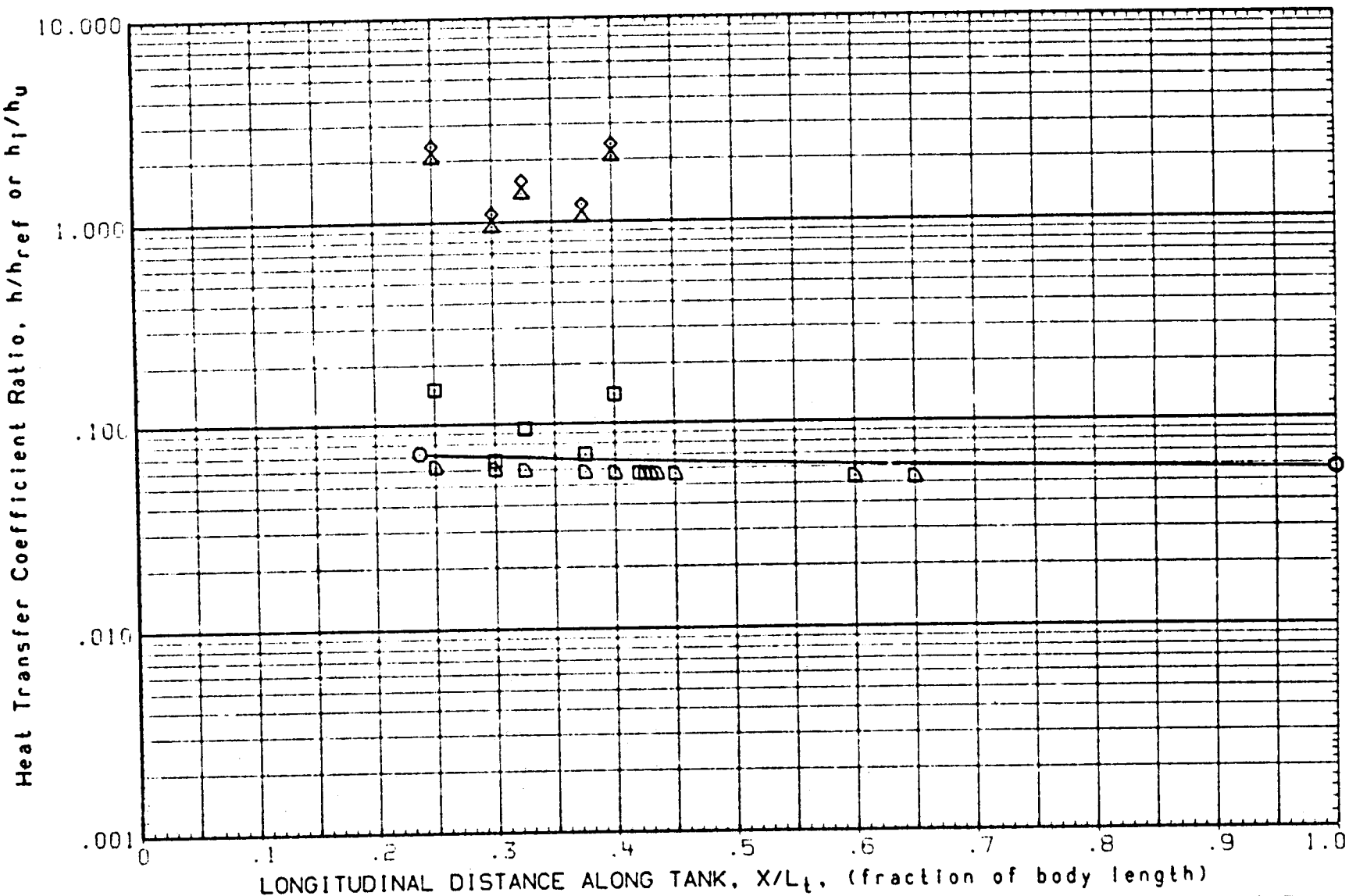

FIG. 4-10 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI - 36.320

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT18)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-7.500
(C9NT18)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-7.500
(V4LT39)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-7.500
(X4LT39)	◇	IH85 (W.L. TEST) OTS/ET = V4LT39/C9NT18=	HI/HU	4.020	-5.000	-7.500
(Y4LT39)	△	IH85 (W.L. THEORY) OTS/ET = V4LT39/A9NT18=	HI/HU	4.020	-5.000	-7.500

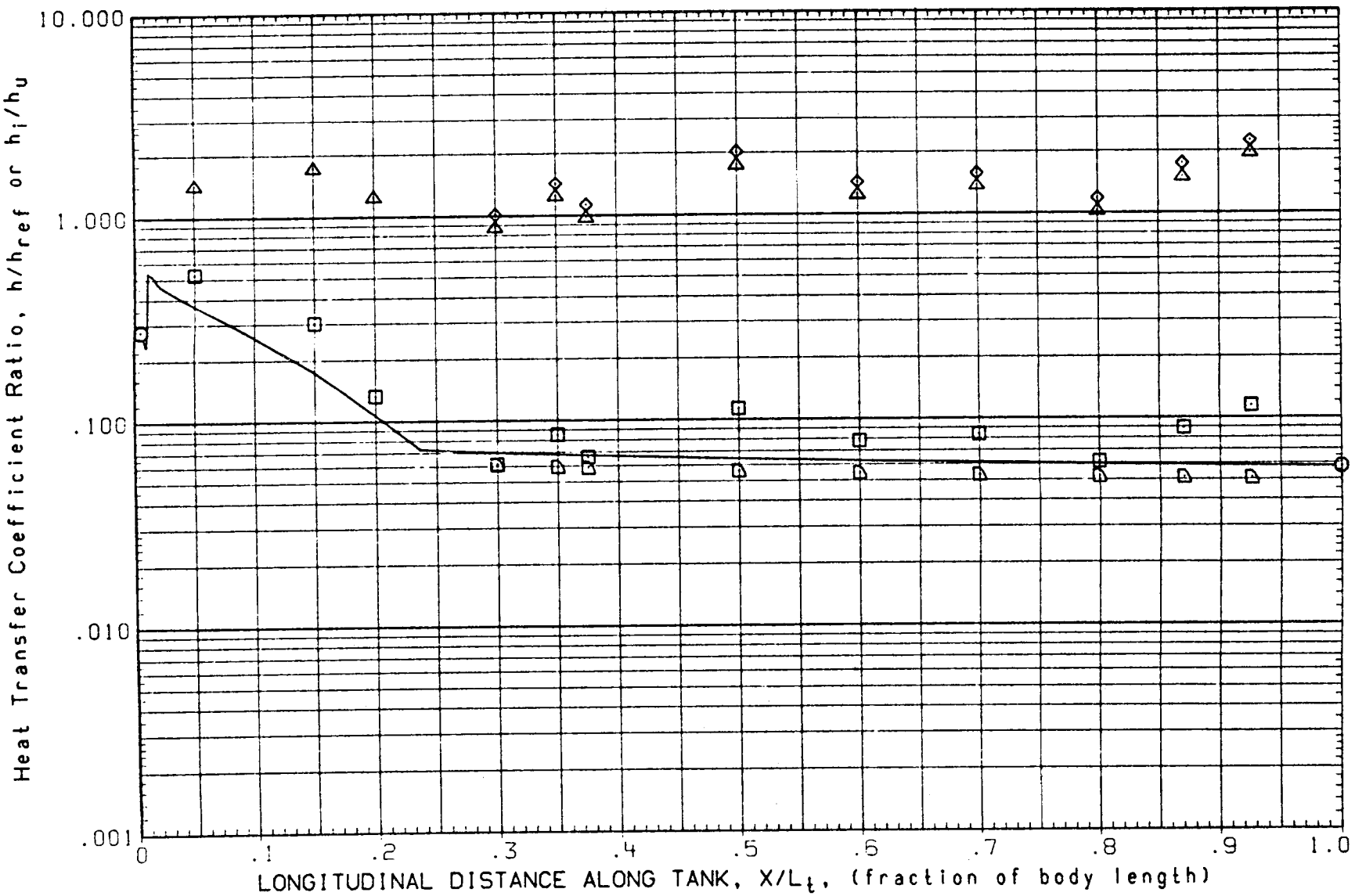

FIG. 4-10 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -7.5
⊡ 0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 37.700

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT18)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-7.500
(C9NT18)	⌂	DATA NOT AVAILABLE		4.020	-5.000	-7.500
(V4LT39)	□	DATA NOT AVAILABLE		4.020	-5.000	-7.500
(X4LT39)	◇	DATA NOT AVAILABLE		4.020	-5.000	-7.500
(Y4LT39)	△	DATA NOT AVAILABLE		4.020	-5.000	-7.500

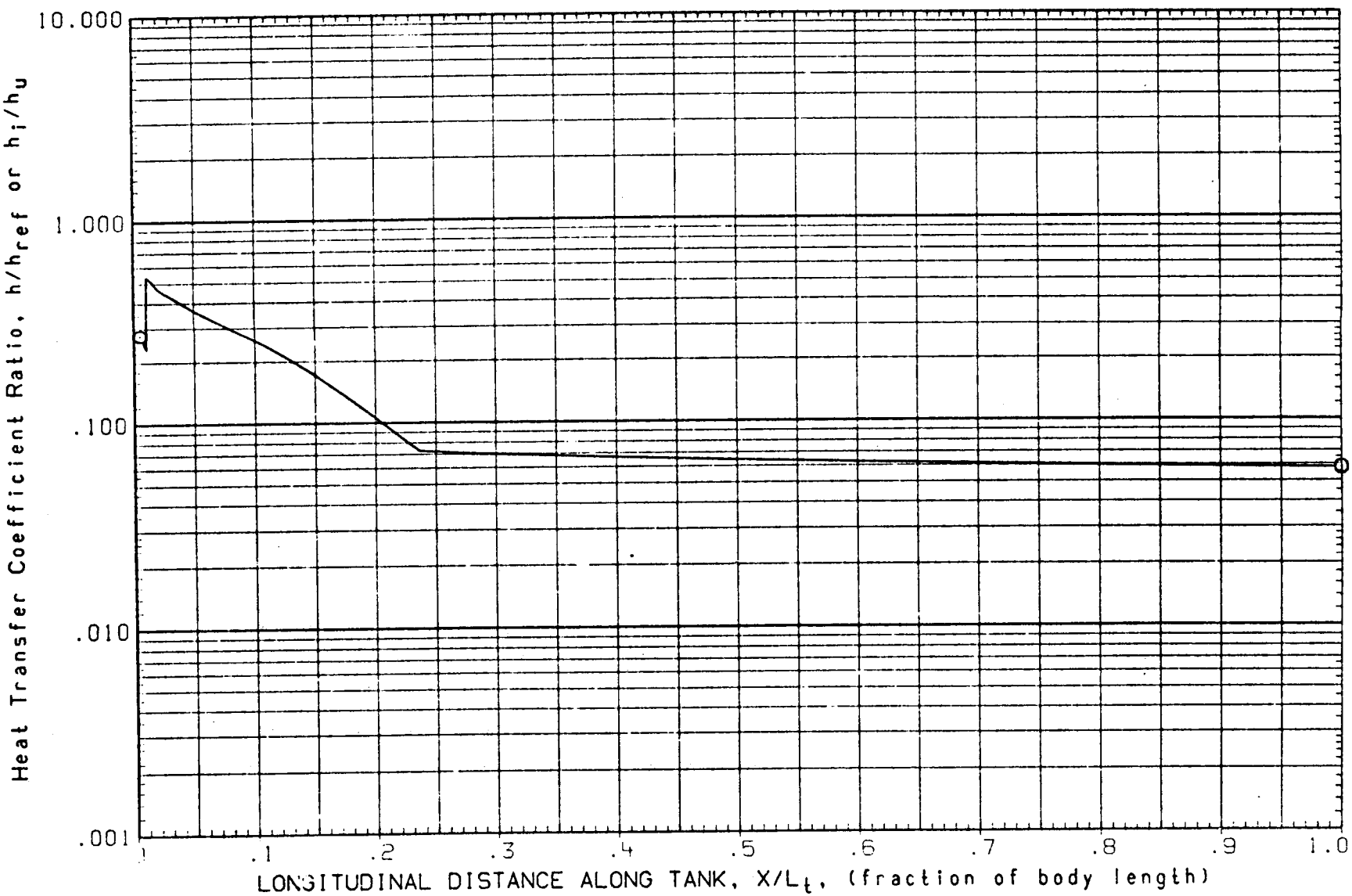

FIG. 4-10 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 39.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT18)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-7.500
(C9NT18)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-7.500
(V4LT39)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-7.500
(X4LT39)	◇	IH85 (W.L. TEST) OTS/ET = V4LT39/C9NT18= HI/HU		4.020	-5.000	-7.500
(Y4LT39)	△	IH85 (W.L. THEORY) OTS/ET = V4LT39/A9NT18= HI/HU		4.020	-5.000	-7.500

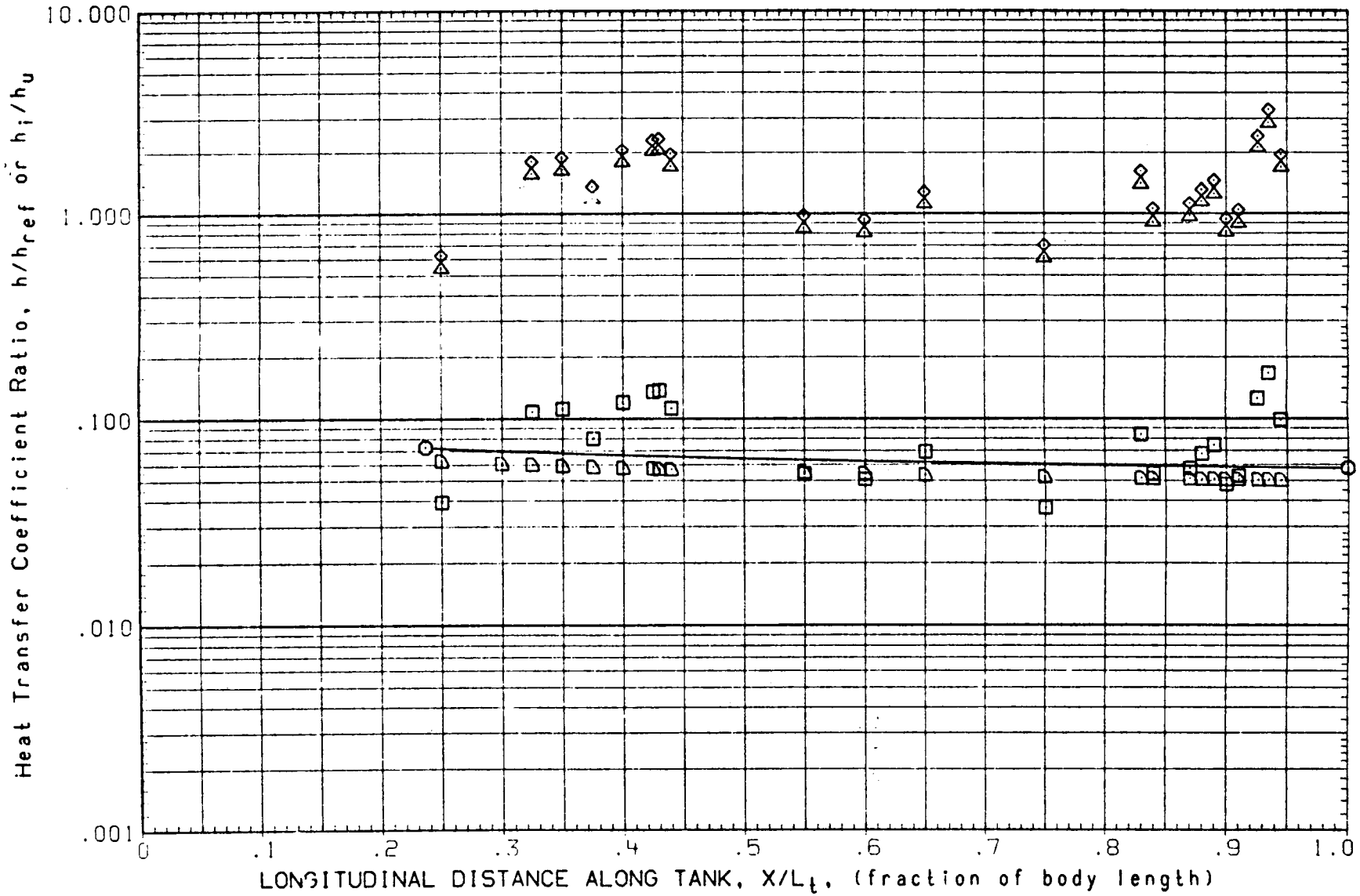

FIG. 4-10 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 45.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT18)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-7.500
(C9NT18)	⊐	DATA NOT AVAILABLE		4.020	-5.000	-7.500
(V4LT39)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-7.500
(X4LT39)	◇	DATA NOT AVAILABLE		4.020	-5.000	-7.500
(Y4LT39)	△	IH85 (W.L. THEORY) OTS/ET = V4LT39/A9NT18= HI/HU		4.020	-5.000	-7.500

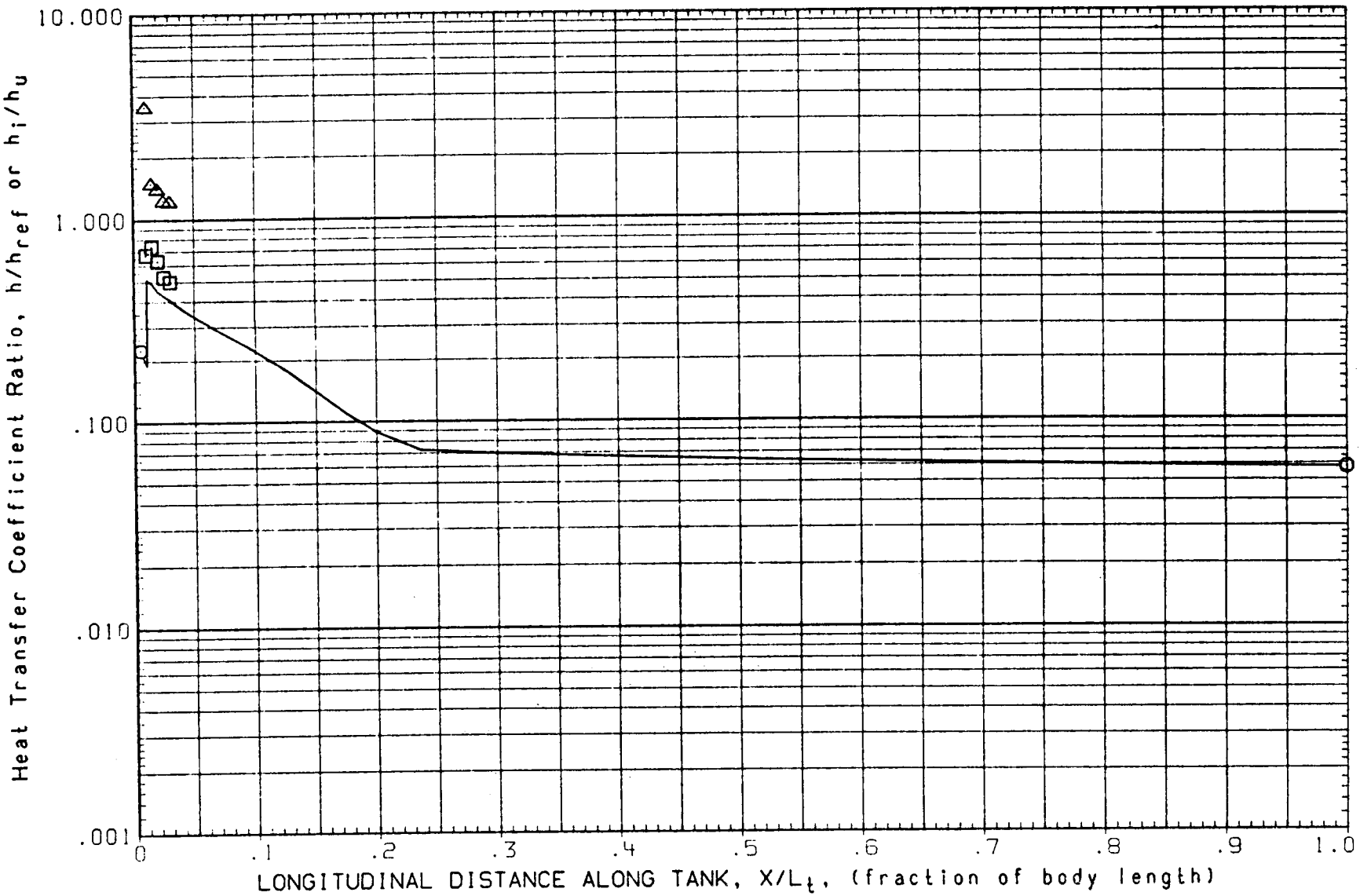

FIG. 4-10 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 180.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT18)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-7.500
(C9NT18)	◻	DATA NOT AVAILABLE		4.020	-5.000	-7.500
(V4LT39)	◻	DATA NOT AVAILABLE		4.020	-5.000	-7.500
(X4LT39)	◇	DATA NOT AVAILABLE		4.020	-5.000	-7.500
(Y4LT39)	△	DATA NOT AVAILABLE		4.020	-5.000	-7.500

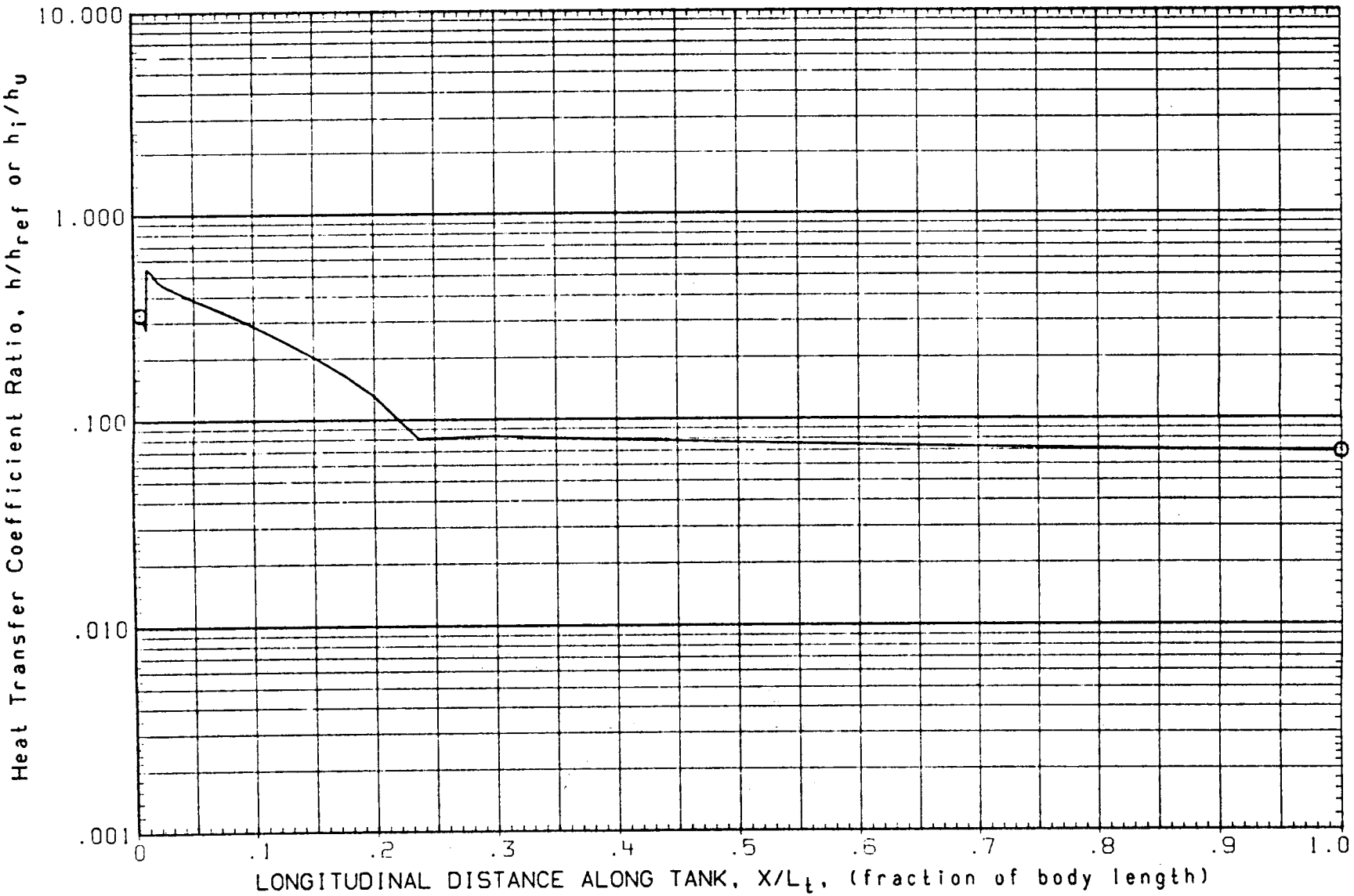

FIG. 4-10 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 235.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT18)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-7.500
(C9NT18)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-7.500
(V4LT39)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-7.500
(X4LT39)	◇	IH85 (W.L. TEST) OTS/ET = V4LT39/C9NT18=	HI/HU	4.020	-5.000	-7.500
(Y4LT39)	△	IH85 (W.L. THEORY) OTS/ET = V4LT39/A9NT18=	HI/HU	4.020	-5.000	-7.500

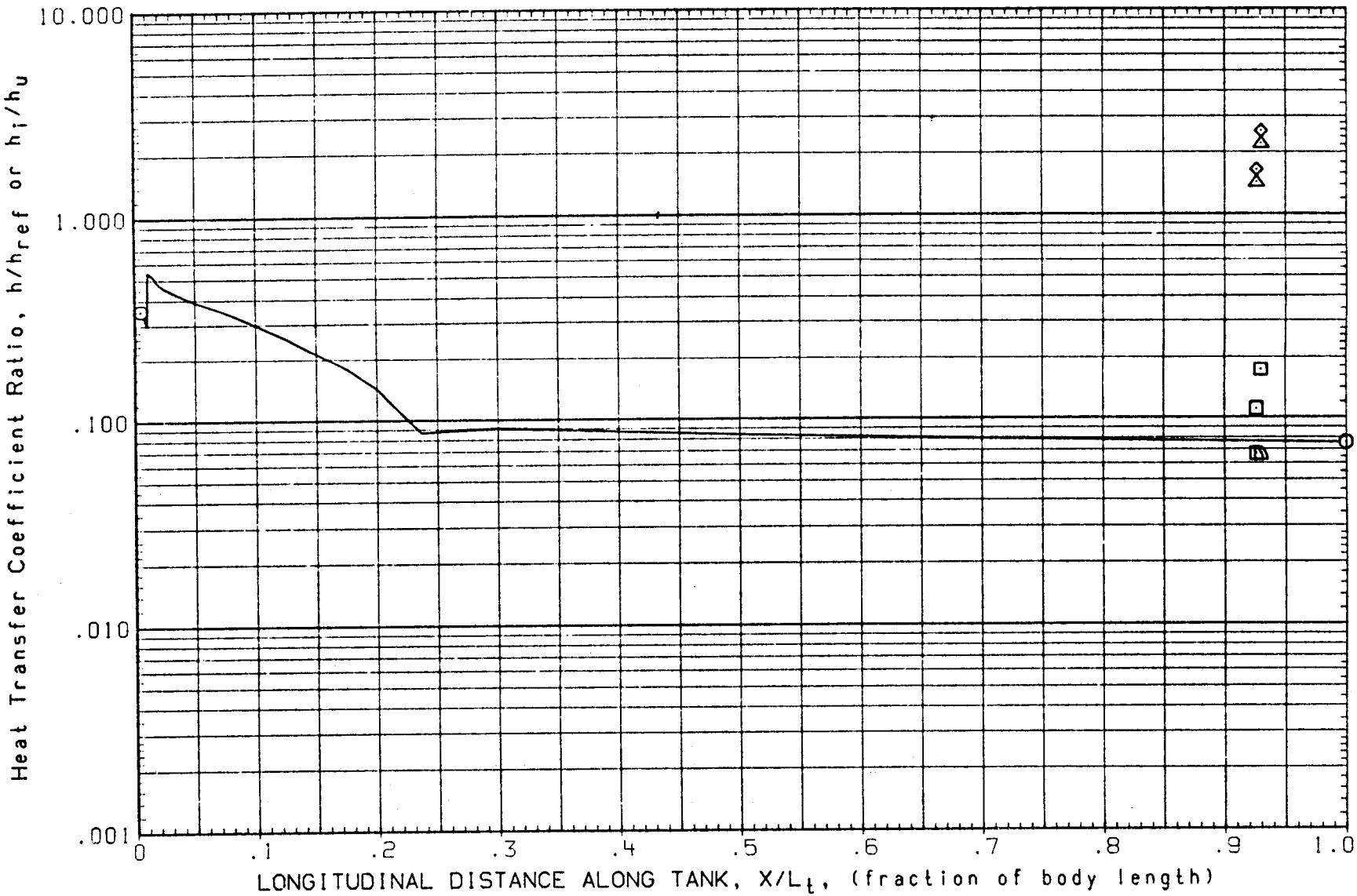

FIG. 4-10 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 247.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT18)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-7.500
(C9NT18)	⌂	DATA NOT AVAILABLE		4.020	-5.000	-7.500
(V4LT39)	□	DATA NOT AVAILABLE		4.020	-5.000	-7.500
(X4LT39)	◇	DATA NOT AVAILABLE		4.020	-5.000	-7.500
(Y4LT39)	△	DATA NOT AVAILABLE		4.020	-5.000	-7.500

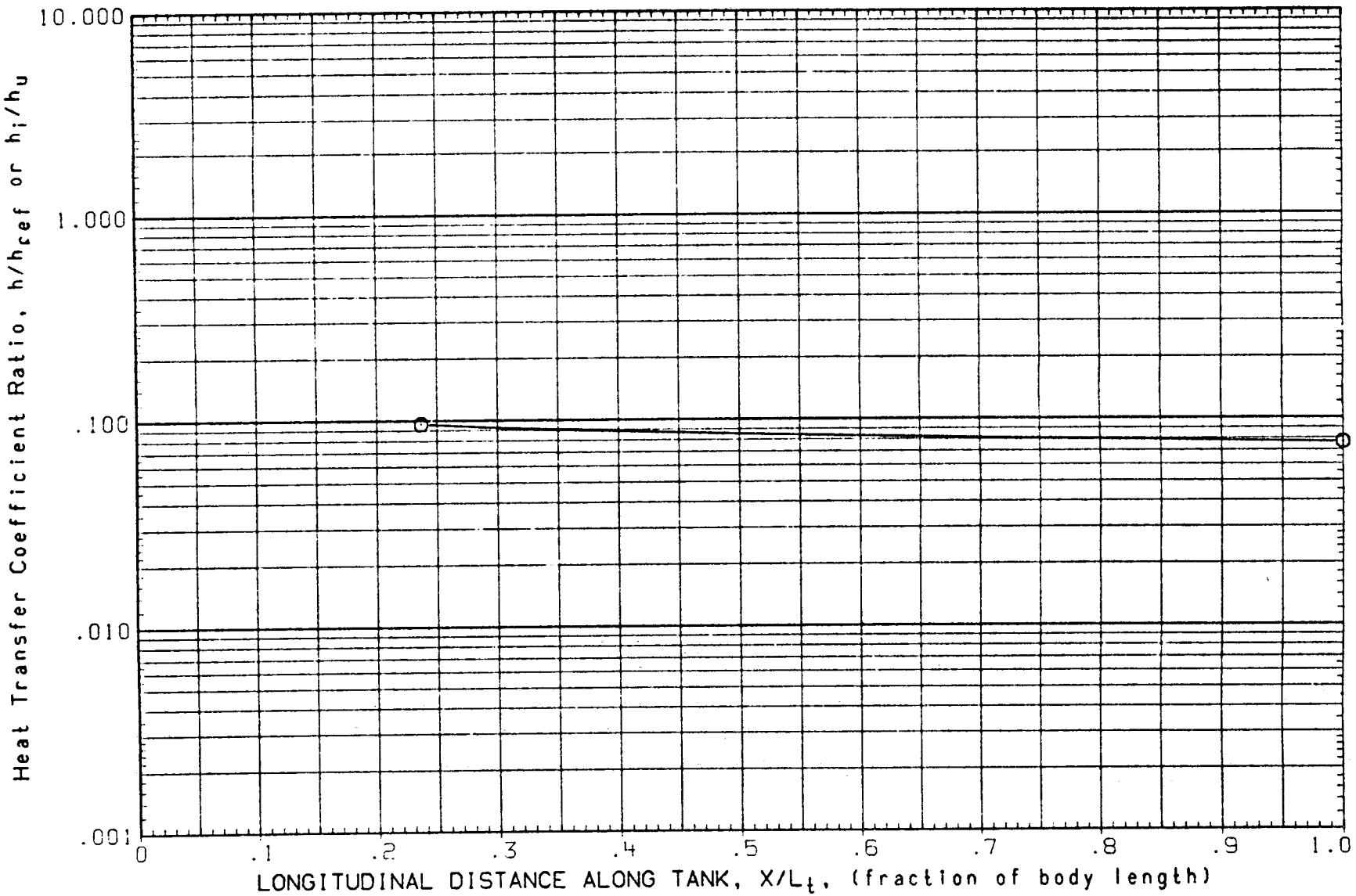

FIG. 4-10 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 247.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT18)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-7.500
(C9NT18)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-7.500
(V4LT39)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-7.500
(X4LT39)	◇	IH85 (W.L. TEST) OTS/ET = V4LT39/C9NT18=	HI/HU	4.020	-5.000	-7.500
(Y4LT39)	△	IH85 (W.L. THEORY) OTS/ET = V4LT39/A9NT18=	HI/HU	4.020	-5.000	-7.500

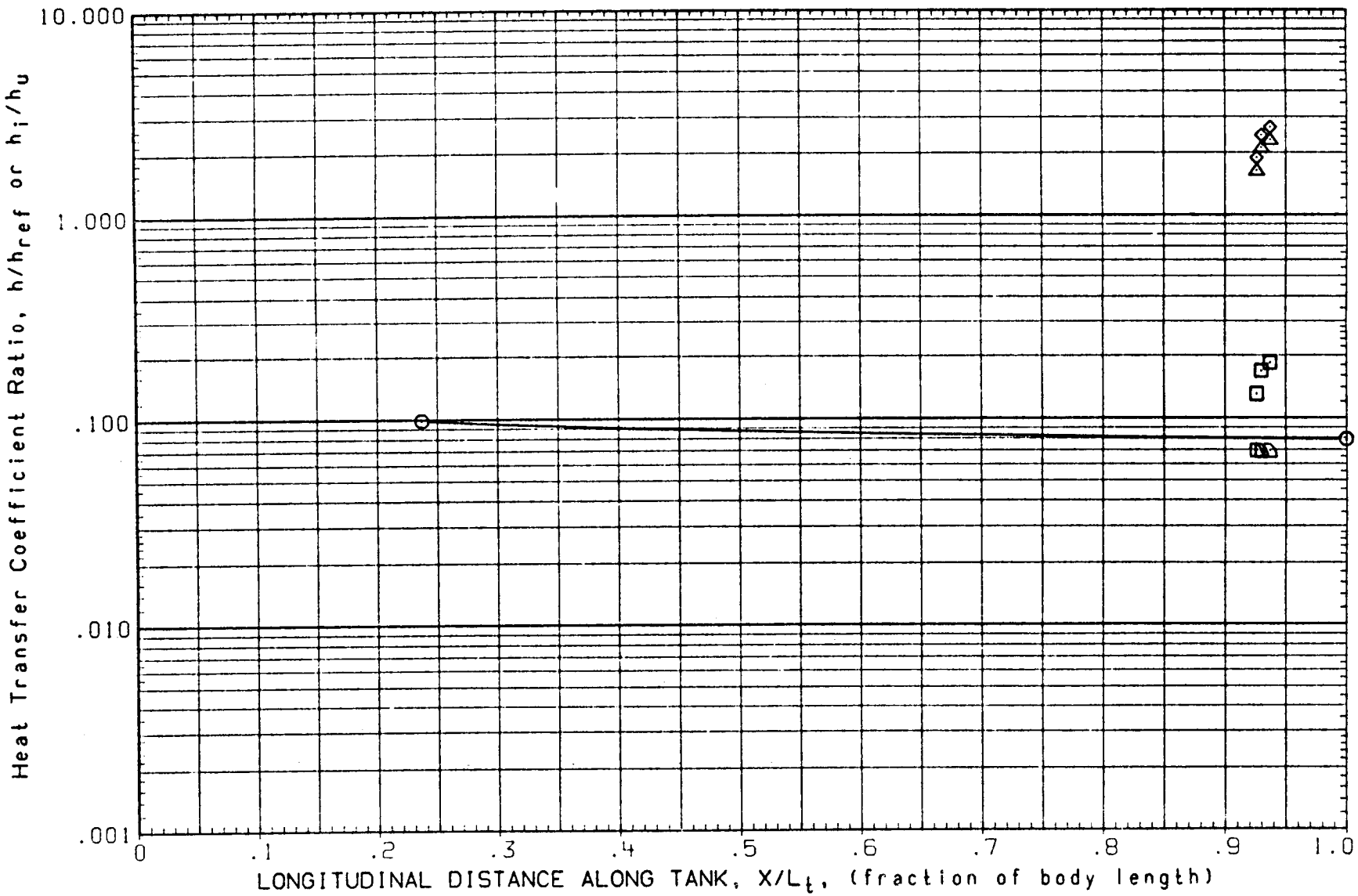

FIG. 4-10 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 250.570

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT18)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-7.500
(C9NT18)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-7.500
(V4LT39)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-7.500
(X4LT39)	◇	IH85 (W.L. TEST) OTS/ET = V4LT39/C9NT18= HI/HU		4.020	-5.000	-7.500
(Y4LT39)	△	IH85 (W.L. THEORY) OTS/ET = V4LT39/A9NT18= HI/HU		4.020	-5.000	-7.500

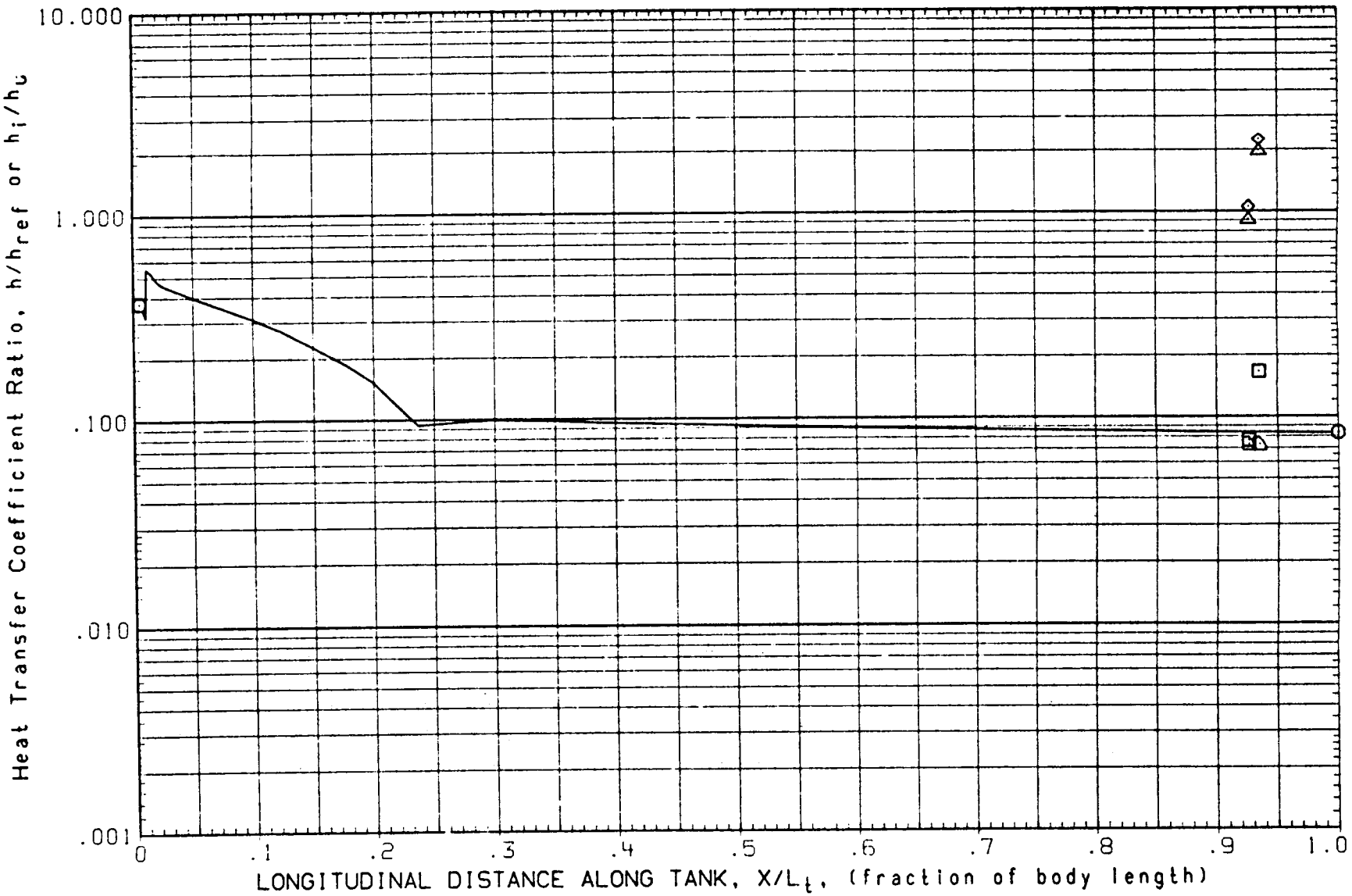

FIG. 4-10 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 258.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT18)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-7.500
(C9NT18)	⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-7.500
(V4LT39)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-7.500
(X4LT39)	◇	IH85 (W.L. TEST) OTS/ET = V4LT39/C9NT18=	HI/HU	4.020	-5.000	-7.500
(Y4LT39)	△	IH85 (W.L. THEORY) OTS/ET = V4LT39/A9NT18=	HI/HU	4.020	-5.000	-7.500

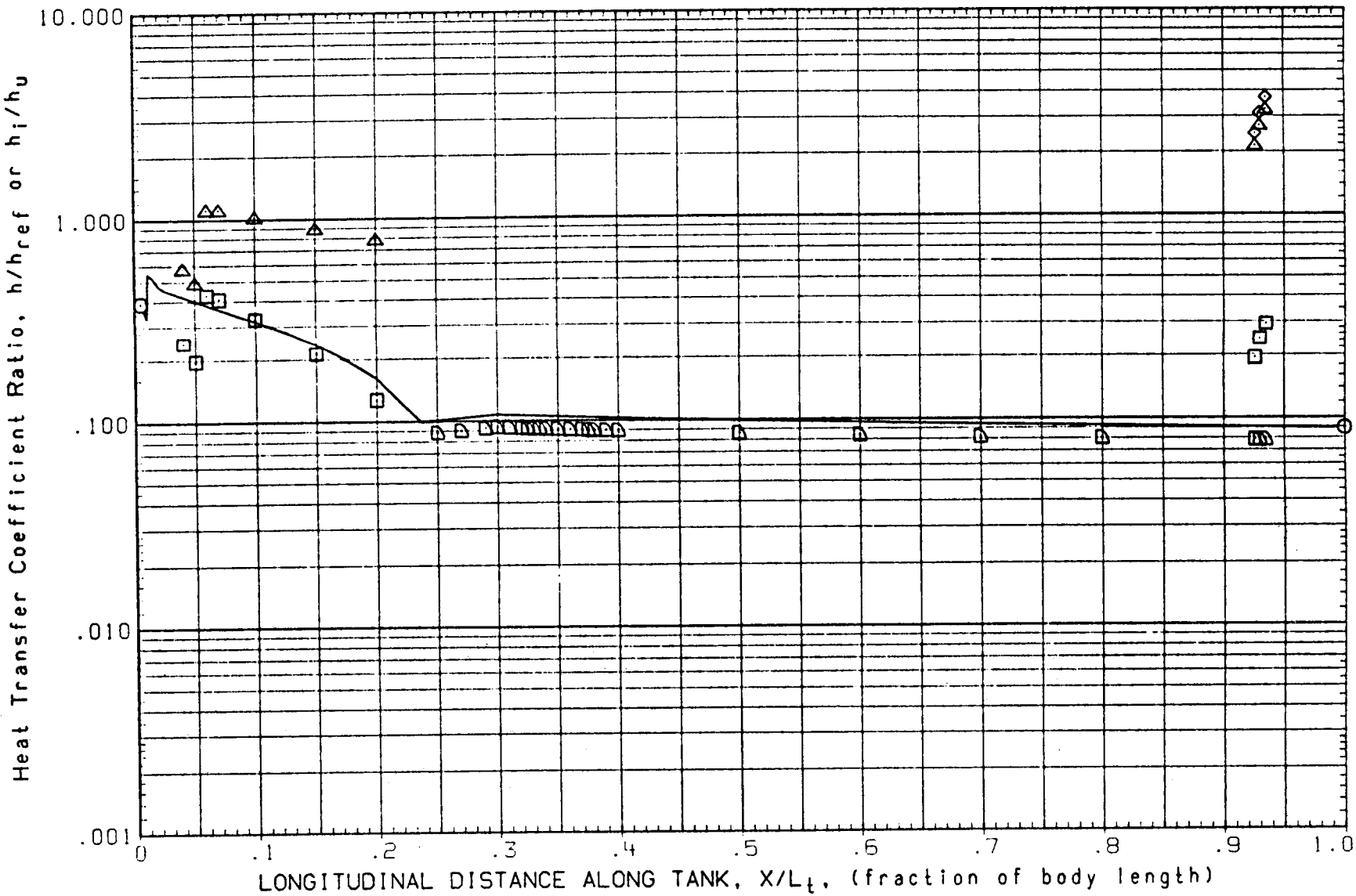

FIG. 4-10 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 270.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT18)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-7.500
(C9NT18)	▷	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-7.500
(V4LT39)	□	IH35, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-7.500
(X4LT39)	◇	IH85 (W,L, TEST) OTS/ET = V4LT39/C9NT18= HI/HU		4.020	-5.000	-7.500
(Y4LT39)	△	IH85 (W,L, THEORY) OTS/ET = V4LT39/A9NT18= HI/HU		4.020	-5.000	-7.500

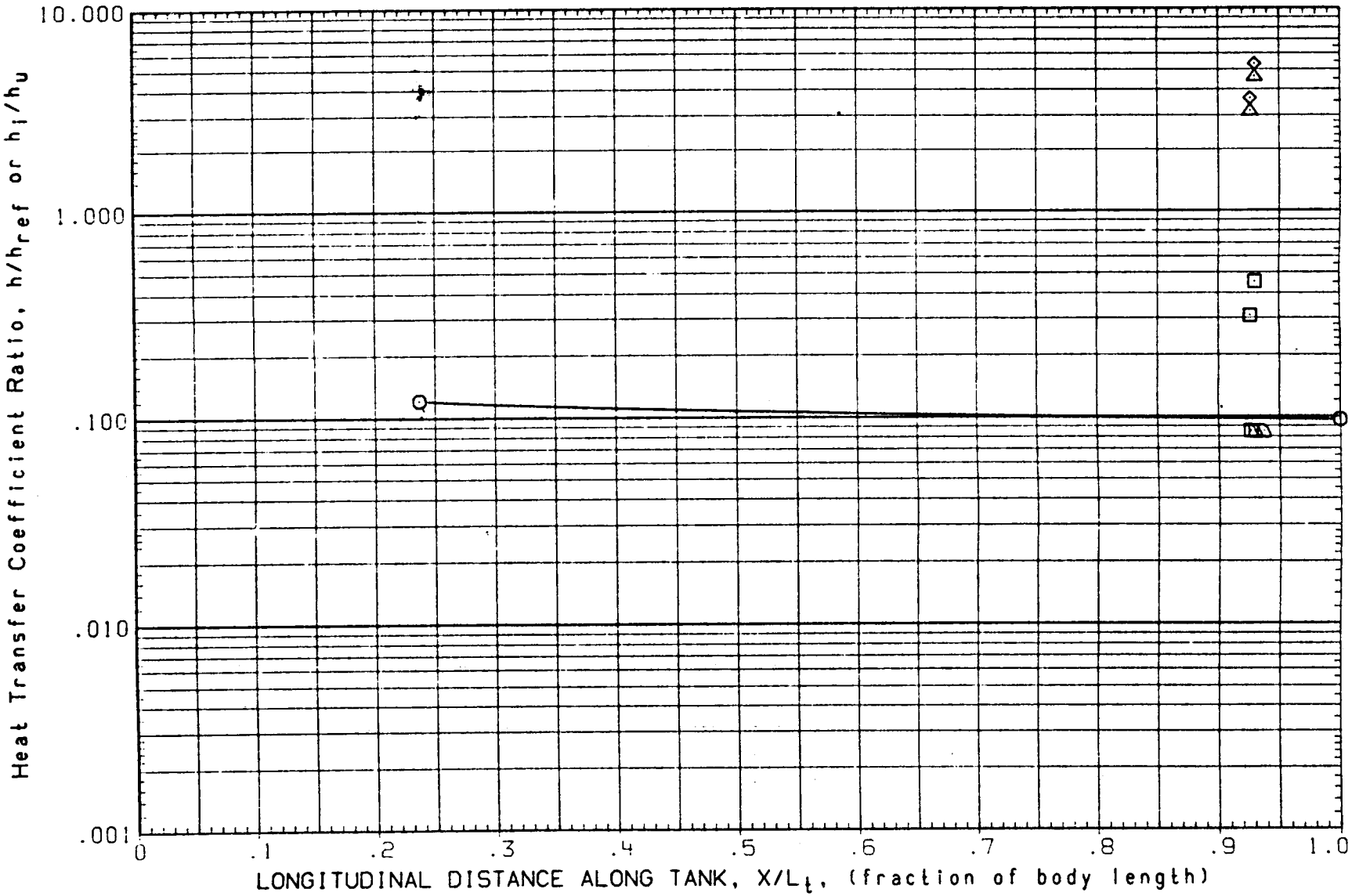

FIG. 4-10 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 289.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT18)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-7.500
(C9NT18)	▢	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-7.500
(V4LT39)	□	IH85, AEDC V4IA-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-7.500
(X4LT39)	◇	IH85 (W.L. TEST) OTS/ET = V4LT39/C9NT18= HI/HU		4.020	-5.000	-7.500
(Y4LT39)	△	IH85 (W.L. THEORY) OTS/ET = V4LT39/A9NT18= HI/HU		4.020	-5.000	-7.500

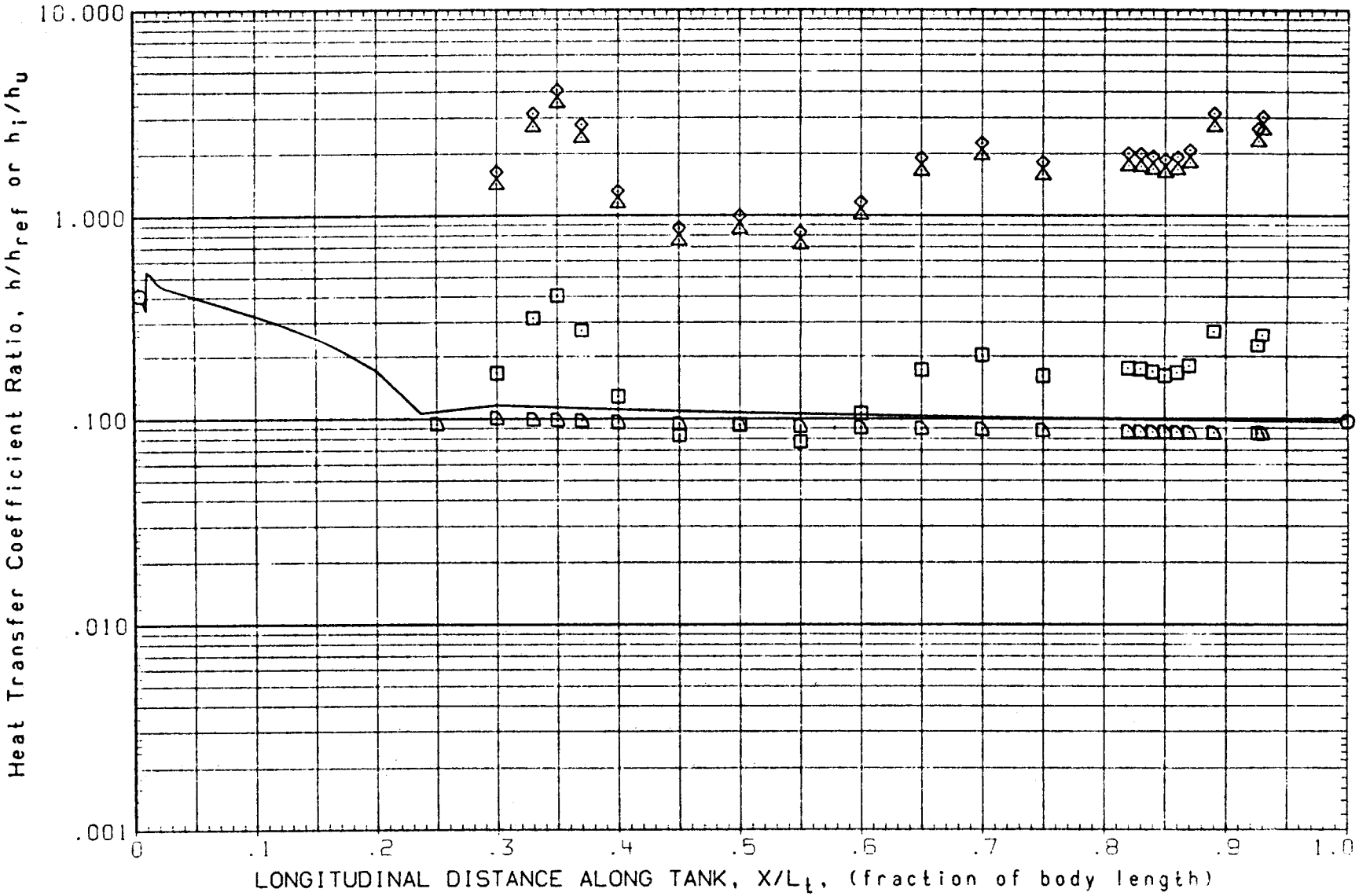

FIG. 4-10 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 292.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(C9NT18)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-7.500
(C9NT18)	◇	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-7.500
(V4LT39)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-7.500
(X4LT39)	◇	IH85 (W.L. TEST) OTS/ET = V4LT39/C9NT18=	HI/HU	4.020	-5.000	-7.500
(Y4LT39)	△	IH85 (W.L. THEORY) OTS/ET = V4LT39/A9NT18=	HI/HU	4.020	-5.000	-7.500

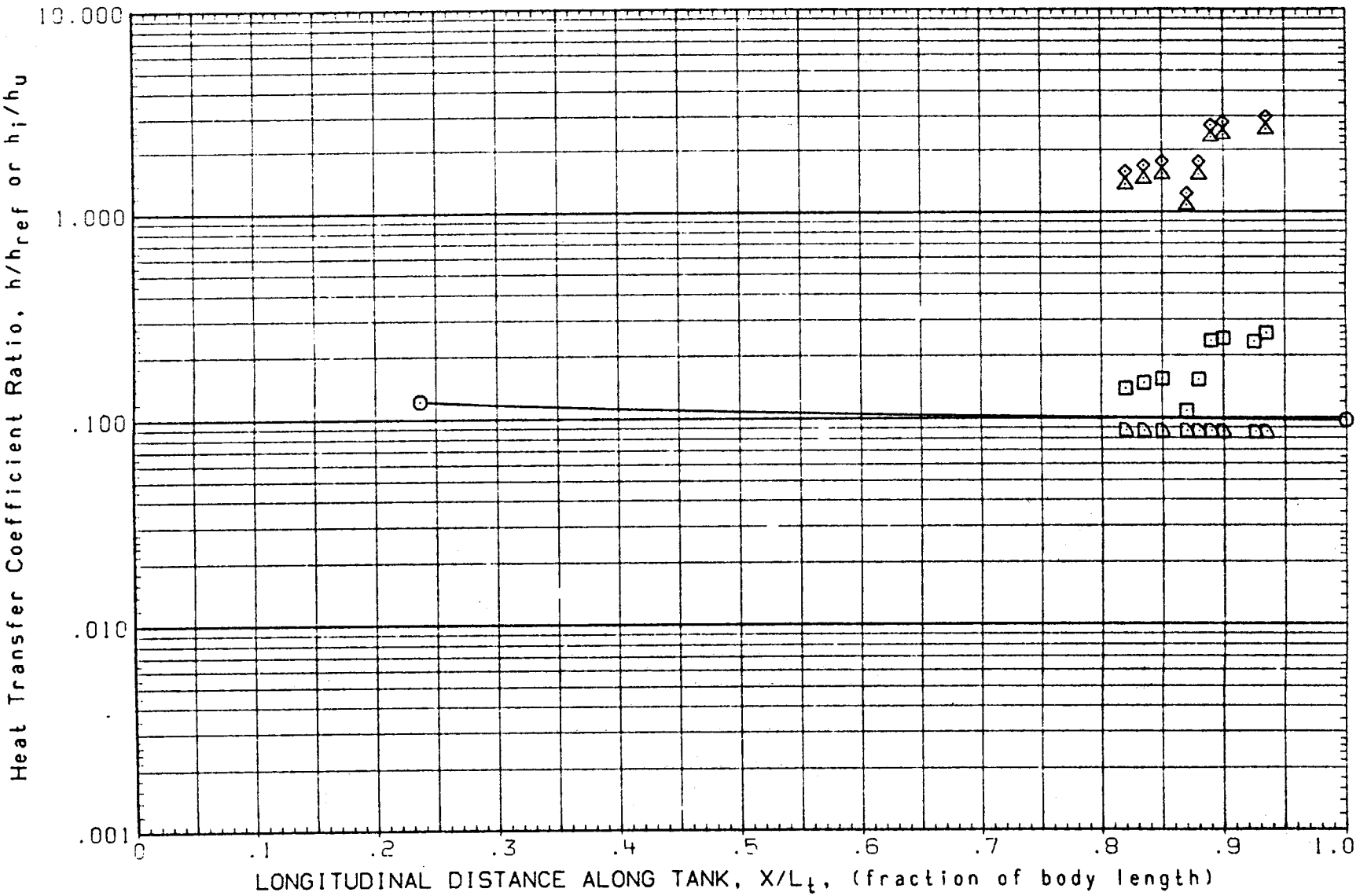

FIG. 4-10 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 301.500

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT18)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-7.500
(C9NT18)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-7.500
(V4LT39)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-7.500
(X4LT39)	◇	IH85 (W.L. TEST) OTS/ET = V4LT39/C9NT18= HI/HU		4.020	-5.000	-7.500
(Y4LT39)	△	IH85 (W.L. THEORY) OTS/ET = V4LT39/A9NT18= HI/HU		4.020	-5.000	-7.500

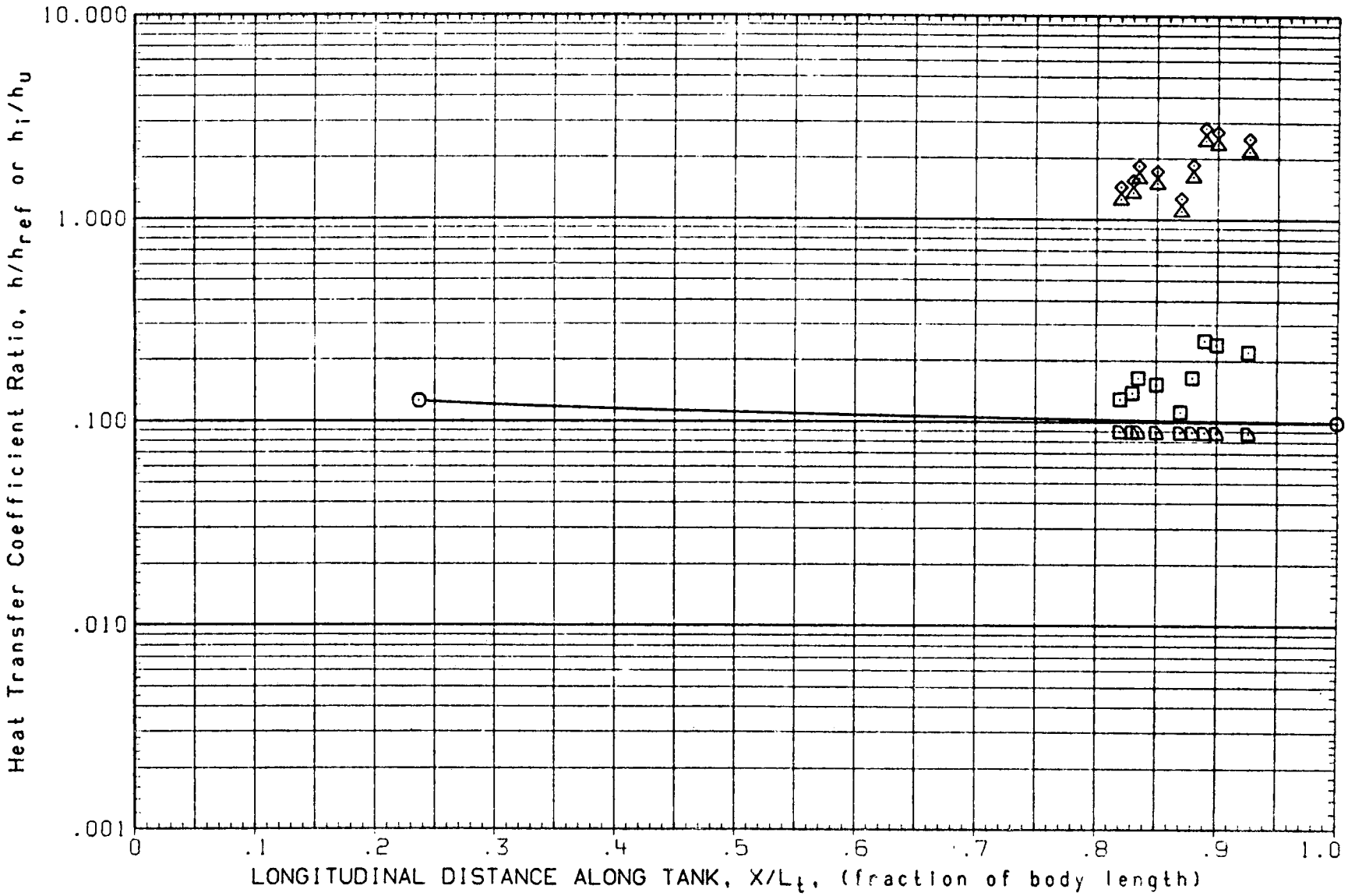

FIG. 4-10 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 305.400

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT18)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-7.500
(C9NT18)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-7.500
(V4LT39)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-7.500
(X4LT39)	◇	IH85 (W.L. TEST) OTS/ET = V4LT39/C9NT18=	HI/HU	4.020	-5.000	-7.500
(Y4LT39)	△	IH85 (W.L. THEORY) OTS/ET = V4LT39/A9NT18=	HI/HU	4.020	-5.000	-7.500

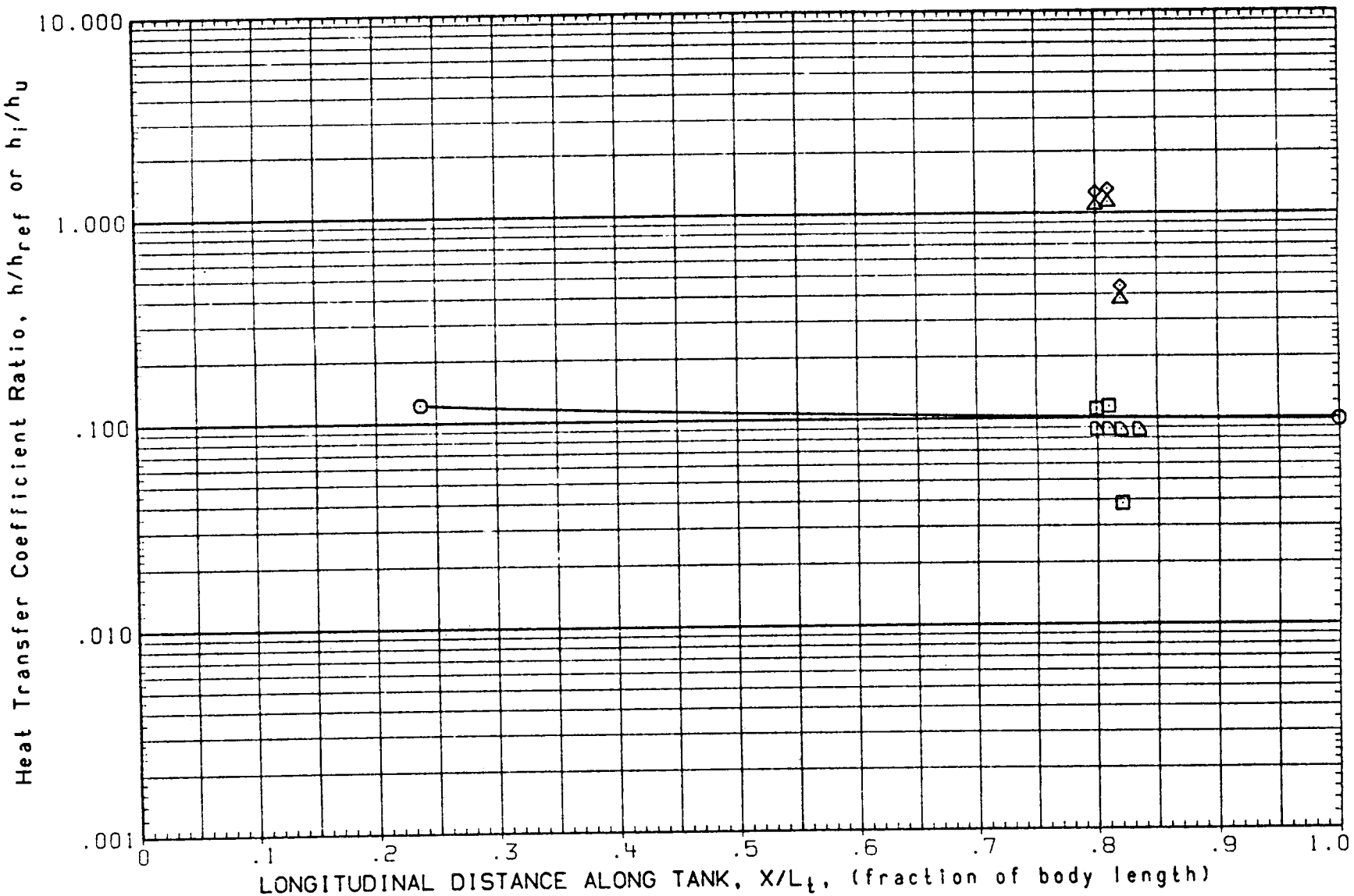

FIG. 4-10 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 309.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT18)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-7.500
(C9NT18)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-7.500
(V4LT39)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-7.500
(X4LT39)	◇	IH85 (W.L. TEST) OTS/ET = V4LT39/C9NT18=	HI/HU	4.020	-5.000	-7.500
(Y4LT39)	△	IH85 (W.L. THEORY) OTS/ET = V4LT39/A9NT18=	HI/HU	4.020	-5.000	-7.500

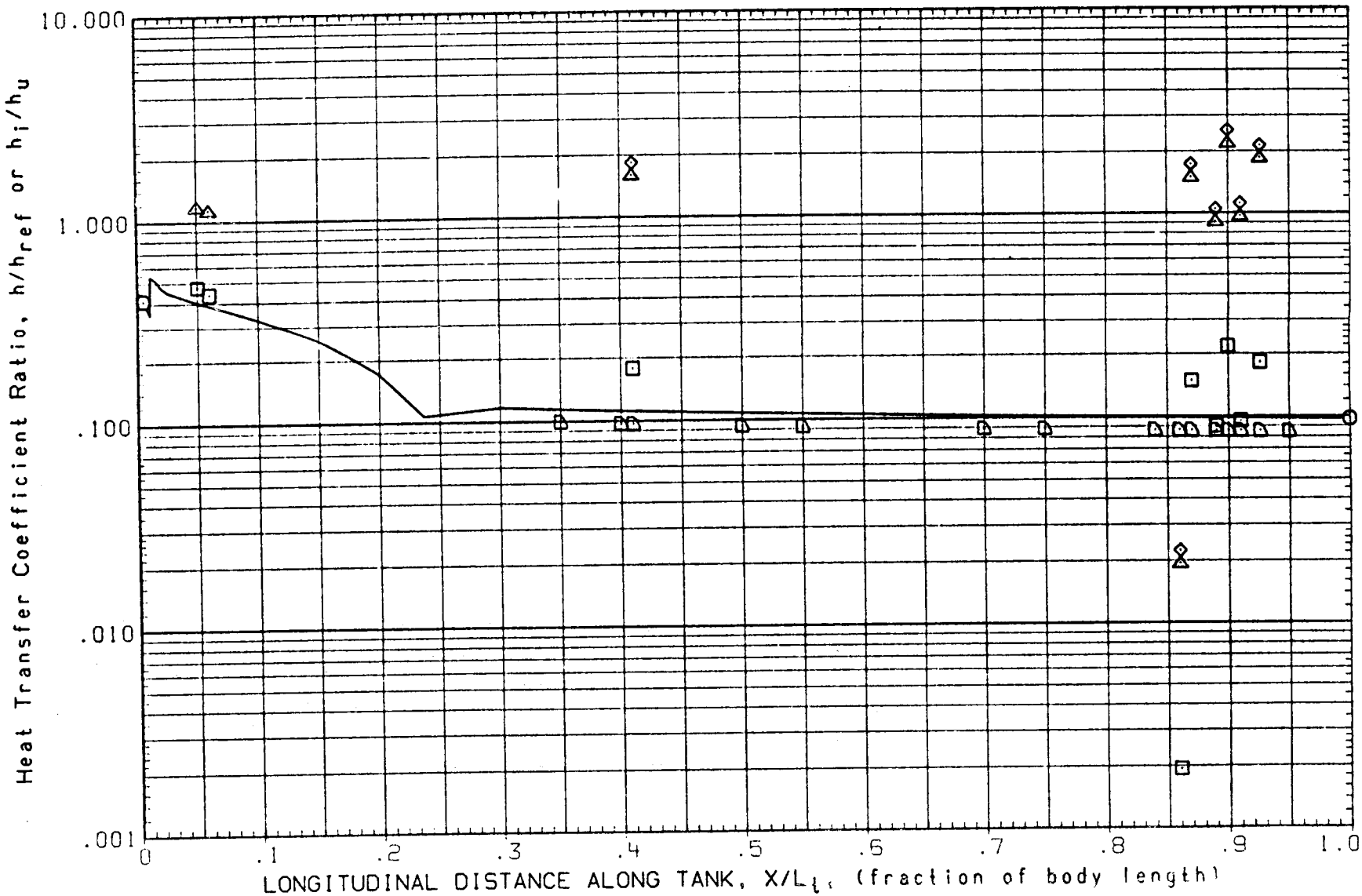

FIG. 4-10 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 315.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT18)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-7.500
(C9NT18)	⊿	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-7.500
(V4LT39)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-7.500
(X4LT39)	◇	IH85 (W.L. TEST) OTS/ET = V4LT39/C9NT18=	HI/HU	4.020	-5.000	-7.500
(Y4LT39)	△	IH85 (W.L. THEORY) OTS/ET = V4LT39/A9NT18=	HI/HU	4.020	-5.000	-7.500

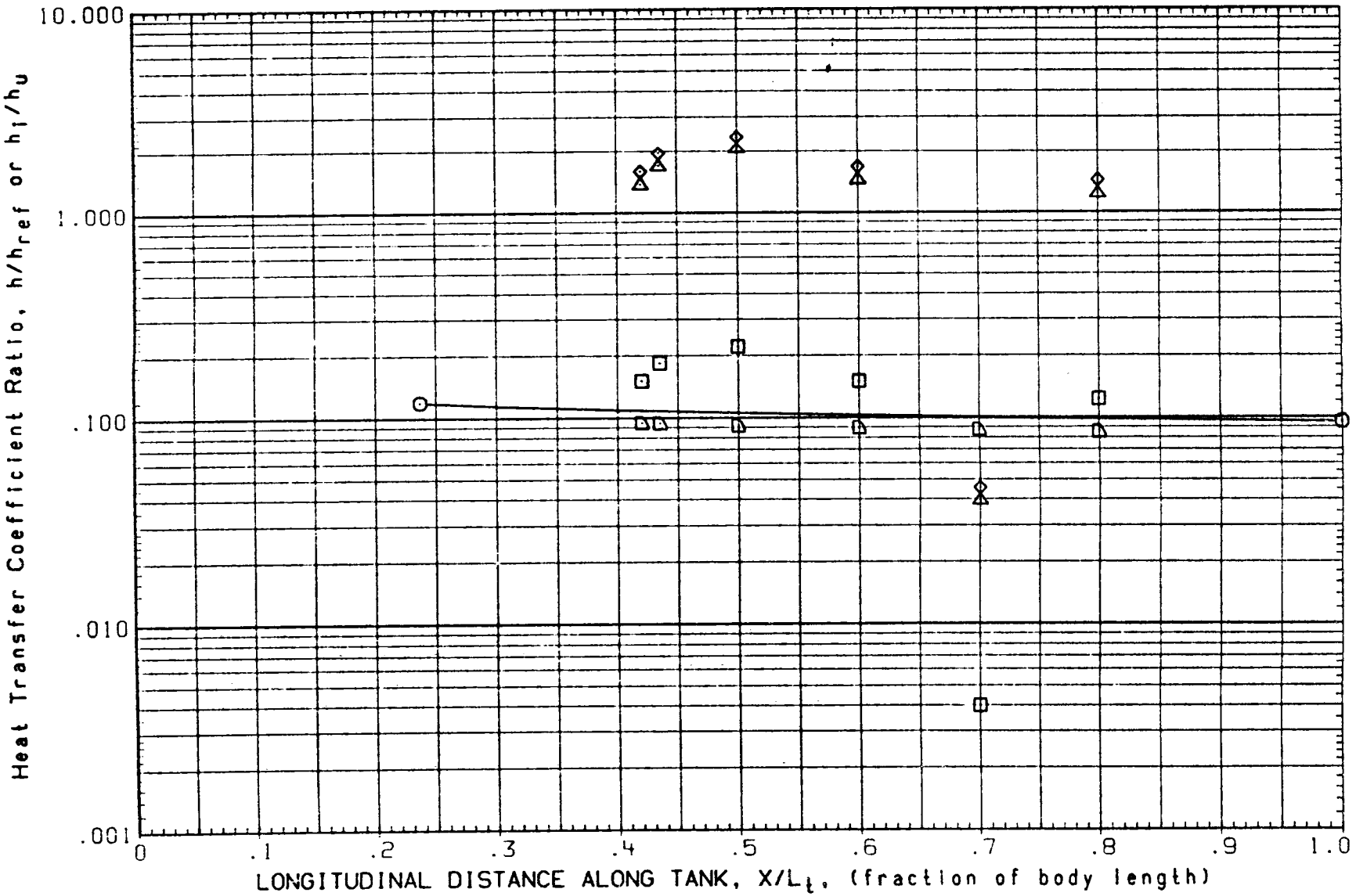

FIG. 4-10 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 322.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT18)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-7.500
(C9NT18)	⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-7.500
(V4LT39)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-7.500
(X4LT39)	◇	IH85 (W.L. TEST) OTS/ET = V4LT39/C9NT18=	HI/HU	4.020	-5.000	-7.500
(Y4LT39)	△	IH85 (W.L. THEORY) OTS/ET = V4LT39/A9NT18=	HI/HU	4.020	-5.000	-7.500

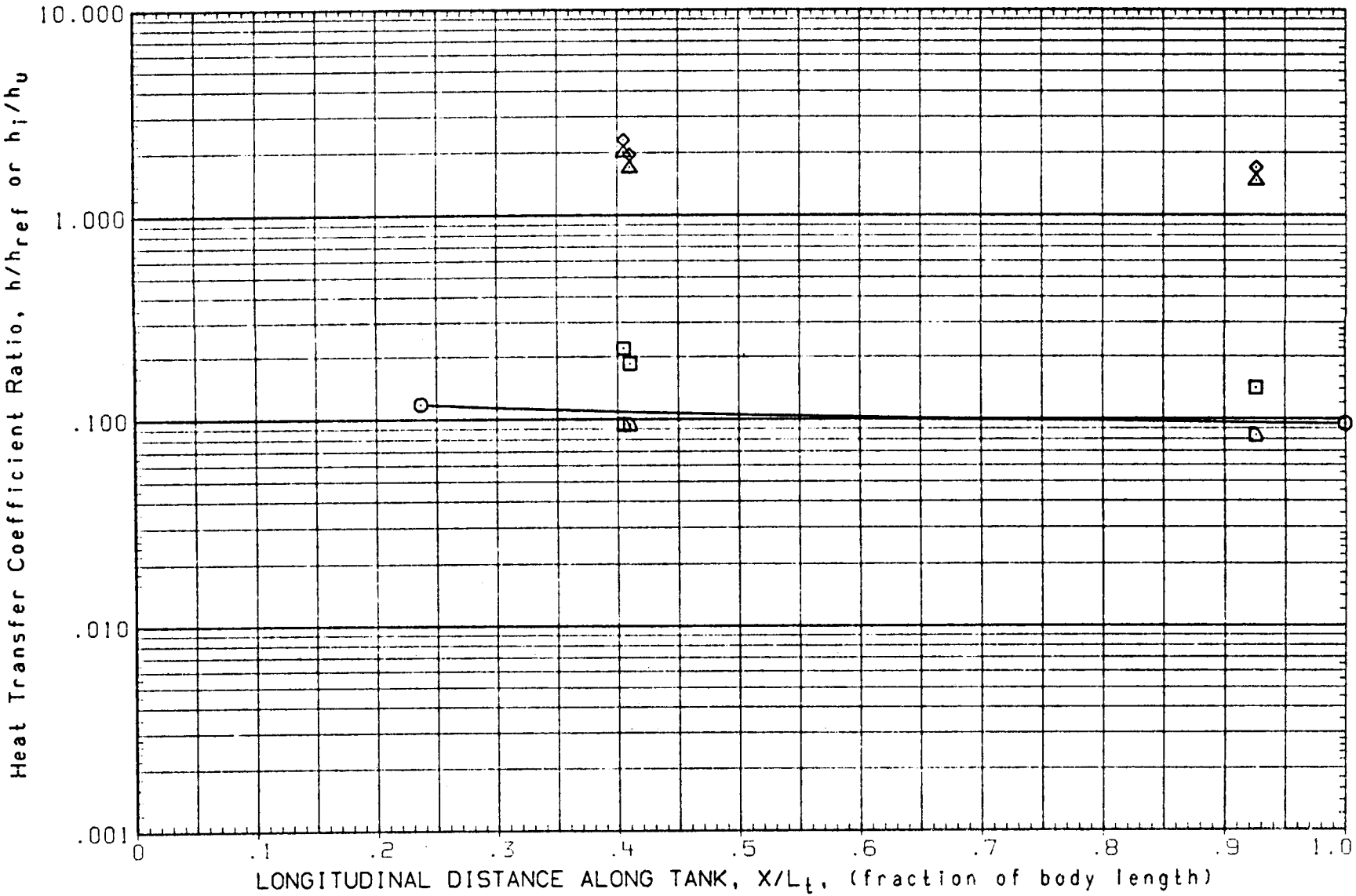

FIG. 4-10 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 324.450

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT18)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-7.500
(C9NT18)	□	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-7.500
(V4LT39)	⊡	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-7.500
(X4LT39)	◇	IH85 (W.L. TEST) OTS/ET = V4LT39/C9NT18=	HI/HU	4.020	-5.000	-7.500
(Y4LT39)	△	IH85 (W.L. THEORY) OTS/ET = V4LT39/A9NT18=	HI/HU	4.020	-5.000	-7.500

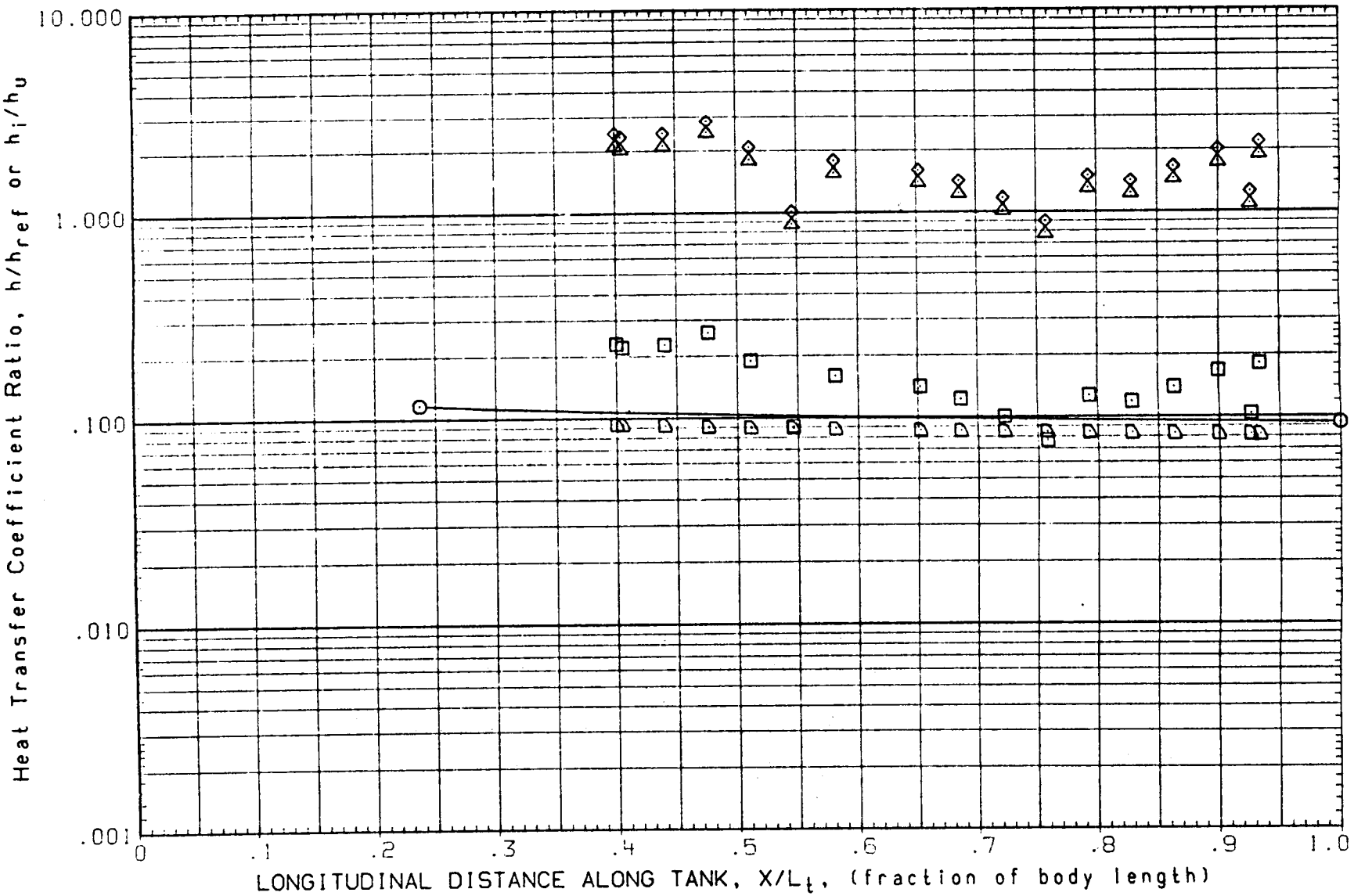

FIG. 4-10 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 326.850

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT18)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-7.500
(C9NT18)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-7.500
(V4LT39)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-7.500
(X4LT39)	◇	IH85 (W.L. TEST) OTS/ET = V4LT39/C9NT18= HI/HU		4.020	-5.000	-7.500
(Y4LT39)	△	IH85 (W.L. THEORY) OTS/ET = V4LT39/A9NT18= HI/HU		4.020	-5.000	-7.500

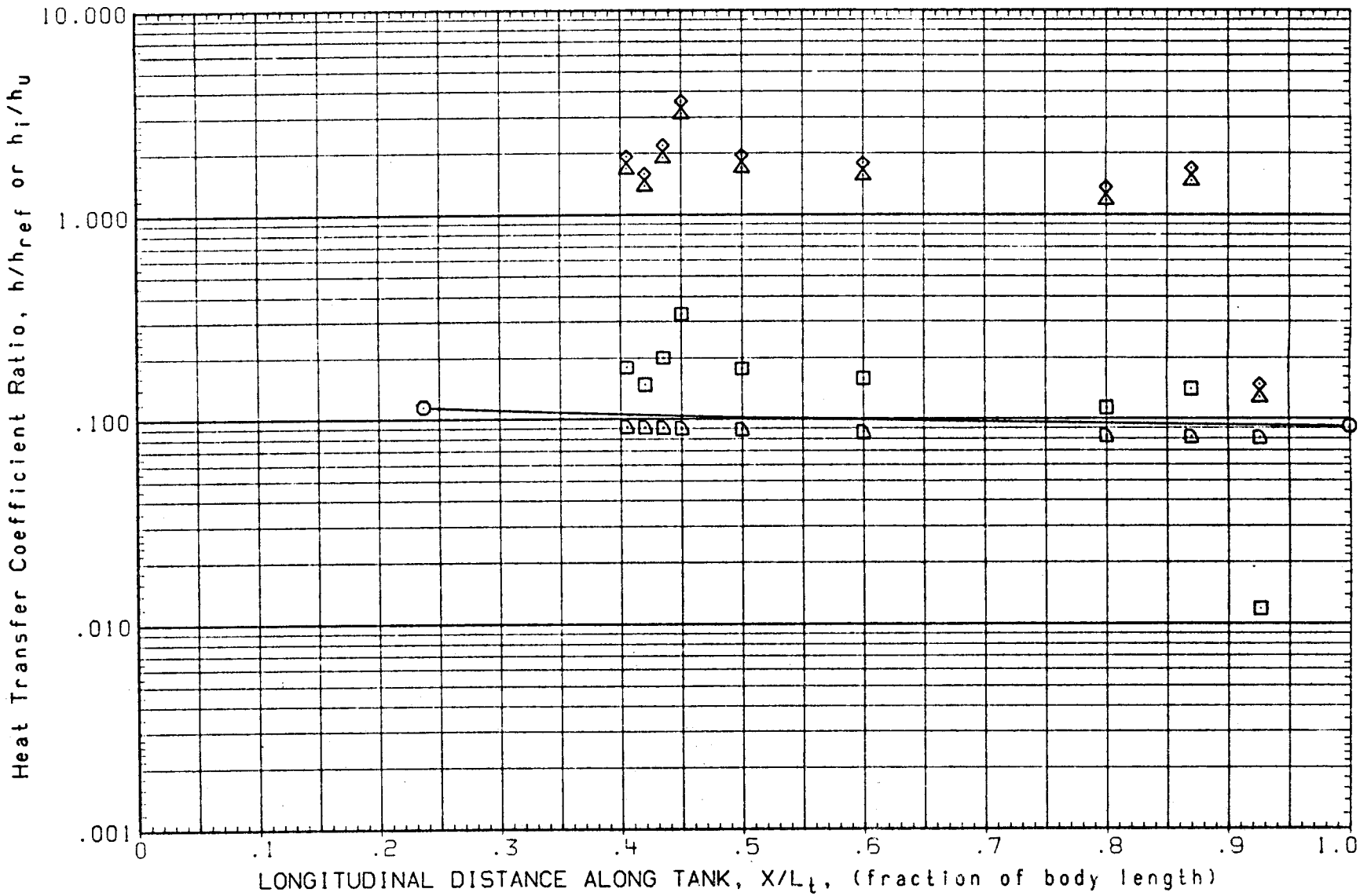

FIG. 4-10 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 330.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT18)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-7.500
(C9NT18)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-7.500
(V4LT39)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-7.500
(X4LT39)	◇	IH85 (W.L. TEST) OTS/ET = V4LT39/C9NT18=	HI/HU	4.020	-5.000	-7.500
(Y4LT39)	△	IH85 (W.L. THEORY) OTS/ET = V4LT39/A9NT18=	HI/HU	4.020	-5.000	-7.500

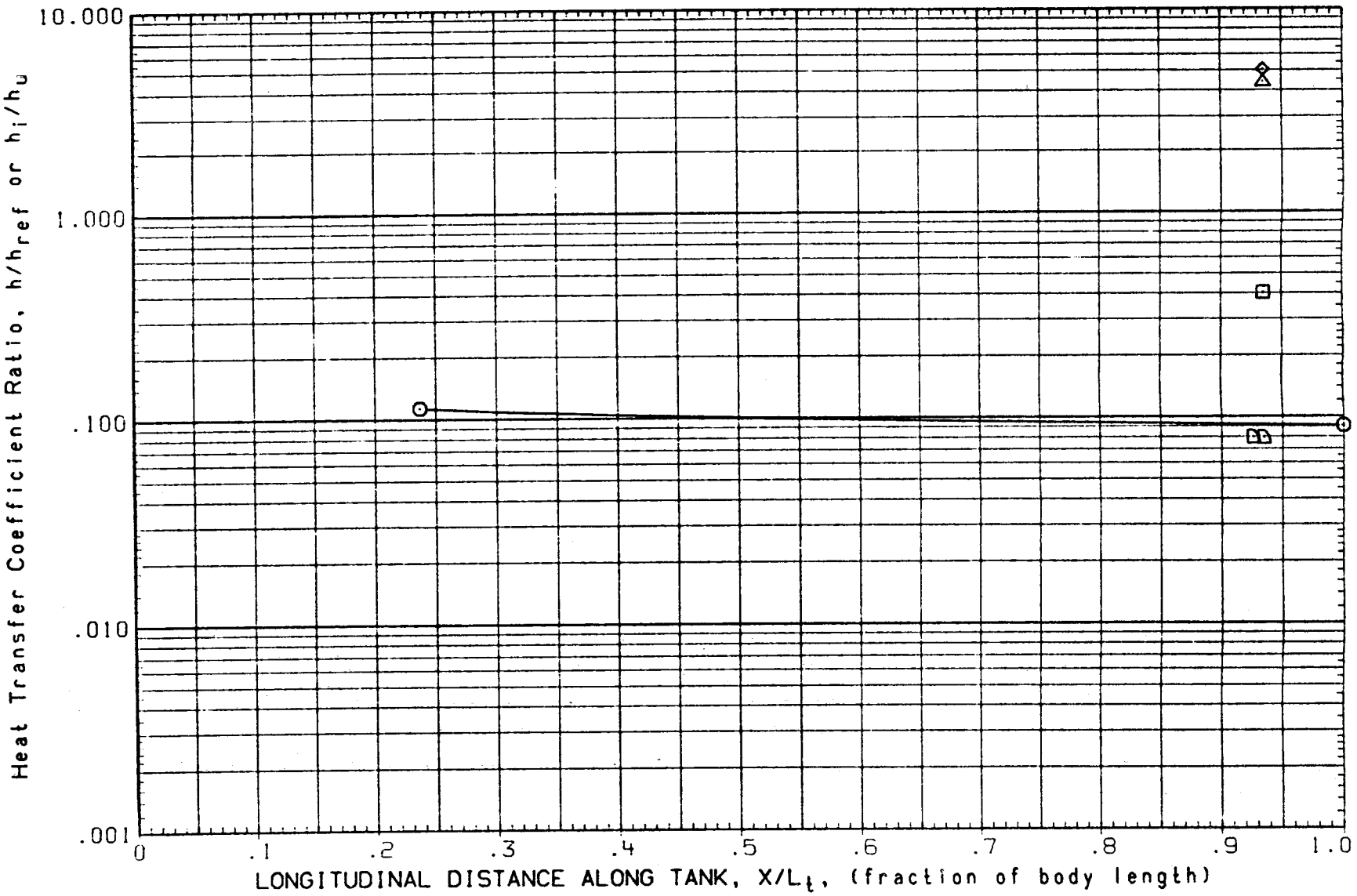

FIG. 4-10 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 334.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT18)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-7.500
(C9NT18)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-7.500
(V4LT39)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-7.500
(X4LT39)	◇	IH85 (W.L. TEST) OTS/ET = V4LT39/C9NT18=	HI/HU	4.020	-5.000	-7.500
(Y4LT39)	△	IH85 (W.L. THEORY) OTS/ET = V4LT39/A9NT18=	HI/HU	4.020	-5.000	-7.500

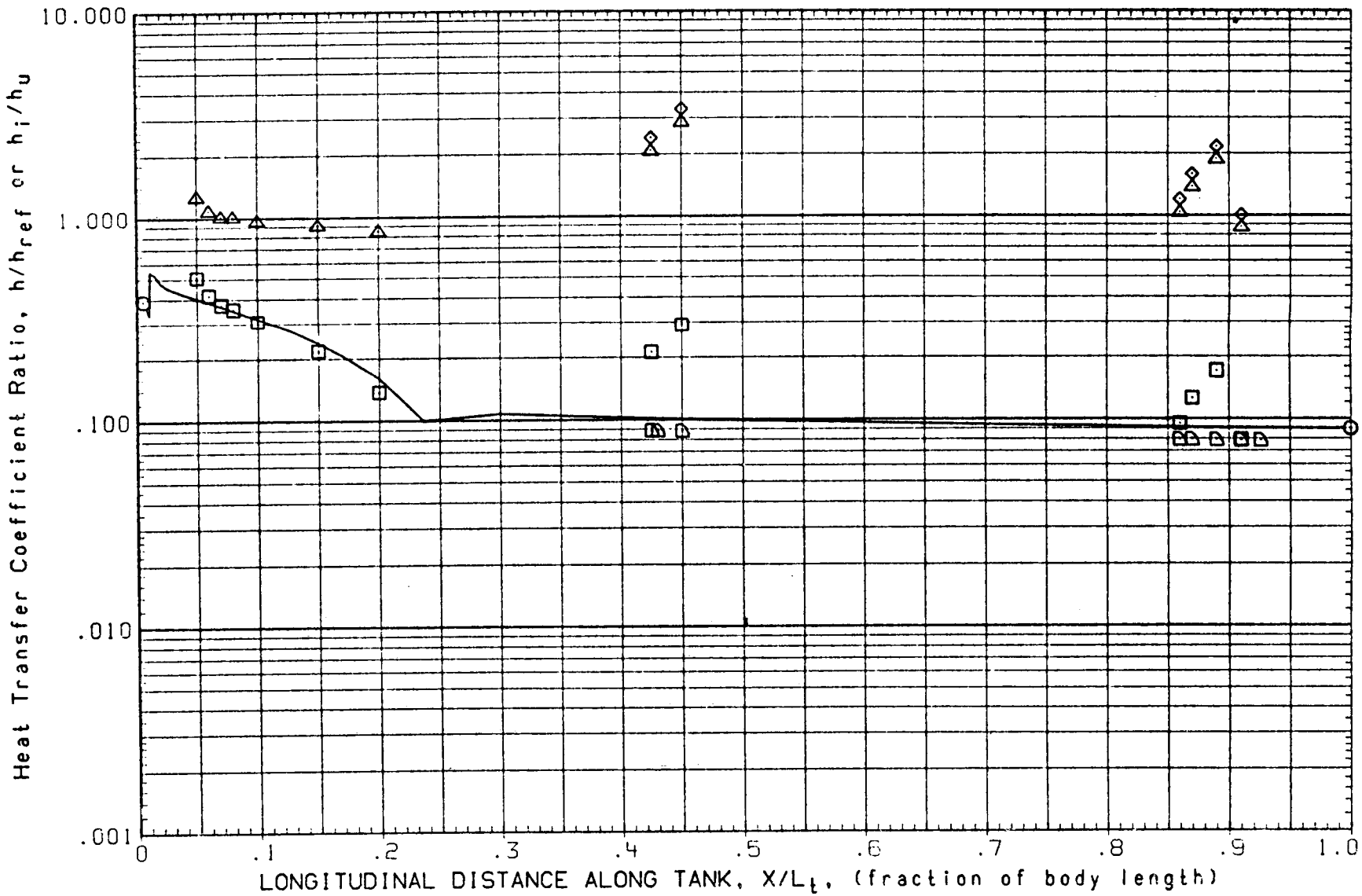

FIG. 4-10 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 337.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT18)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-7.500
(C9NT18)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-7.500
(V4LT39)	□	DATA NOT AVAILABLE		4.020	-5.000	-7.500
(X4LT39)	◇	DATA NOT AVAILABLE		4.020	-5.000	-7.500
(Y4LT39)	△	DATA NOT AVAILABLE		4.020	-5.000	-7.500

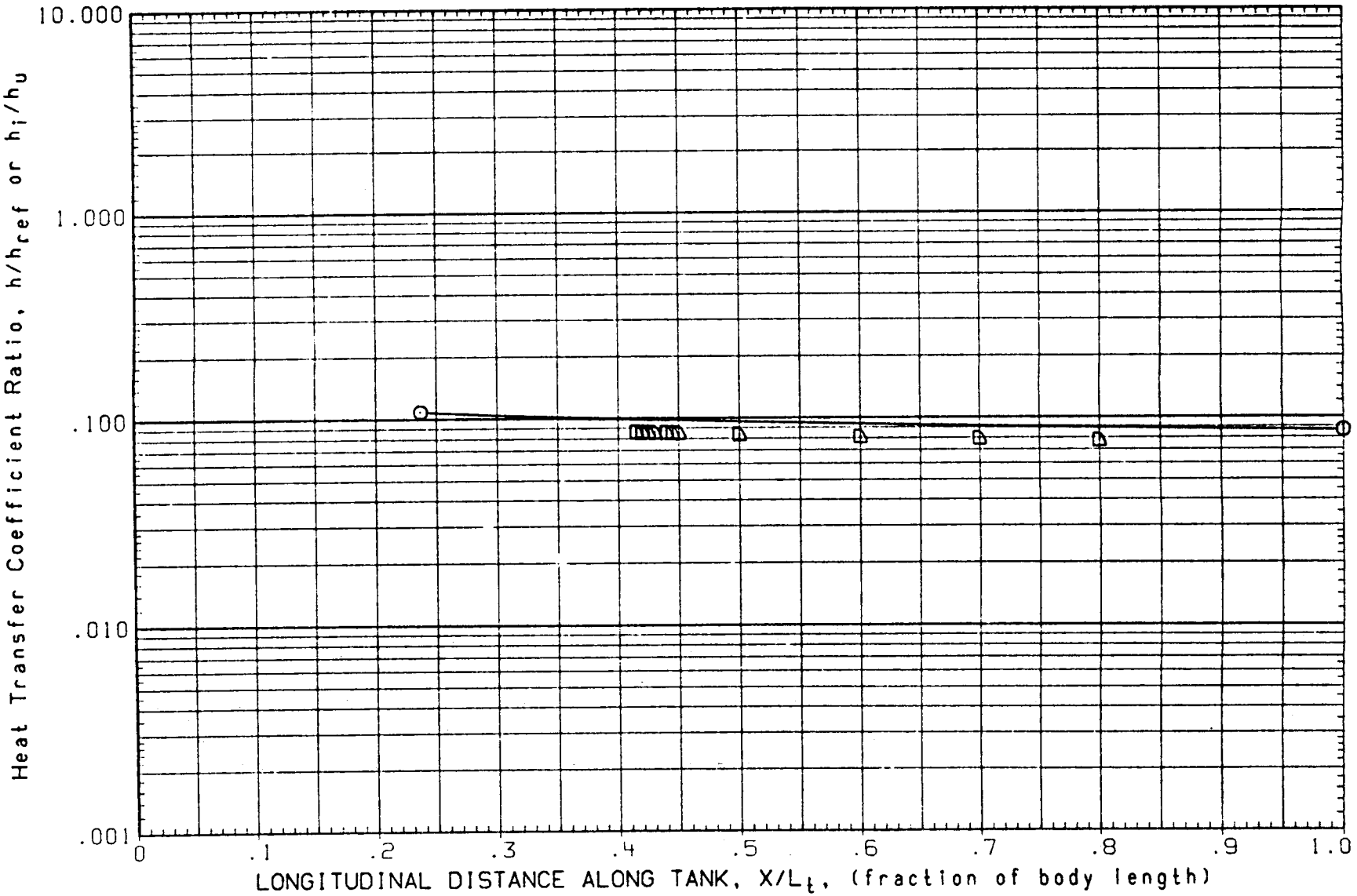

FIG. 4-10 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 343.120

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT18)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-7.500
(C9NT18)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-7.500
(V4LT39)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-7.500
(X4LT39)	◇	IH85 (W.L. TEST) OTS/ET = V4LT39/C9NT18=	HI/HU	4.020	-5.000	-7.500
(Y4LT39)	△	IH85 (W.L. THEORY) OTS/ET = V4LT39/A9NT18=	HI/HU	4.020	-5.000	-7.500

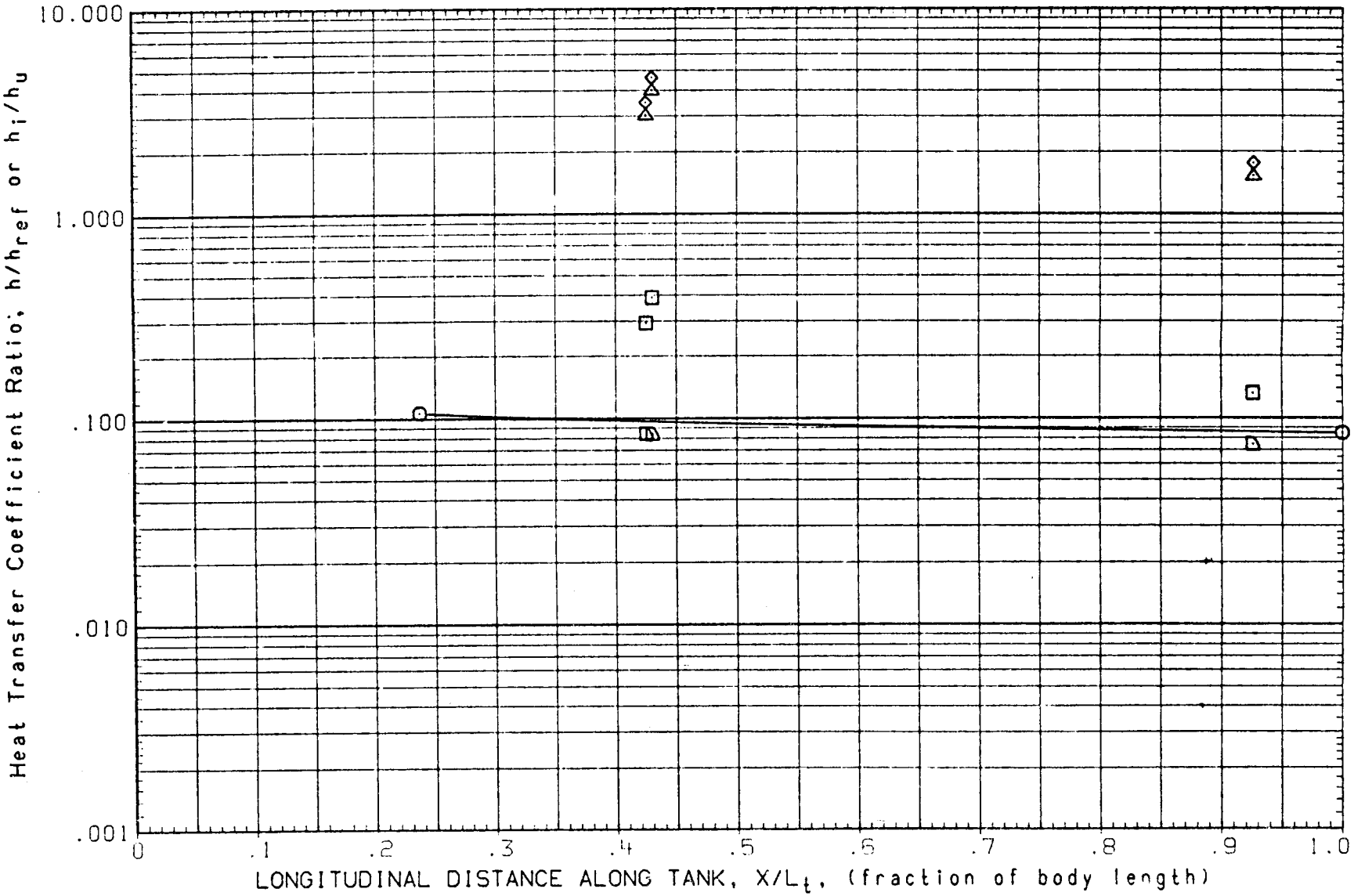

FIG. 4-10 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 345.560

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT18)	○	EXTERNAL TANK THEORY, N.S., TURBULENT HU/HREF	4.020	-5.000	-7.500
(C9NT18)	⊡	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	4.020	-5.000	-7.500
(V4LT39)	⊡	IH85, AEDC V41A-N5, CONFIGURATION 0 (T) S	4.020	-5.000	-7.500
(X4LT39)	◇	IH85 (W.L. TEST) OTS/ET = V4LT39/C9NT18 HI/HU	4.020	-5.000	-7.500
(Y4LT39)	△	IH85 (W.L. THEORY) OTS/ET V4LT39/A9NT18 HI/HU	4.020	-5.000	-7.500

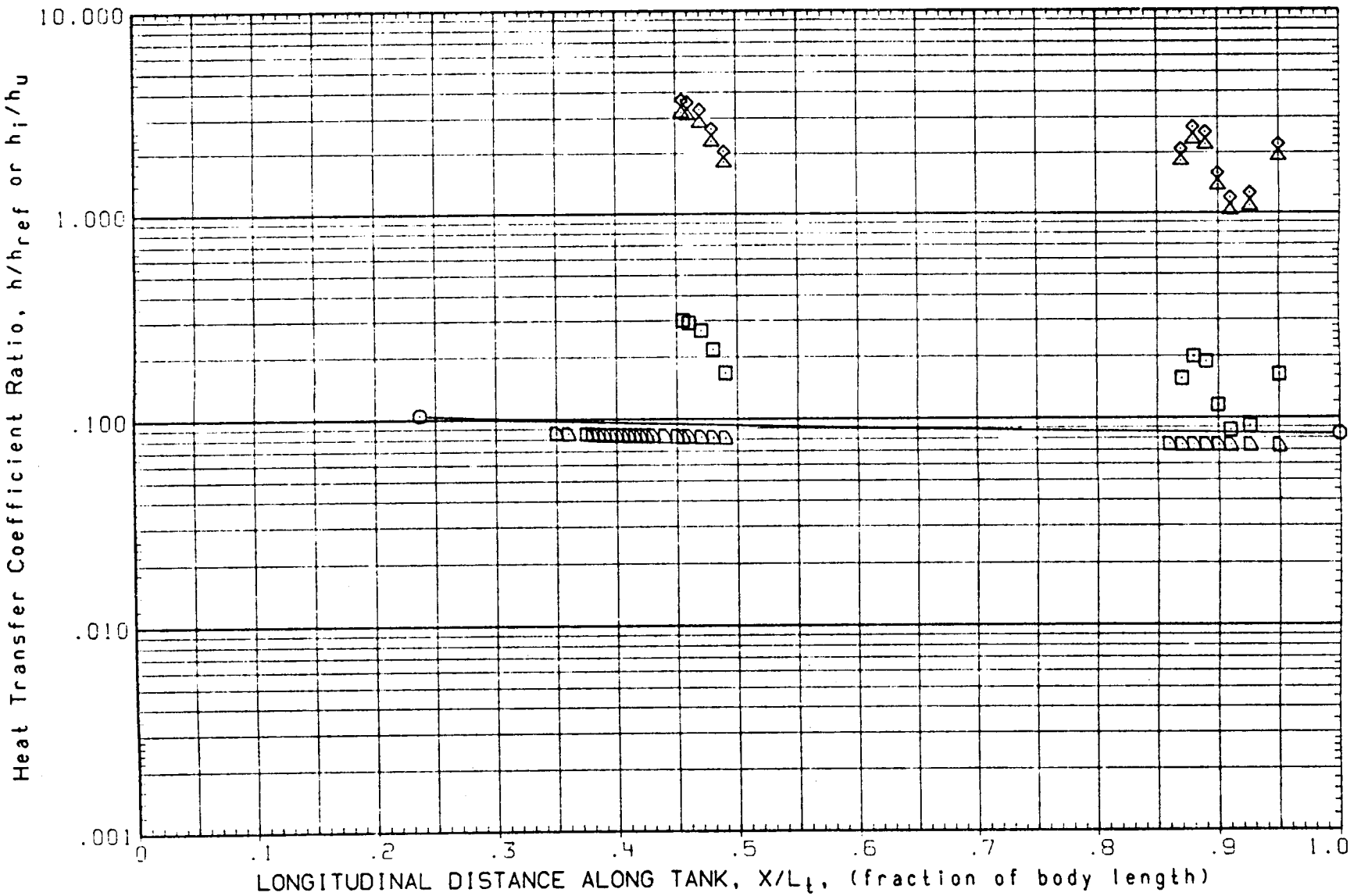

FIG. 4-10 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 , HI = 348.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT18)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-7.500
(C9NT18)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-7.500
(V4LT39)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-7.500
(X4LT39)	◇	IH85 (W.L. TEST) OTS/ET = V4LT39/C9NT18= HI/HU		4.020	-5.000	-7.500
(Y4LT39)	△	IH85 (W.L. THEORY) OTS/ET = V4LT39/A9NT18= HI/HU		4.020	-5.000	-7.500

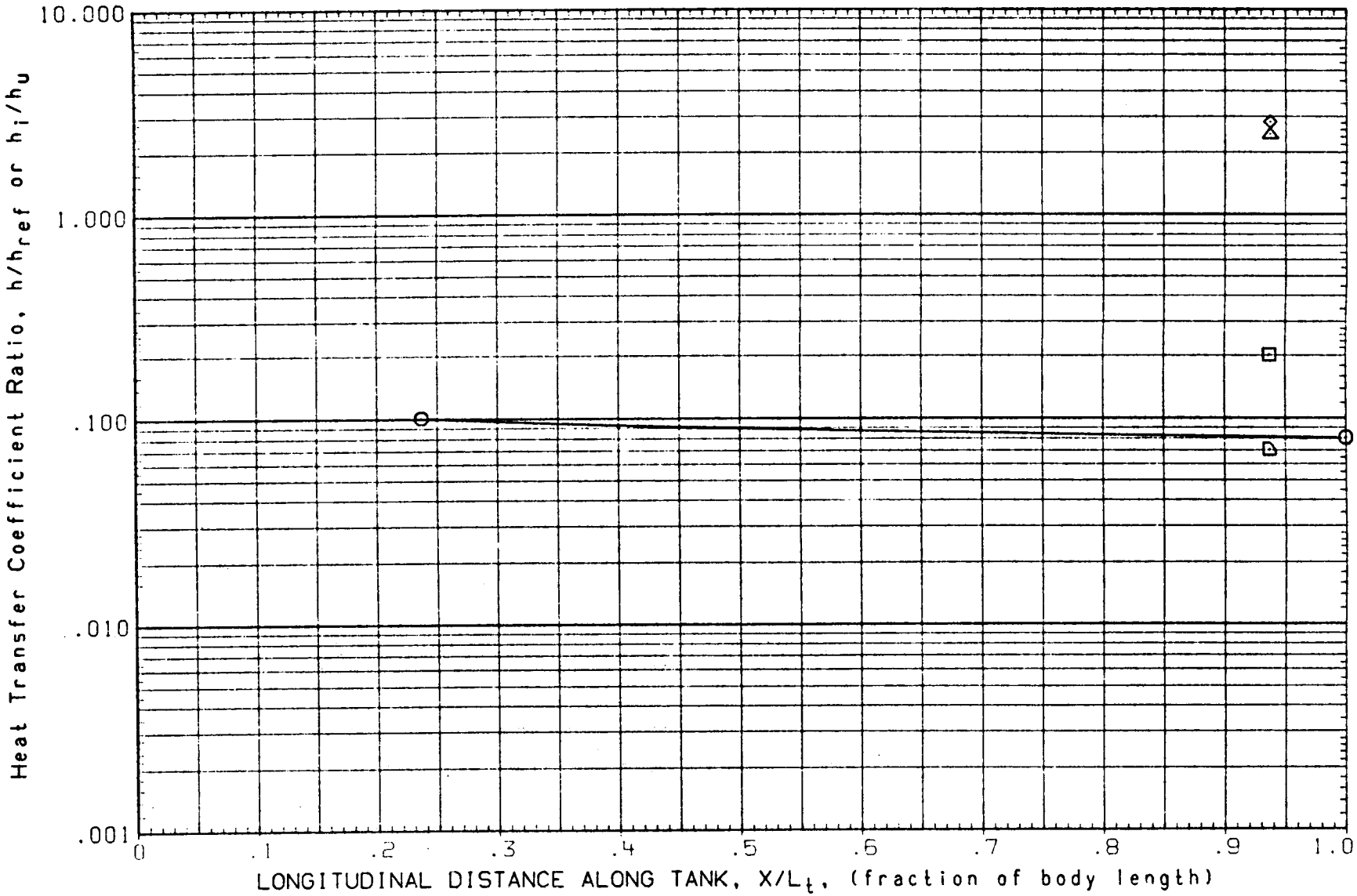

FIG. 4-10 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 352.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT18)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-7.500
(C9NT18)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-7.500
(V4LT39)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-7.500
(X4LT39)	◇	IH85 (W.L. TEST) OTS/ET = V4LT39/C9NT18=	HI/HU	4.020	-5.000	-7.500
(Y4LT39)	△	IH85 (W.L. THEORY) OTS/ET = V4LT39/A9NT18=	HI/HU	4.020	-5.000	-7.500

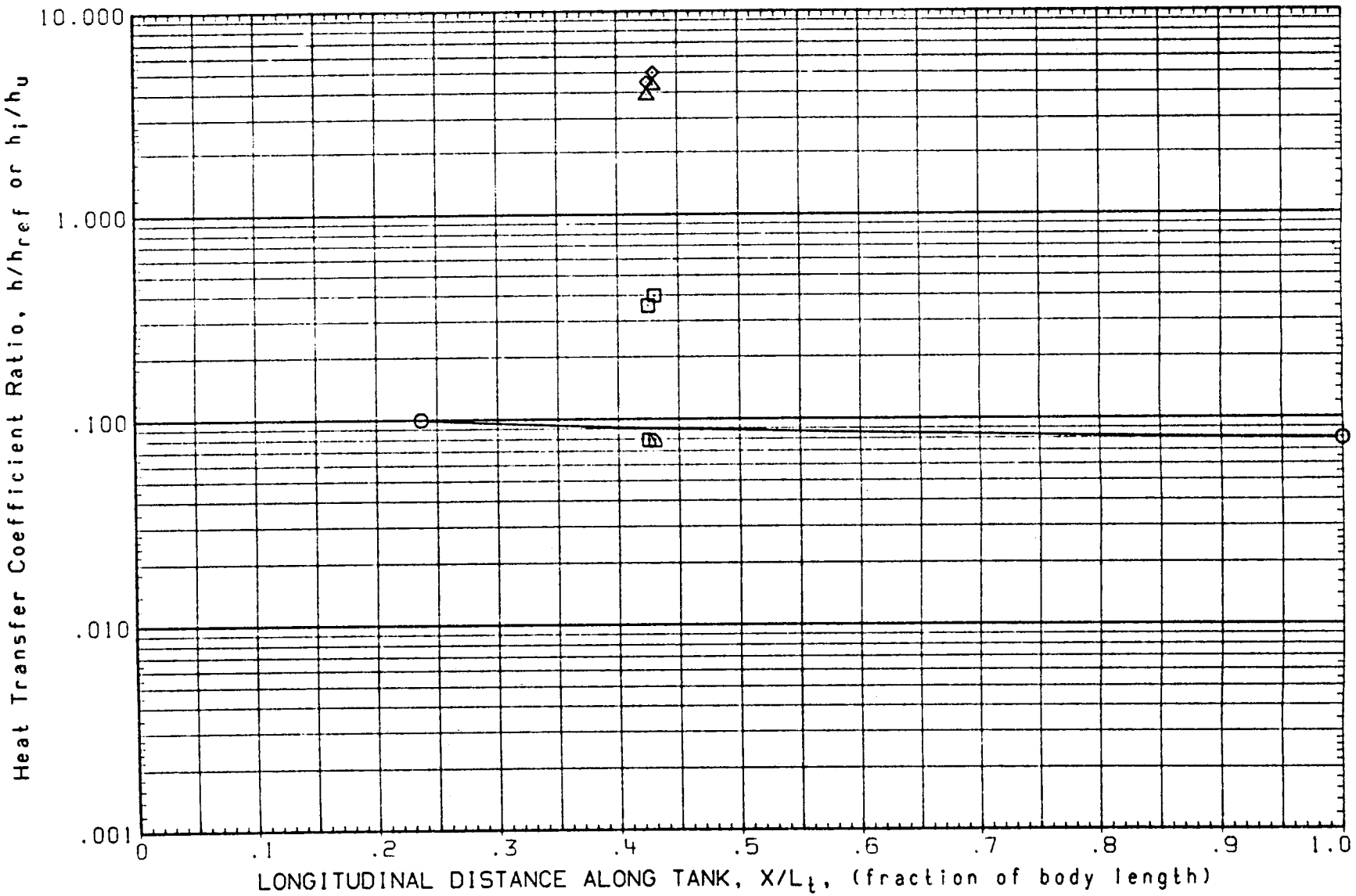

FIG. 4-10 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 354.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT18)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-7.500
(C9NT18)	⊐	DATA NOT AVAILABLE		4.020	-5.000	-7.500
(Y4LT39)	□	DATA NOT AVAILABLE		4.020	-5.000	-7.500
(X4LT39)	◇	DATA NOT AVAILABLE		4.020	-5.000	-7.500
(Y4LT39)	△	DATA NOT AVAILABLE		4.020	-5.000	-7.500

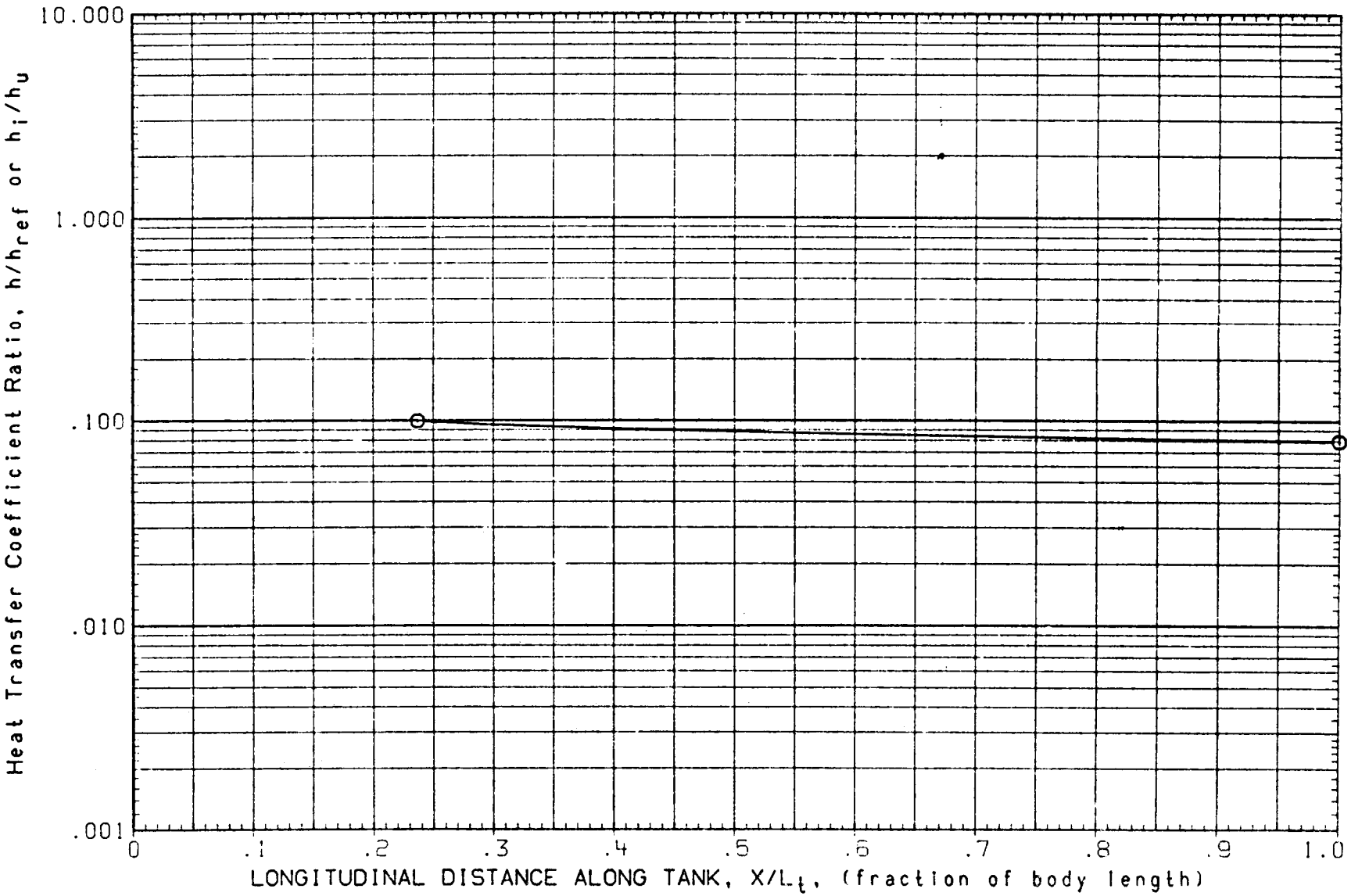

FIG. 4-10 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 355.160

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT18)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-7.500
(C9NT18)	⬠	DATA NOT AVAILABLE		4.020	-5.000	-7.500
(V4LT39)	□	DATA NOT AVAILABLE		4.020	-5.000	-7.500
(X4LT39)	◇	DATA NOT AVAILABLE		4.020	-5.000	-7.500
(Y4LT39)	△	DATA NOT AVAILABLE		4.020	-5.000	-7.500

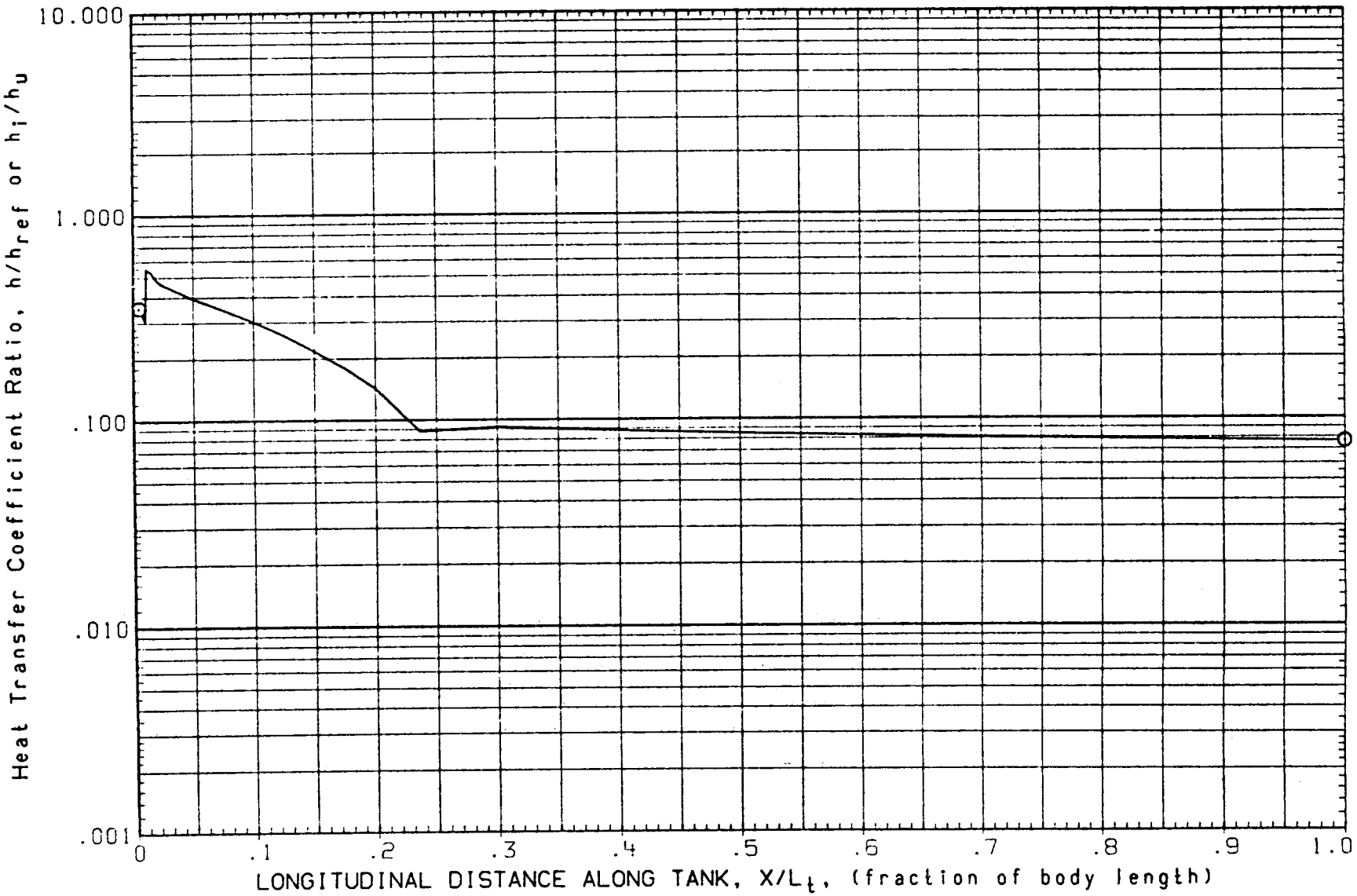

FIG. 4-10 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 360.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT20)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-4.500
(C9NT20)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-4.500
(V4LT41)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-4.500
(X4LT41)	◇	IH85 (W.L. TEST) OTS/ET = V4LT41/C9NT20=	HI/HU	4.020	-5.000	-4.500
(Y4LT41)	△	IH85 (W.L. THEORY) OTS/ET = V4LT41/A9NT20=	HI/HU	4.020	-5.000	-4.500

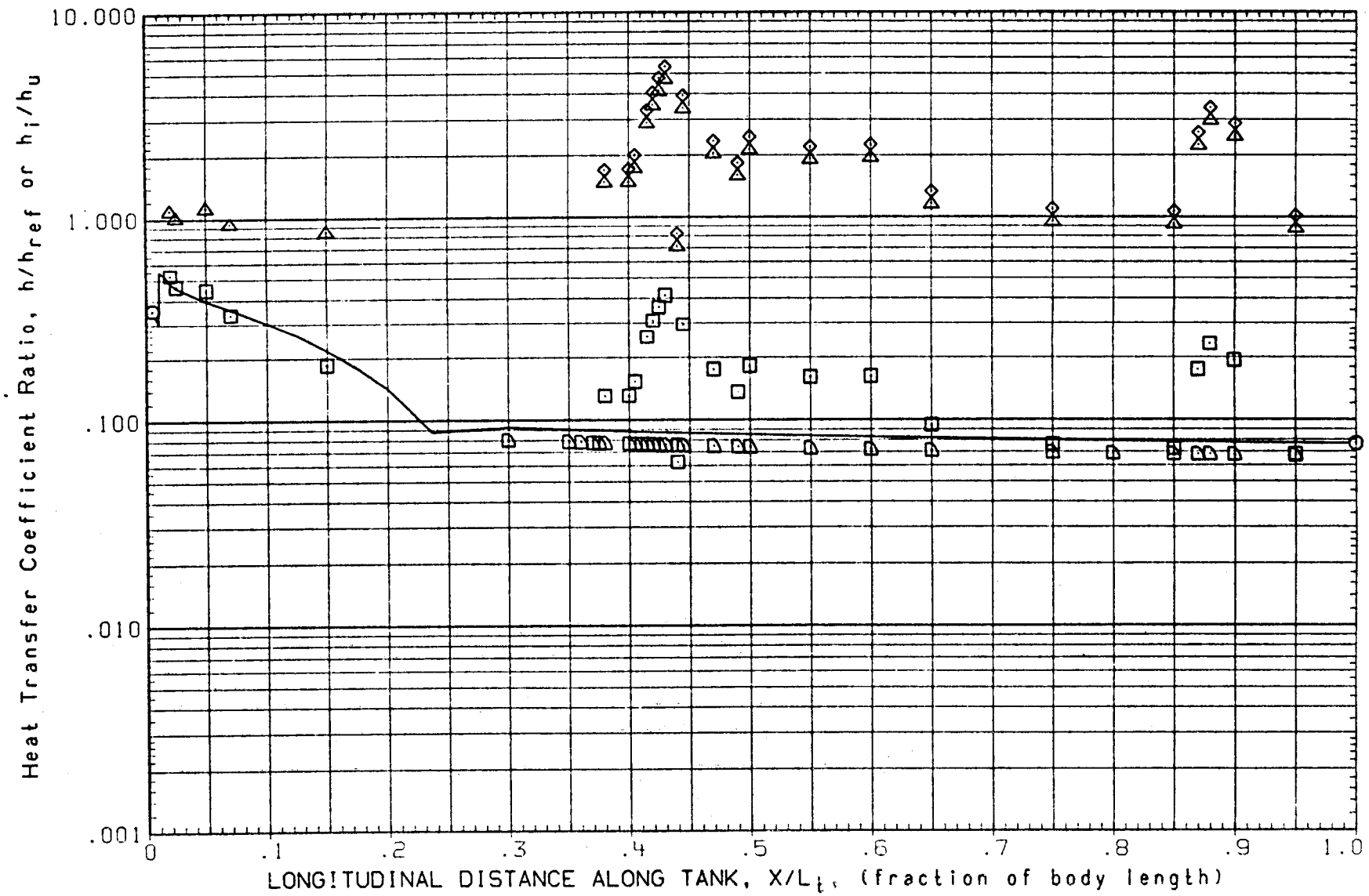

FIG. 4-11 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -4.5
0 < X/L_T < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = .000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT20)	○	DATA NOT AVAILABLE	4.020	-5.000	-4.500
(C9NT20)	⬠	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	4.020	-5.000	-4.500
(V4LT41)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	-5.000	-4.500
(X4LT41)	◇	IH85 (W.L. TEST) OTS/ET = V4LT41/C9NT20= HI/HU	4.020	-5.000	-4.500
(Y4LT41)	△	IH85 (W.L. THEORY) OTS/ET = V4LT41/A9NT20= HI/HU	4.020	-5.000	-4.500

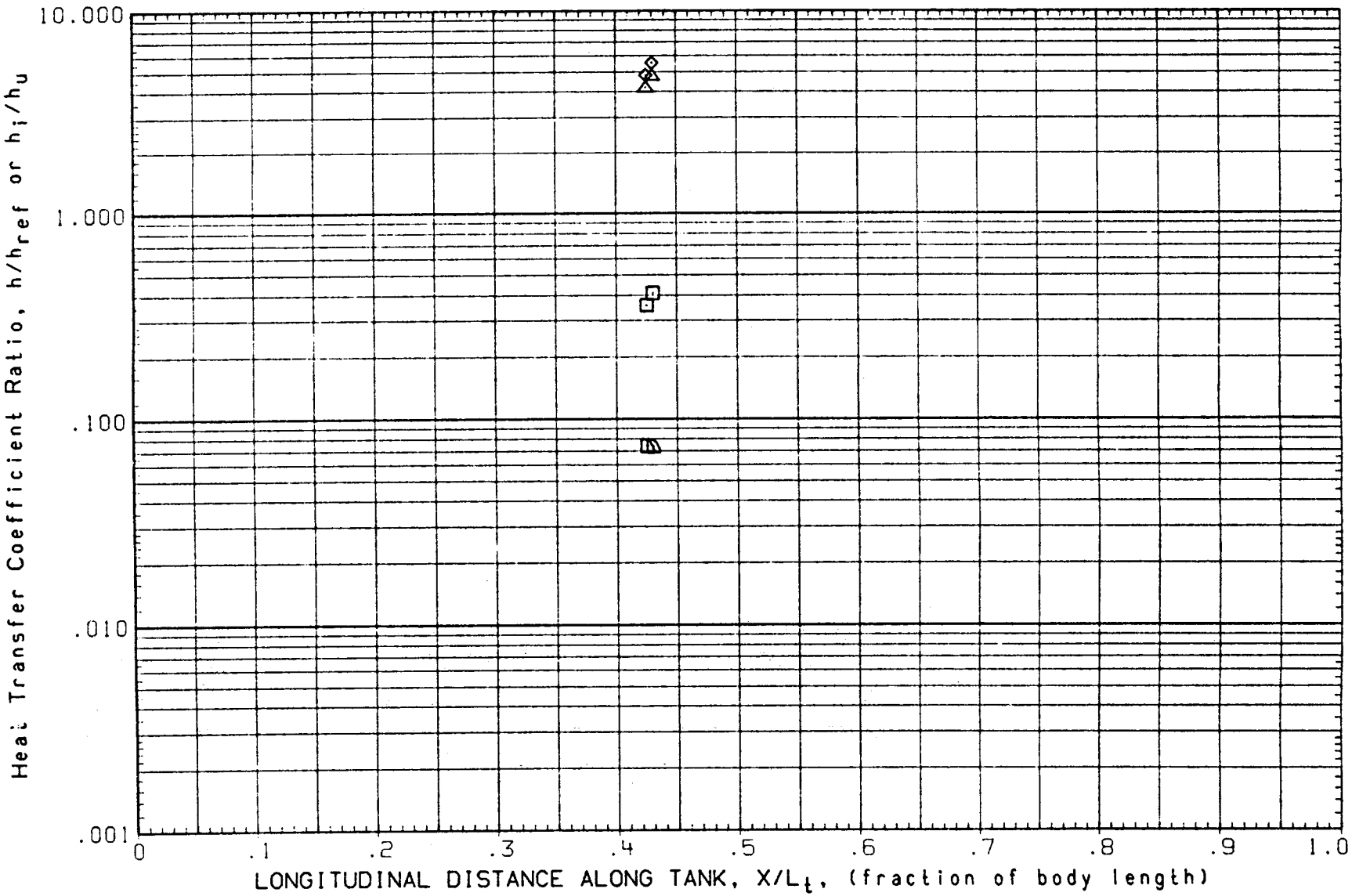

FIG. 4-11 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 5.625

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT20)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-4.500
(C9NT20)	◗	DATA NOT AVAILABLE		4.020	-5.000	-4.500
(Y4LT41)	□	DATA NOT AVAILABLE		4.020	-5.000	-4.500
(X4LT41)	◇	DATA NOT AVAILABLE		4.020	-5.000	-4.500
(Y4LT41)	△	DATA NOT AVAILABLE		4.020	-5.000	-4.500

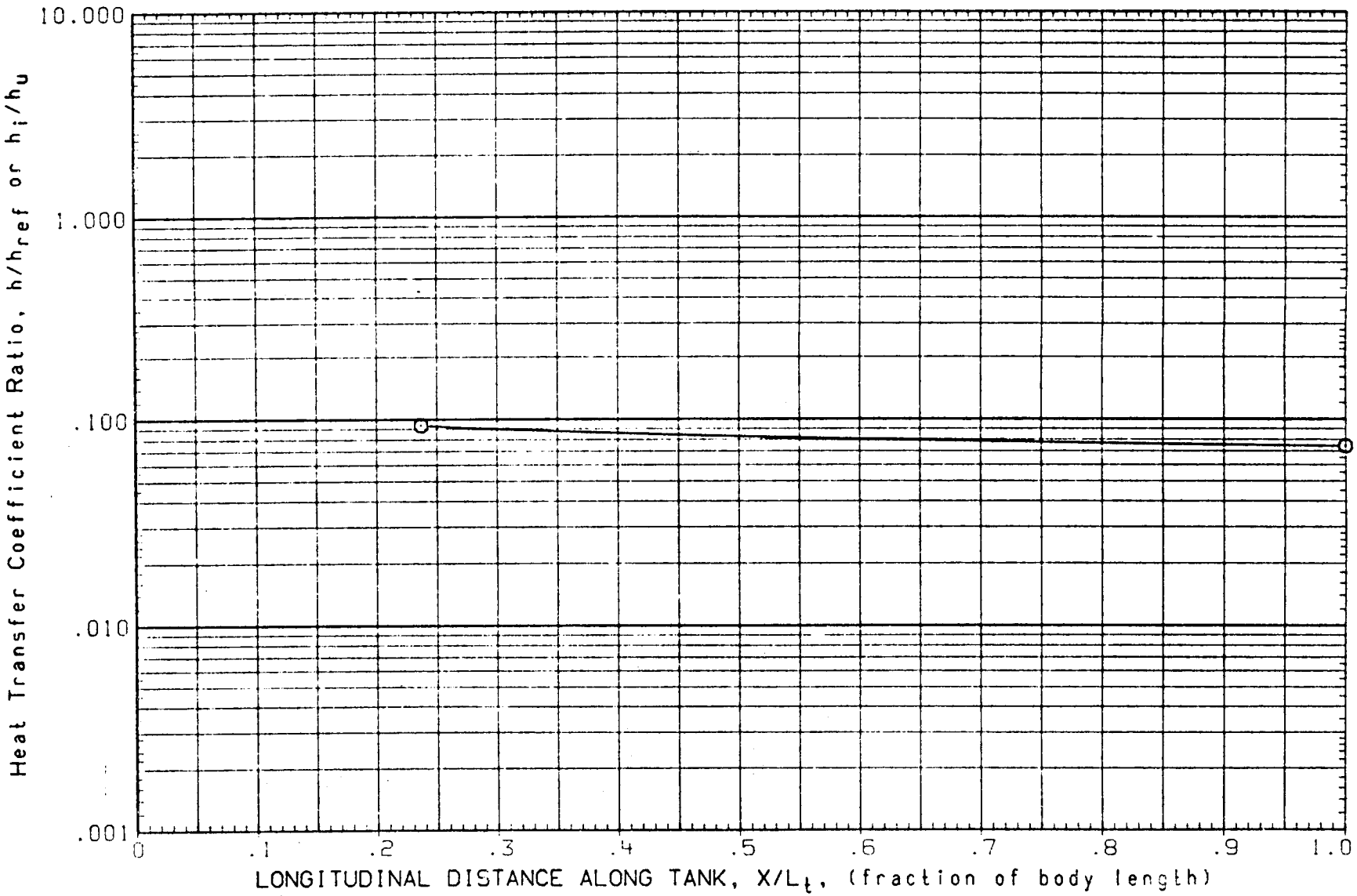

FIG. 4-11 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 5.630

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT20)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-4.500
(C9NT20)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-4.500
(V4LT41)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-4.500
(X4LT41)	◇	IH85 (W.L. TEST) OTS/ET = V4LT41/C9NT20= HI/HU		4.020	-5.000	-4.500
(Y4LT41)	△	IH85 (W.L. THEORY) OTS/ET = V4LT41/A9NT20= HI/HU		4.020	-5.000	-4.500

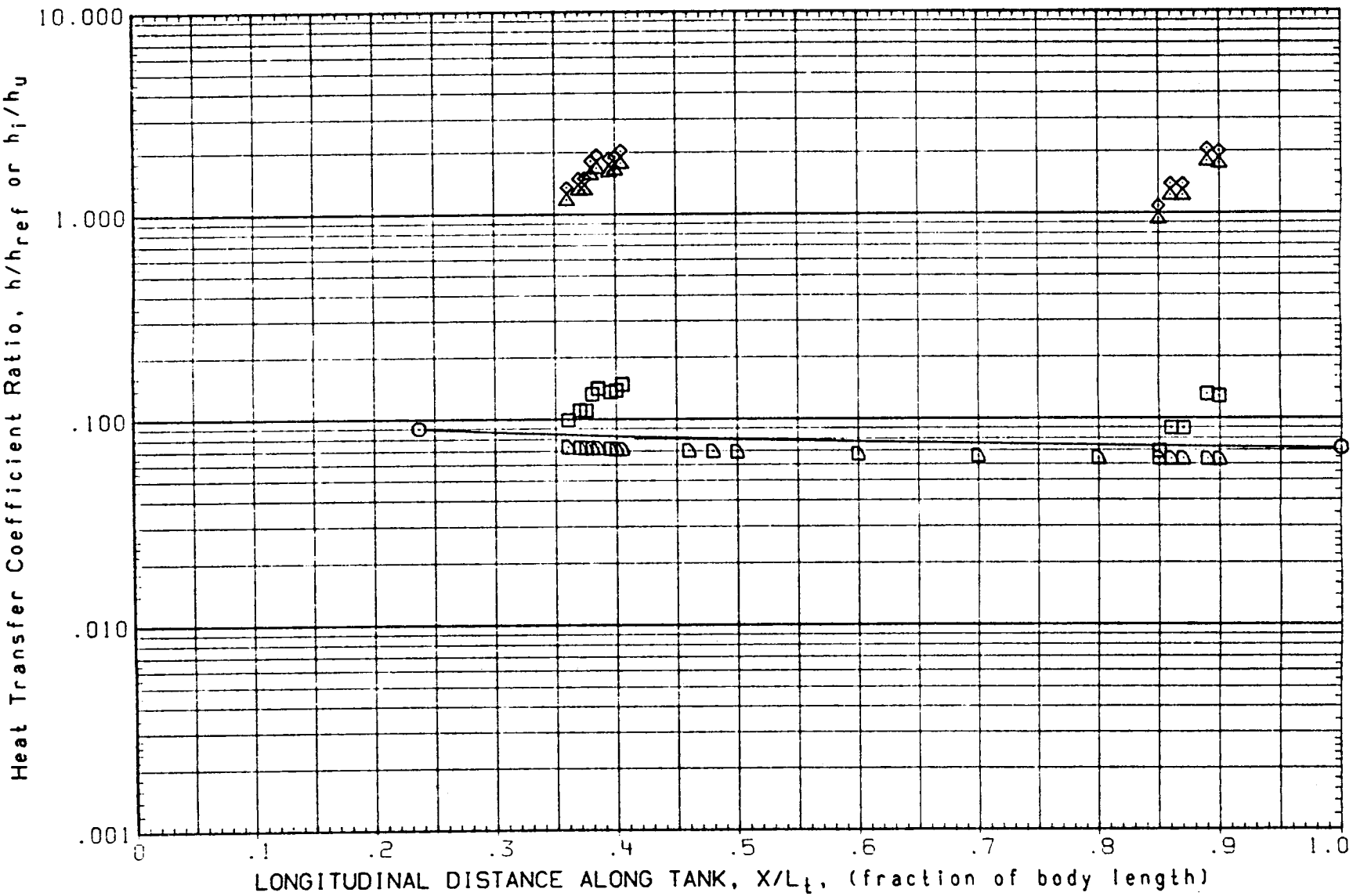

FIG. 4-11 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 11.250

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT20)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-4.500
(C9NT20)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-4.500
(V4LT41)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-4.500
(X4LT41)	◇	IH85 (W.L. TEST) OTS/ET = V4LT41/C9NT20=	HI/HU	4.020	-5.000	-4.500
(Y4LT41)	△	IH85 (W.L. THEORY) OTS/ET = V4LT41/A9NT20=	HI/HU	4.020	-5.000	-4.500

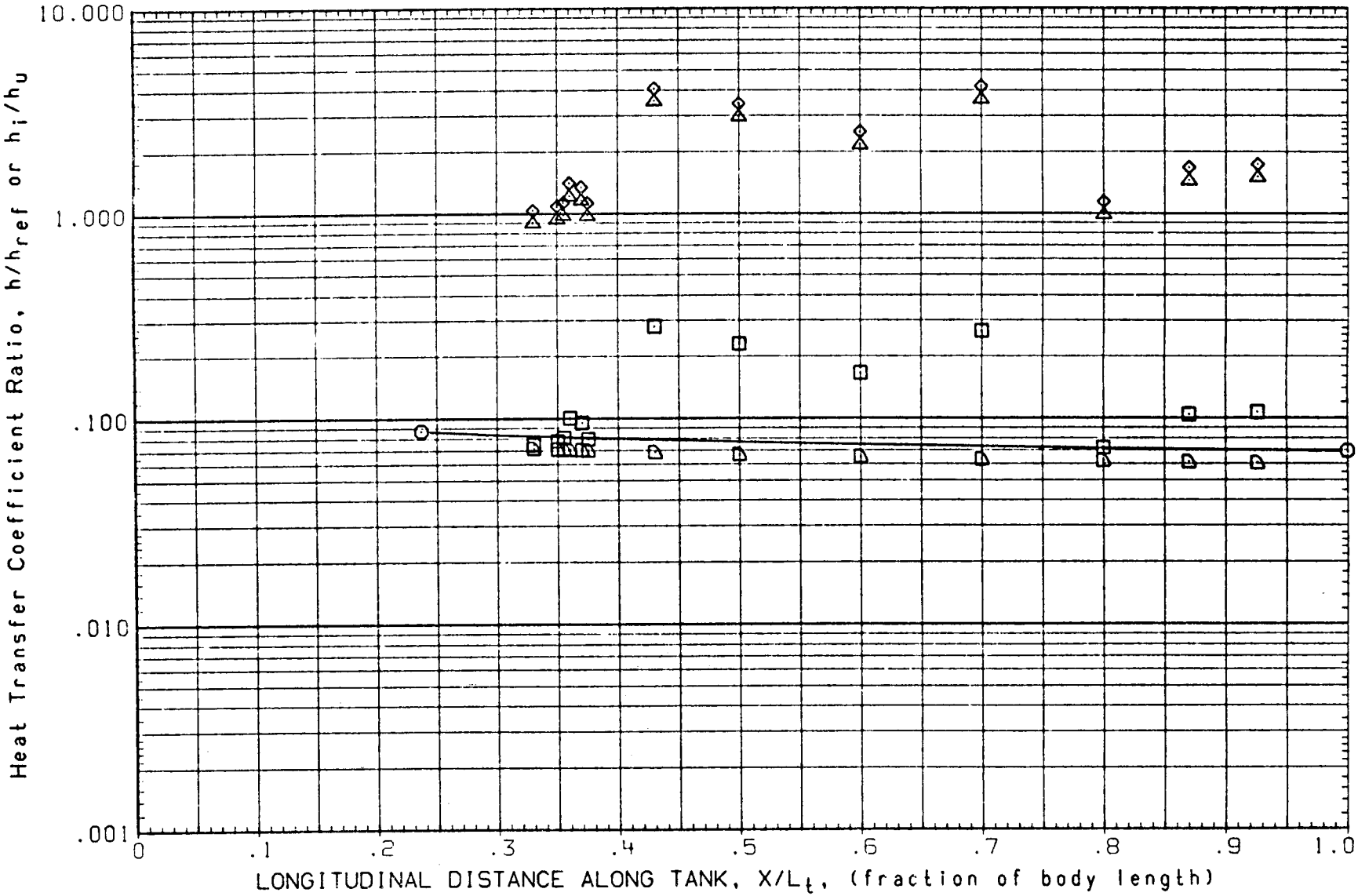

FIG. 4-11 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 17.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT20)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-4.500
(C9NT20)	□	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-4.500
(V4LT41)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-4.500
(X4LT41)	◇	IH85 (W.L. TEST) OTS/ET = V4LT41/C9NT20=	HI/HU	4.020	-5.000	-4.500
(Y4LT41)	△	IH85 (W.L. THEORY) OTS/ET = V4LT41/A9NT20=	HI/HU	4.020	-5.000	-4.500

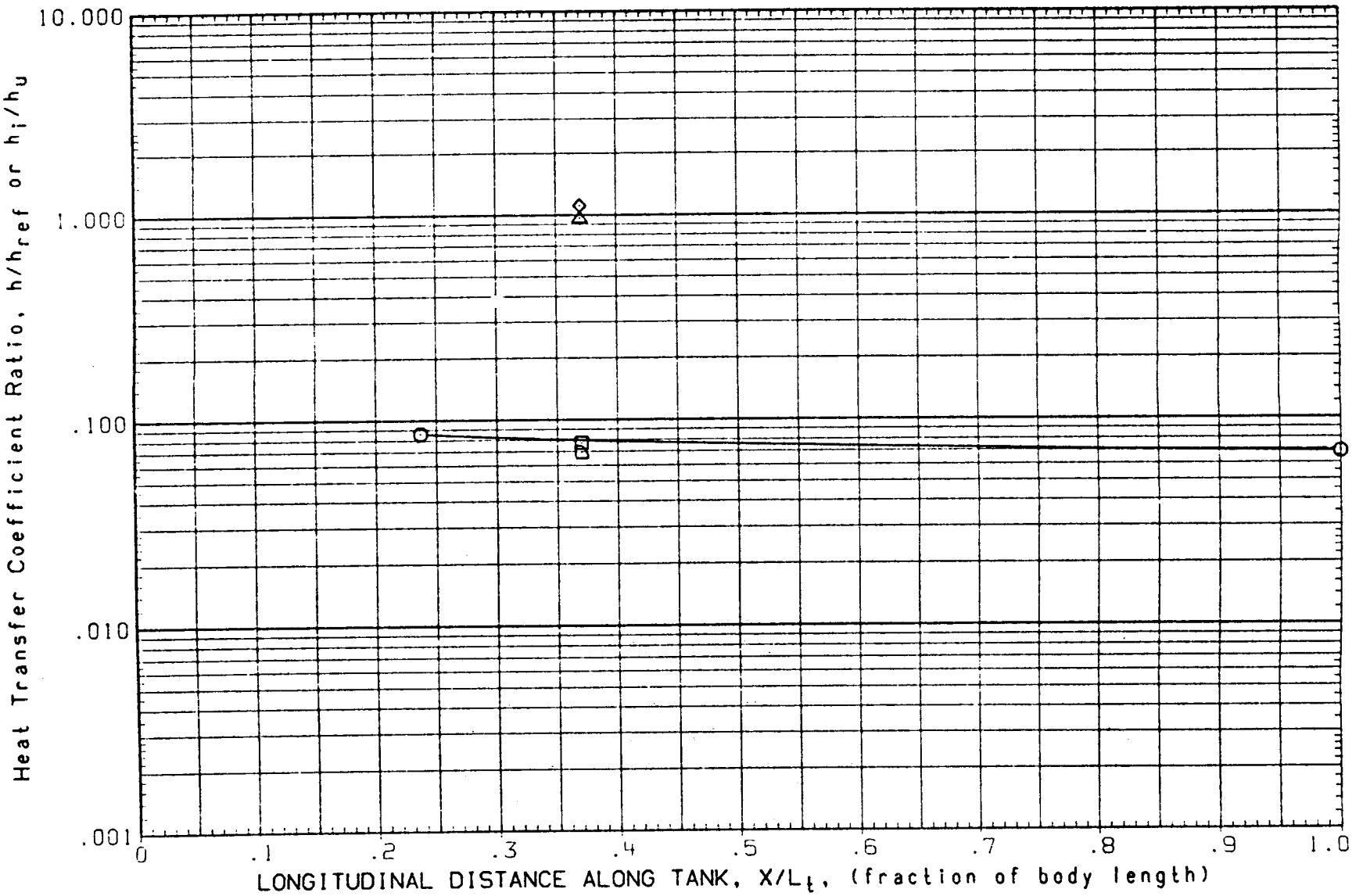

FIG. 4-11 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 20.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT20)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-4.500
(C9NT20)	⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-4.500
(V4LT41)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) 5		4.020	-5.000	-4.500
(X4LT41)	◇	IH85 (W.L. TEST) OTS/ET = V4LT41/C9NT20=	HI/HU	4.020	-5.000	-4.500
(Y4LT41)	△	IH85 (W.L. THEORY) OTS/ET = V4LT41/A9NT20=	HI/HU	4.020	-5.000	-4.500

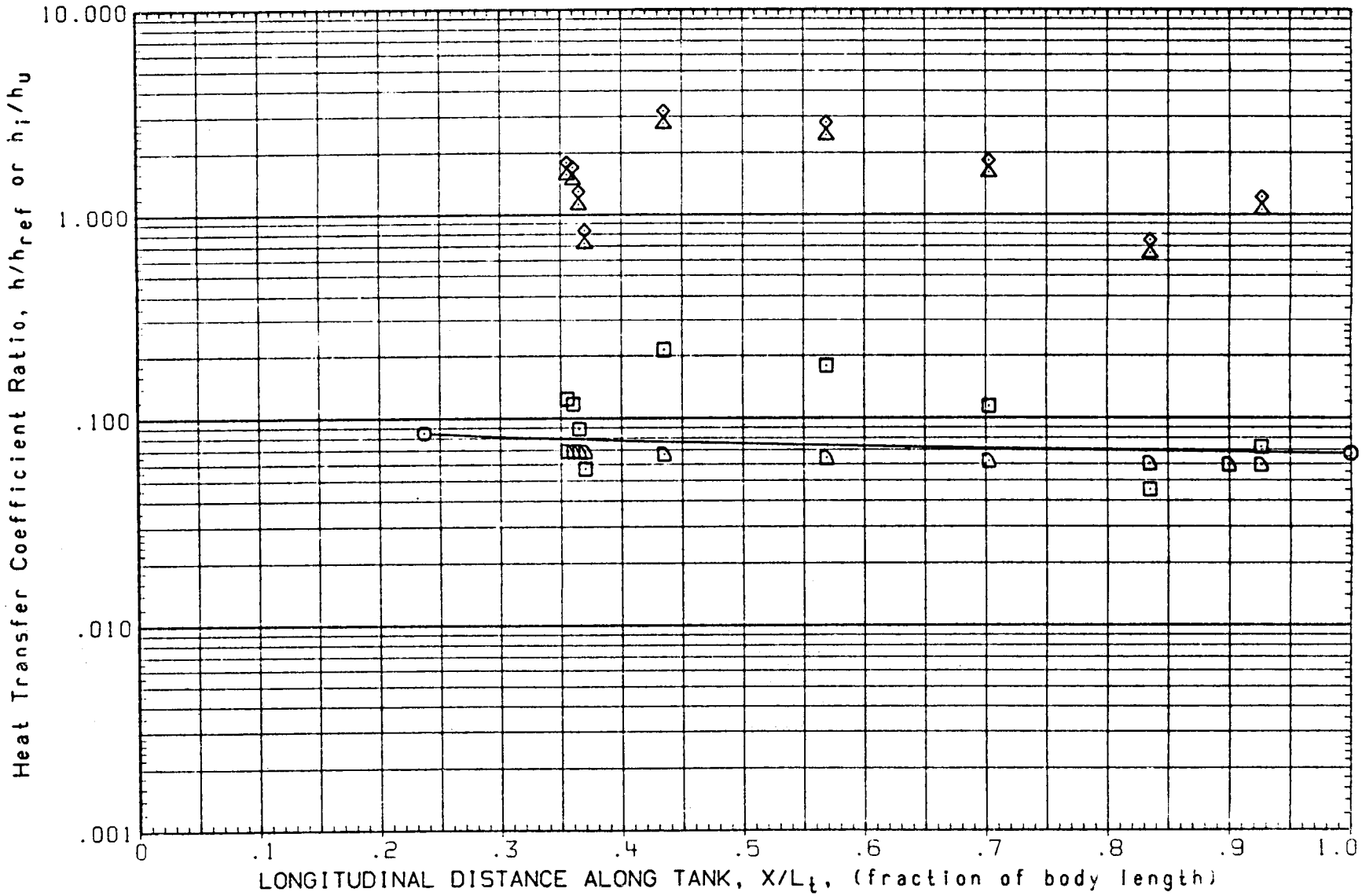

FIG. 4-11 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 23.070

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT20)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-4.500
(C9NT20)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-4.500
(V4LT41)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-4.500
(X4LT41)	◇	IH85 (W.L. TEST) OTS/ET = V4LT41/C9NT20= HI/HU		4.020	-5.000	-4.500
(Y4LT41)	△	IH85 (W.L. THEORY) OTS/ET = V4LT41/A9NT20= HI/HU		4.020	-5.000	-4.500

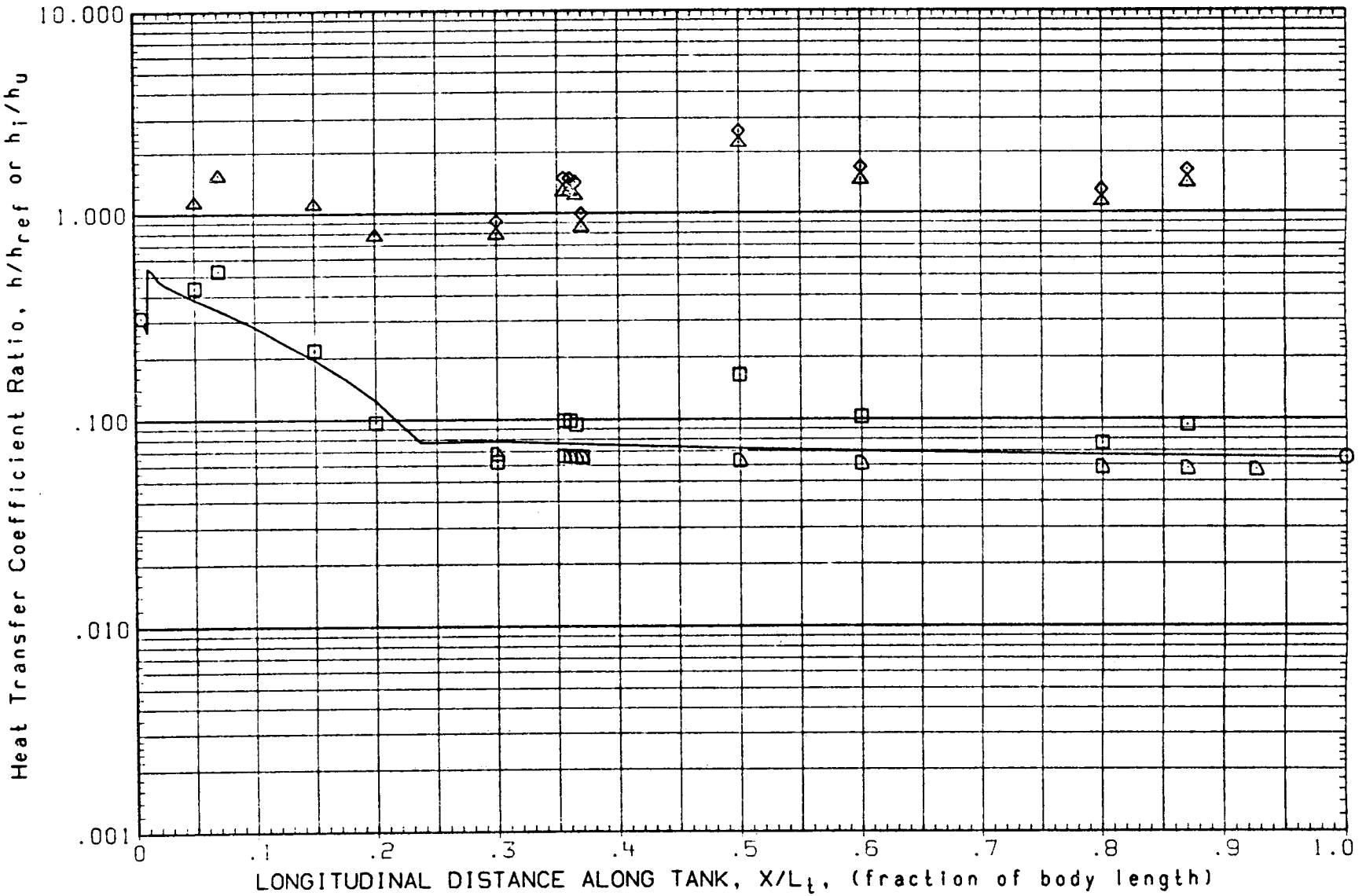

FIG. 4-11 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 29.800

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT20)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-4.500
(C9NT20)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-4.500
(V4LT41)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-4.500
(X4LT41)	◇	IH85 (W.L. TEST) OTS/ET = V4LT41/C9NT20=	HI/HU	4.020	-5.000	-4.500
(Y4LT41)	△	IH85 (W.L. THEORY) OTS/ET = V4LT41/A9NT20=	HI/HU	4.020	-5.000	-4.500

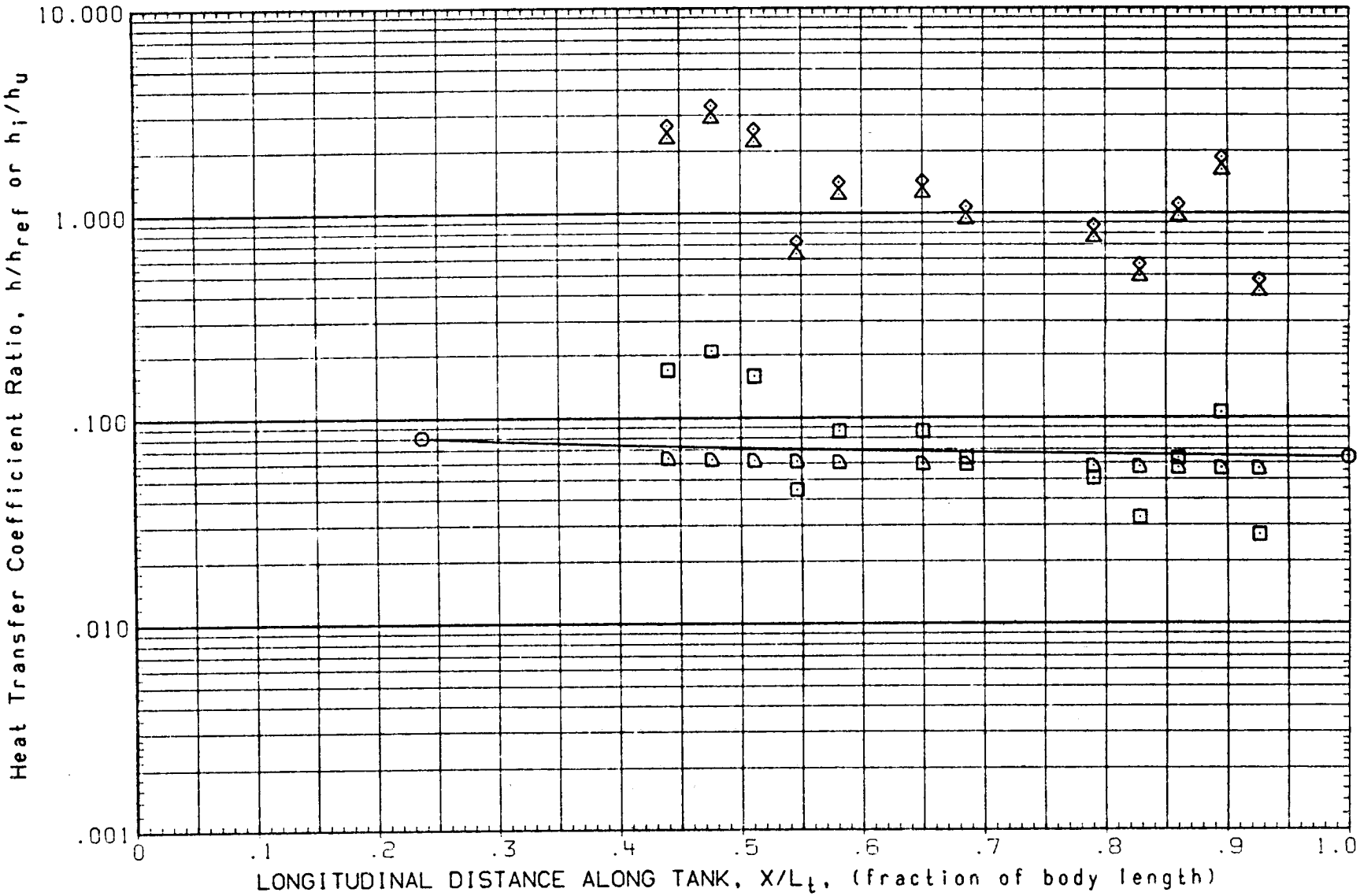

FIG. 4-11 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 31.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT20)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-4.500
(C9NT20)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-4.500
(V4LT41)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-4.500
(X4LT41)	◇	IH85 (W.L. TEST) OTS/ET = V4LT41/C9NT20= HI/HU		4.020	-5.000	-4.500
(Y4LT41)	△	IH85 (W.L. THEORY) OTS/ET = V4LT41/A9NT20= HI/HU		4.020	-5.000	-4.500

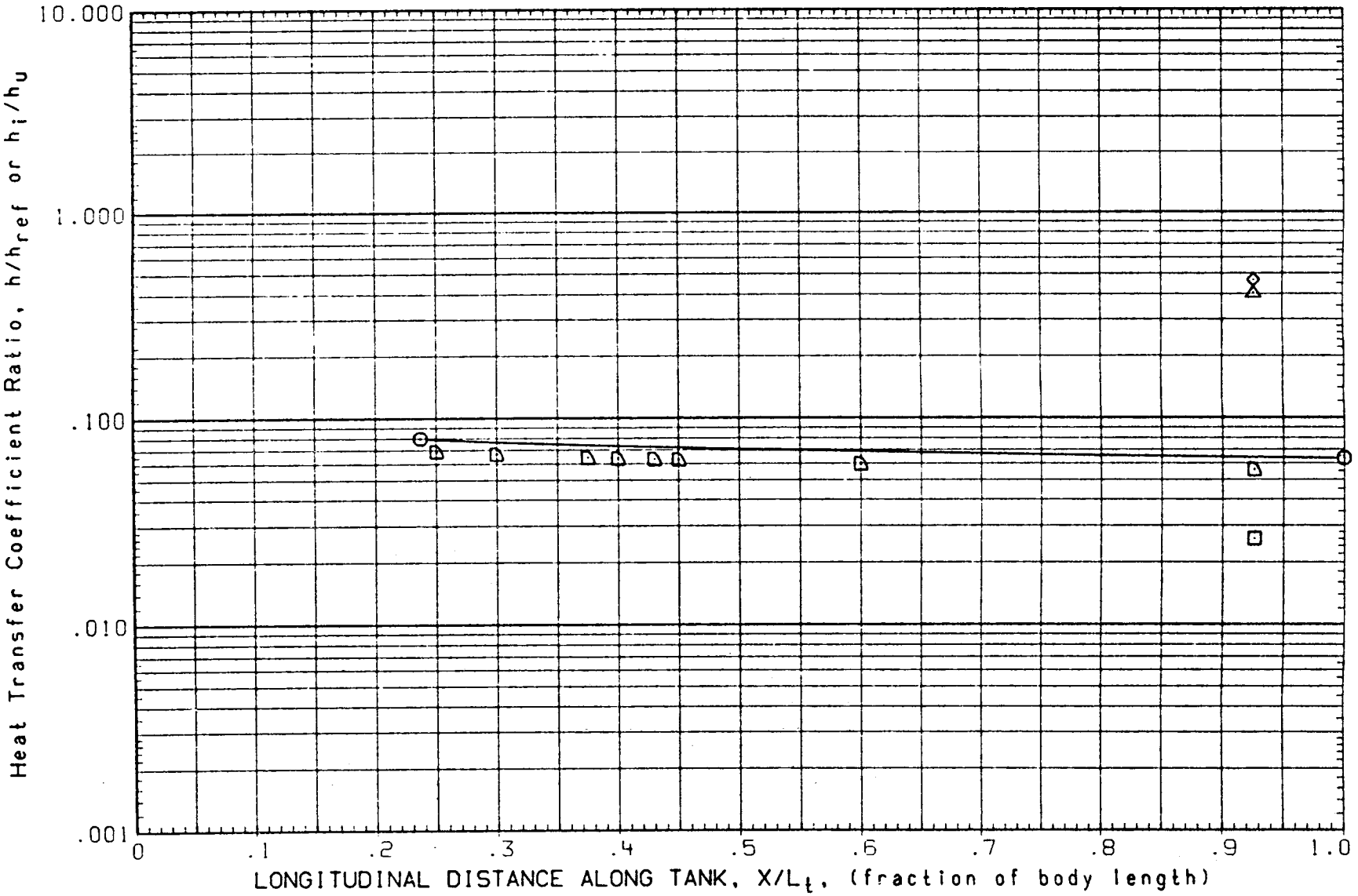

FIG. 4-11 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 33.750

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT20)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-4.500
(C9NT20)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-4.500
(V4LT41)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-4.500
(X4LT41)	◇	IH85 (W.L. TEST) OTS/ET = V4LT41/C9NT20=	HI/HU	4.020	-5.000	-4.500
(Y4LT41)	△	IH85 (W.L. THEORY) OTS/ET = V4LT41/A9NT20=	HI/HU	4.020	-5.000	-4.500

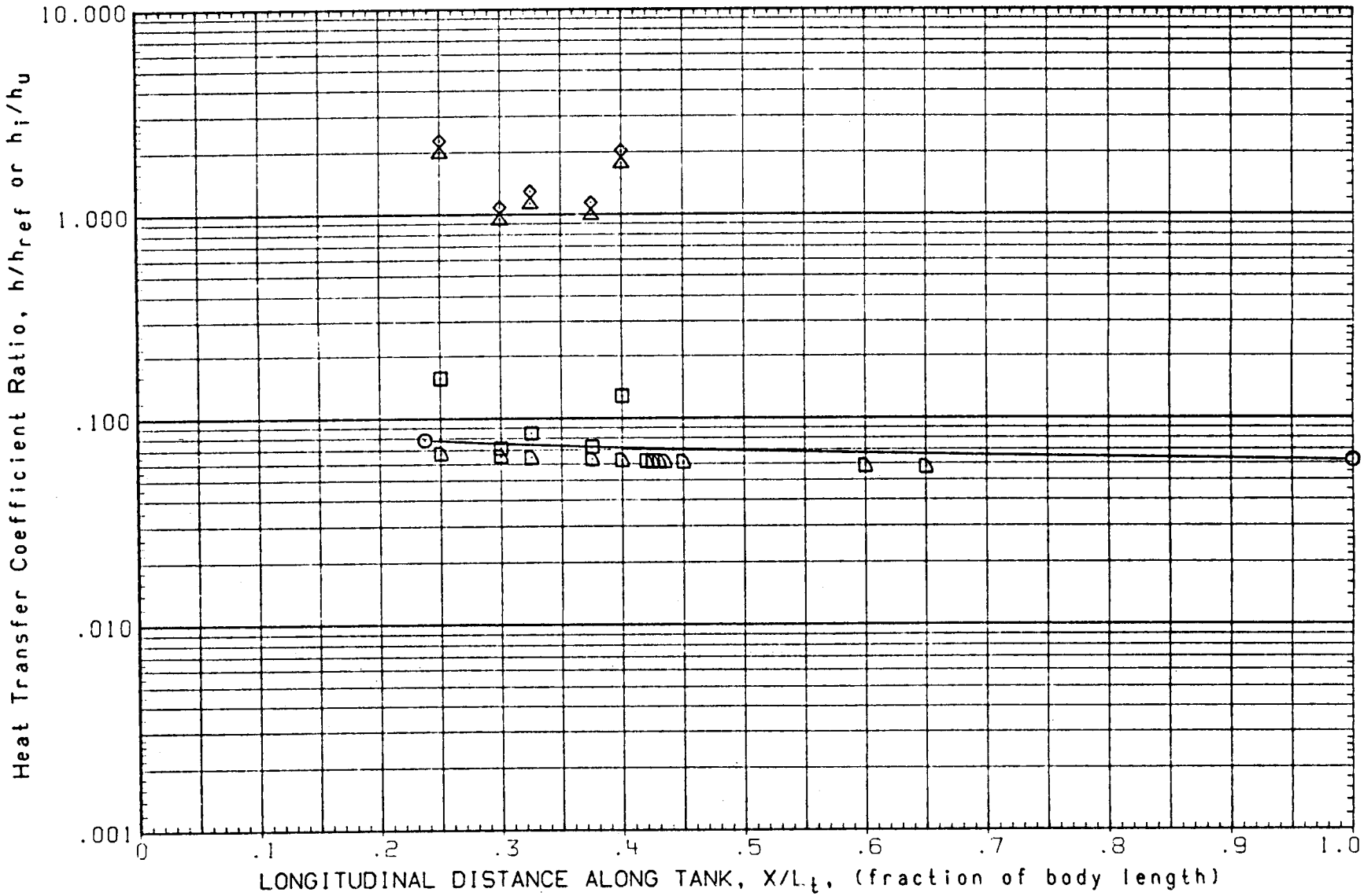

FIG. 4-11 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 36.320

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT20)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-4.500
(C9NT20)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-4.500
(V4LT41)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-4.500
(X4LT41)	◇	IH85 (W.L. TEST) OTS/ET = V4LT41/C9NT20=	HI/HU	4.020	-5.000	-4.500
(Y4LT41)	△	IH85 (W.L. THEORY) OTS/ET = V4LT41/A9NT20=	HI/HU	4.020	-5.000	-4.500

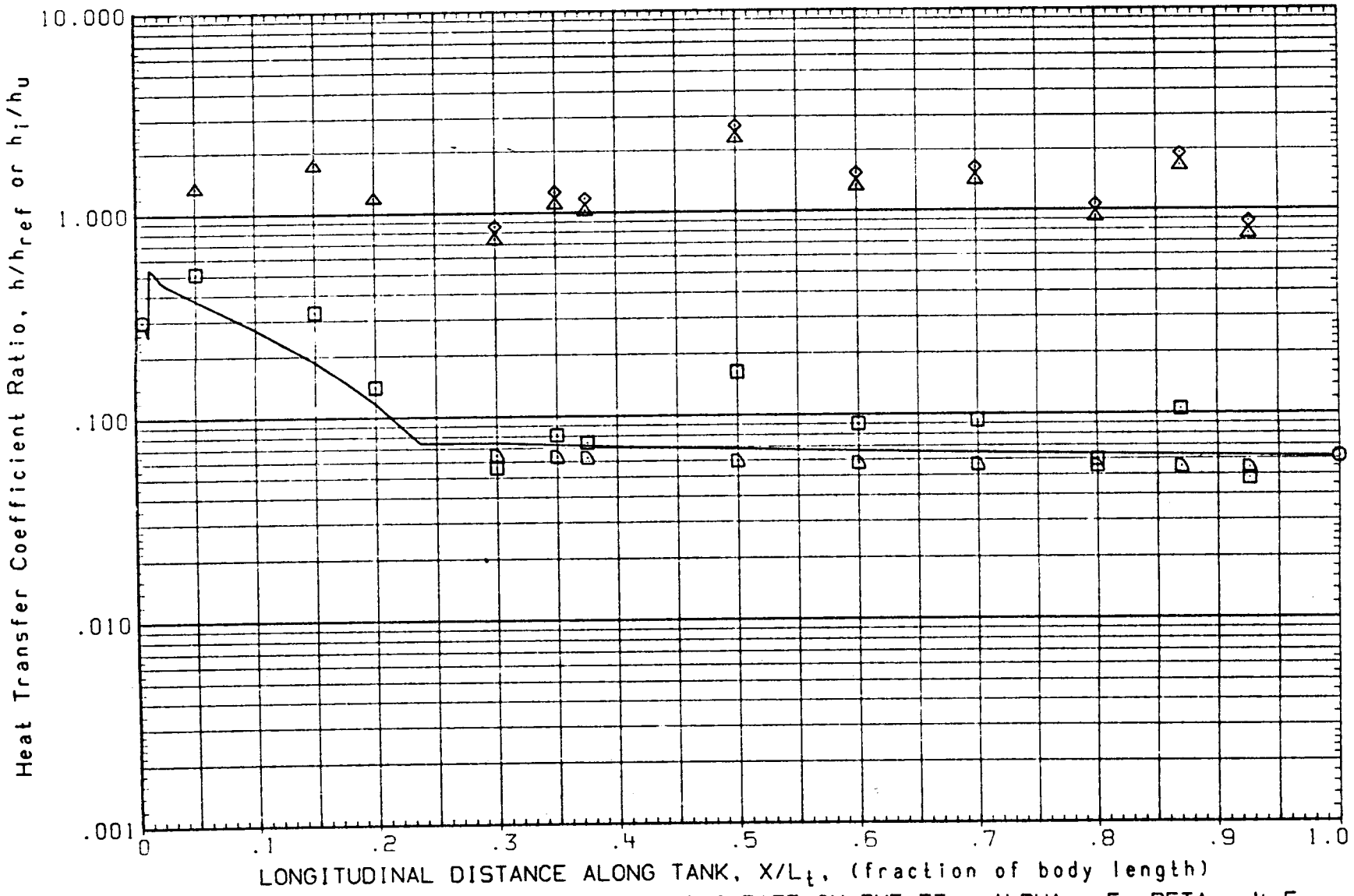

FIG. 4-11 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 37.700

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT20)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-4.500
(C9NT20)	⌂	DATA NOT AVAILABLE		4.020	-5.000	-4.500
(V4LT41)	□	DATA NOT AVAILABLE		4.020	-5.000	-4.500
(X4LT41)	◇	DATA NOT AVAILABLE		4.020	-5.000	-4.500
(Y4LT41)	△	DATA NOT AVAILABLE		4.020	-5.000	-4.500

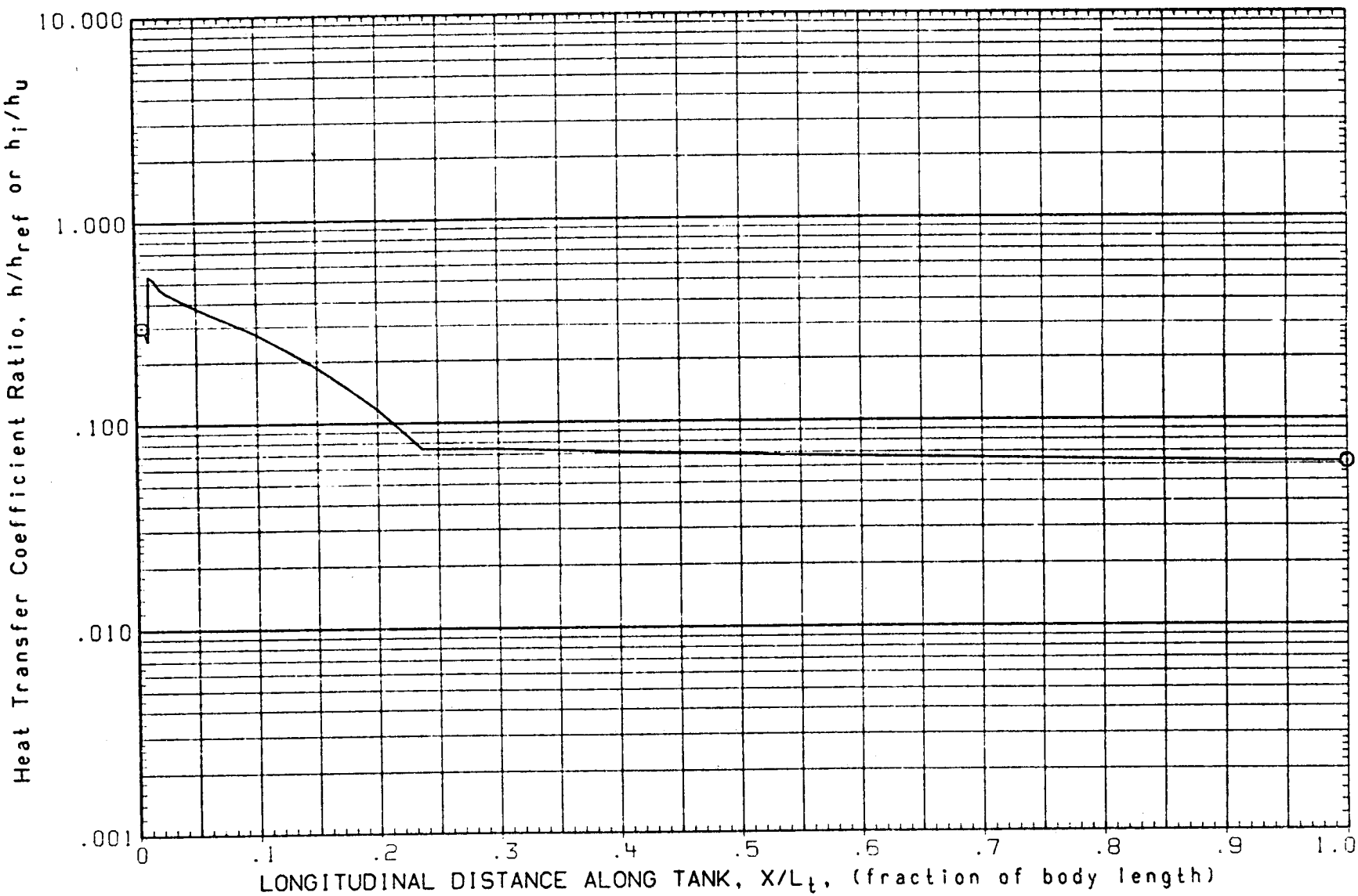

FIG. 4-11 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 39.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT20)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	4.020	-5.000	-4.500
(C9NT20)	⊐	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	4.020	-5.000	-4.500
(V4LT41)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	-5.000	-4.500
(X4LT41)	◇	IH85 (W.L. TEST) OTS/ET = V4LT41/C9NT20= HI/HU	4.020	-5.000	-4.500
(Y4LT41)	△	IH85 (W.L. THEORY) OTS/ET = V4LT41/A9NT20= HI/HU	4.020	-5.000	-4.500

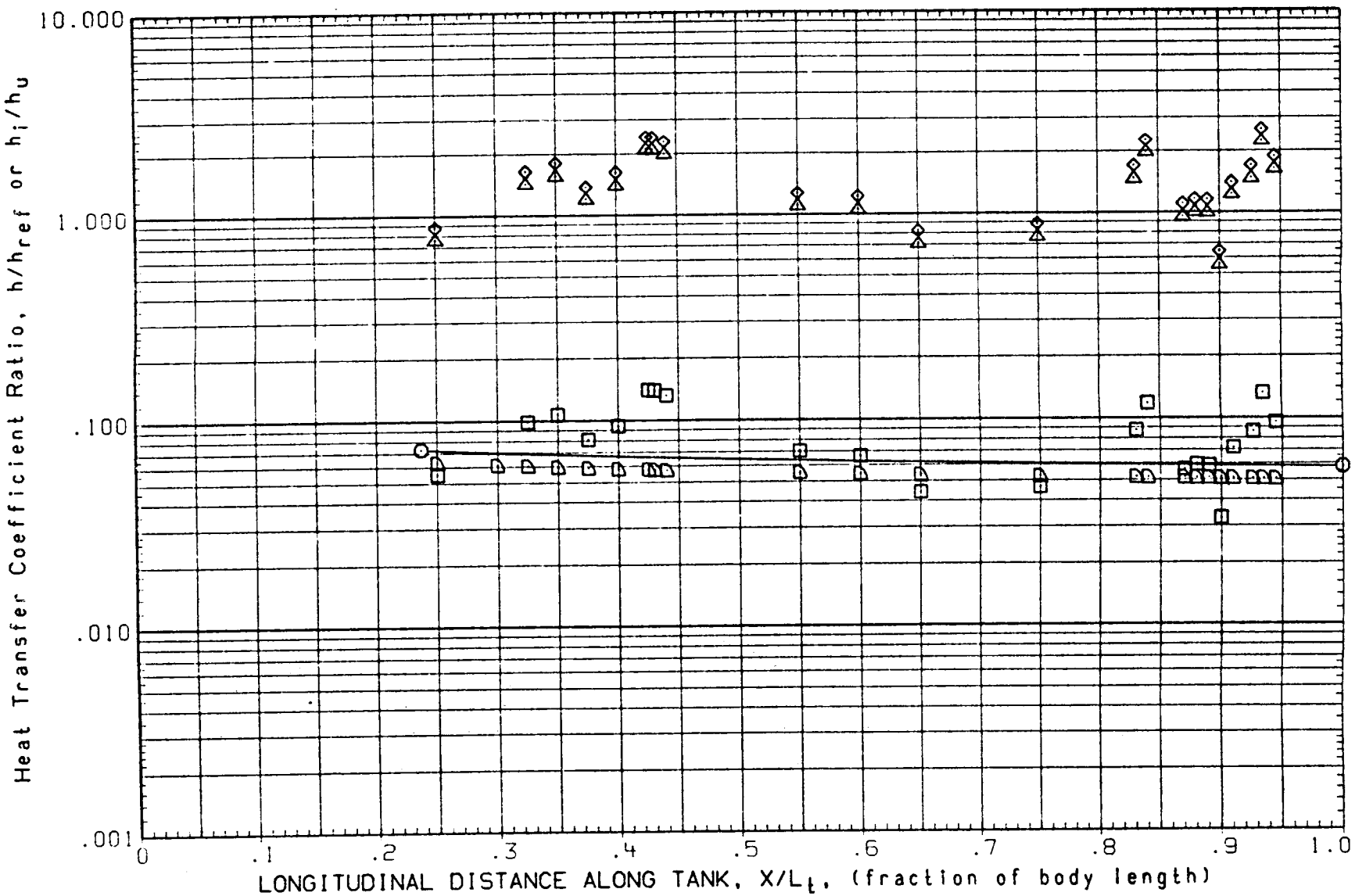

FIG. 4-11 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 45.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT20)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	4.020	-5.000	-4.500
(C9NT20)	⌂	DATA NOT AVAILABLE	4.020	-5.000	-4.500
(V4LT41)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	-5.000	-4.500
(X4LT41)	◇	DATA NOT AVAILABLE	4.020	-5.000	-4.500
(Y4LT41)	△	IH85 (W.L. THEORY) OTS/ET = V4LT41/A9NT20= HI/HU	4.020	-5.000	-4.500

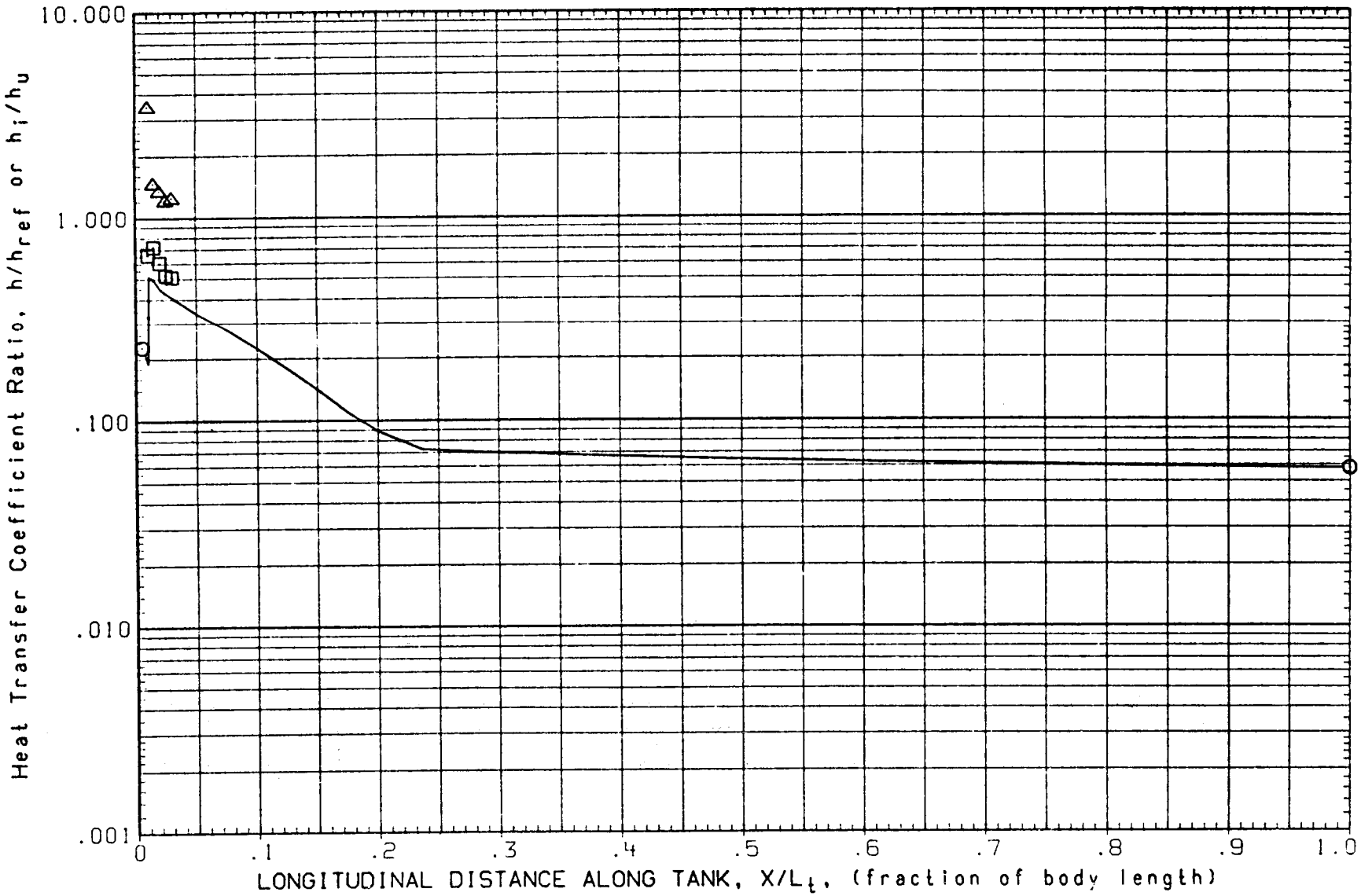

FIG. 4-11 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 180.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT20)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-4.500
(C9NT20)	⌂	DATA NOT AVAILABLE		4.020	-5.000	-4.500
(V4LT41)	□	DATA NOT AVAILABLE		4.020	-5.000	-4.500
(X4LT41)	◇	DATA NOT AVAILABLE		4.020	-5.000	-4.500
(Y4LT41)	△	DATA NOT AVAILABLE		4.020	-5.000	-4.500

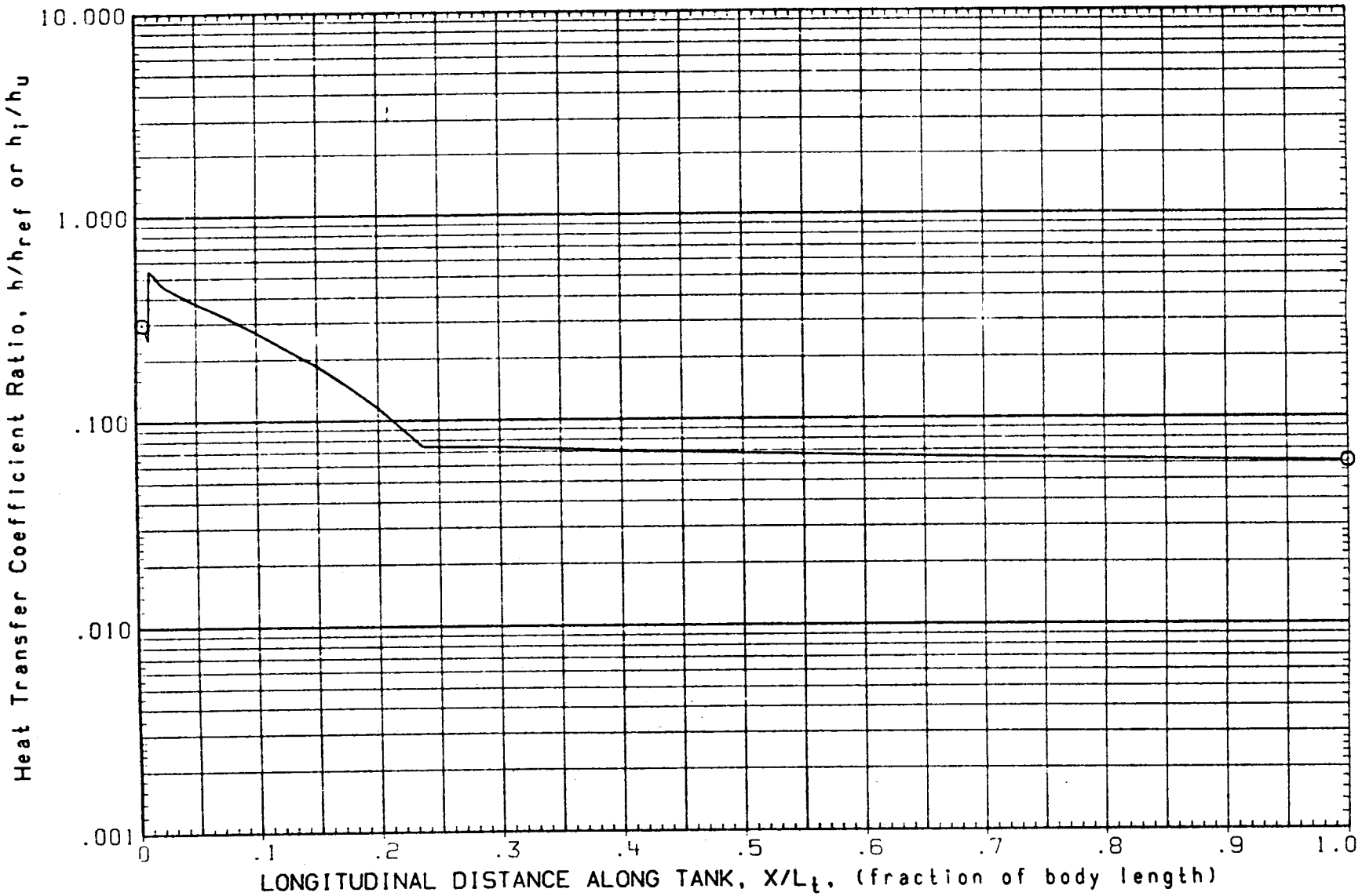

FIG. 4-11 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 235.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT20)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-4.500
(C9NT20)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-4.500
(V4LT41)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-4.500
(X4LT41)	◇	IH85 (W.L. TEST) OTS/ET = V4LT41/C9NT20=	HI/HU	4.020	-5.000	-4.500
(Y4LT41)	△	IH85 (W.L. THEORY) OTS/ET = V4LT41/A9NT20=	HI/HU	4.020	-5.000	-4.500

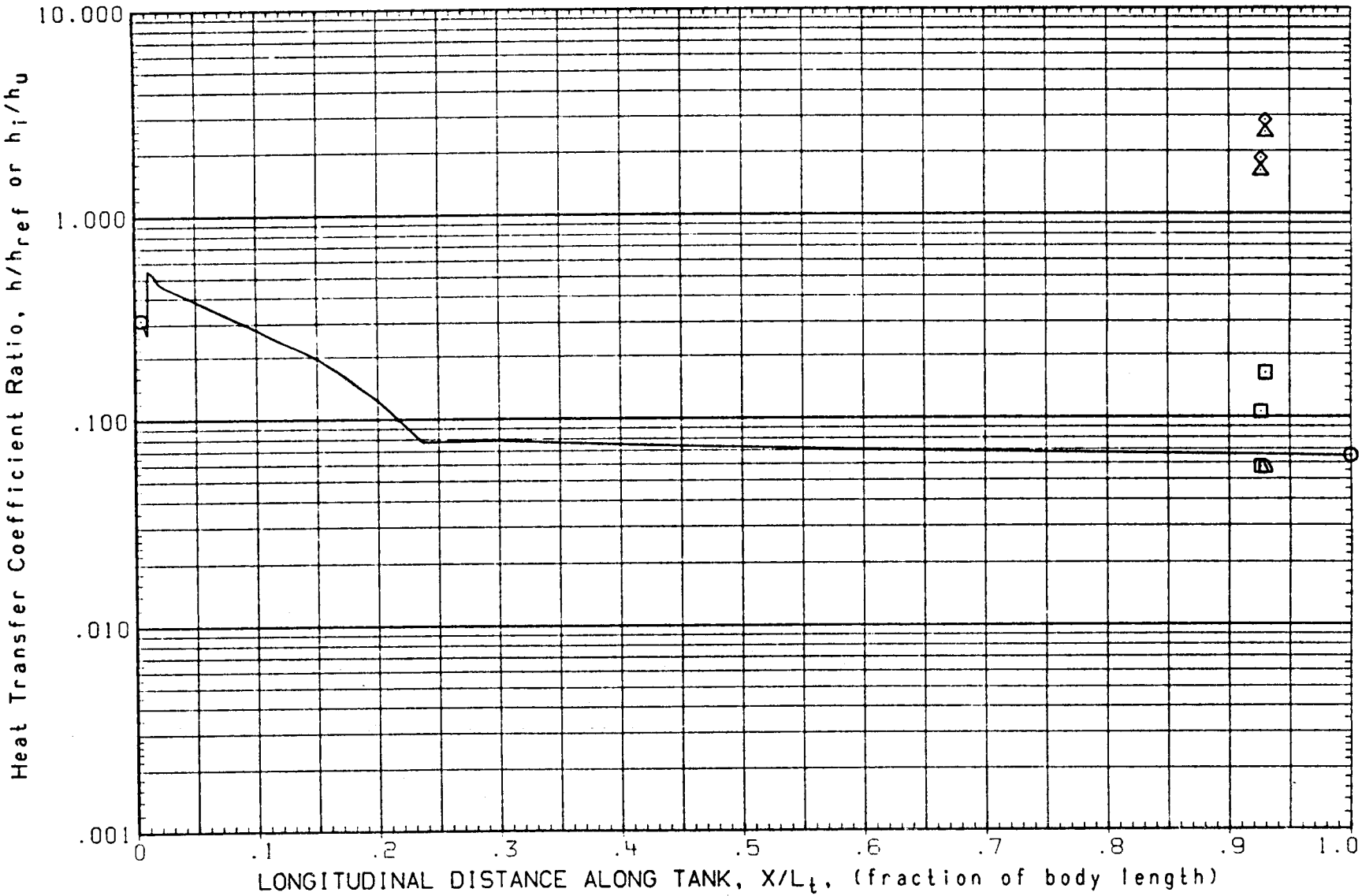

FIG. 4-11 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 247.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT20)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-4.500
(C9NT20)	⬠	DATA NOT AVAILABLE		4.020	-5.000	-4.500
(V4LT41)	□	DATA NOT AVAILABLE		4.020	-5.000	-4.500
(X4LT41)	◇	DATA NOT AVAILABLE		4.020	-5.000	-4.500
(Y4LT41)	△	DATA NOT AVAILABLE		4.020	-5.000	-4.500

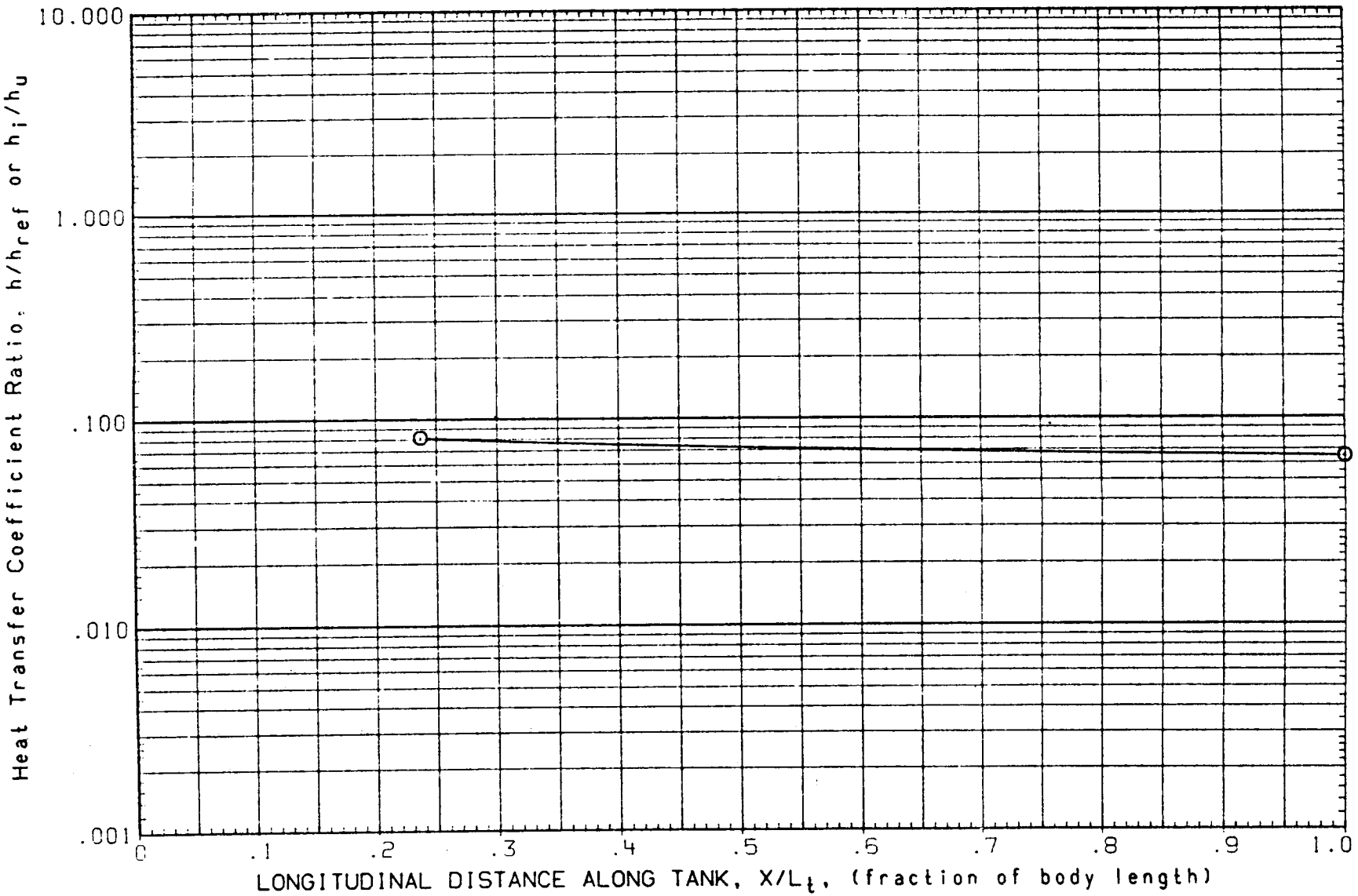

FIG. 4-11 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 247.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT20)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-4.500
(C9NT20)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-4.500
(V4LT41)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-4.500
(X4LT41)	◇	IH85 (W.L. TEST) OTS/ET = V4LT41/C9NT20=	HI/HU	4.020	-5.000	-4.500
(Y4LT41)	△	IH85 (W.L. THEORY) OTS/ET = V4LT41/A9NT20=	HI/HU	4.020	-5.000	-4.500

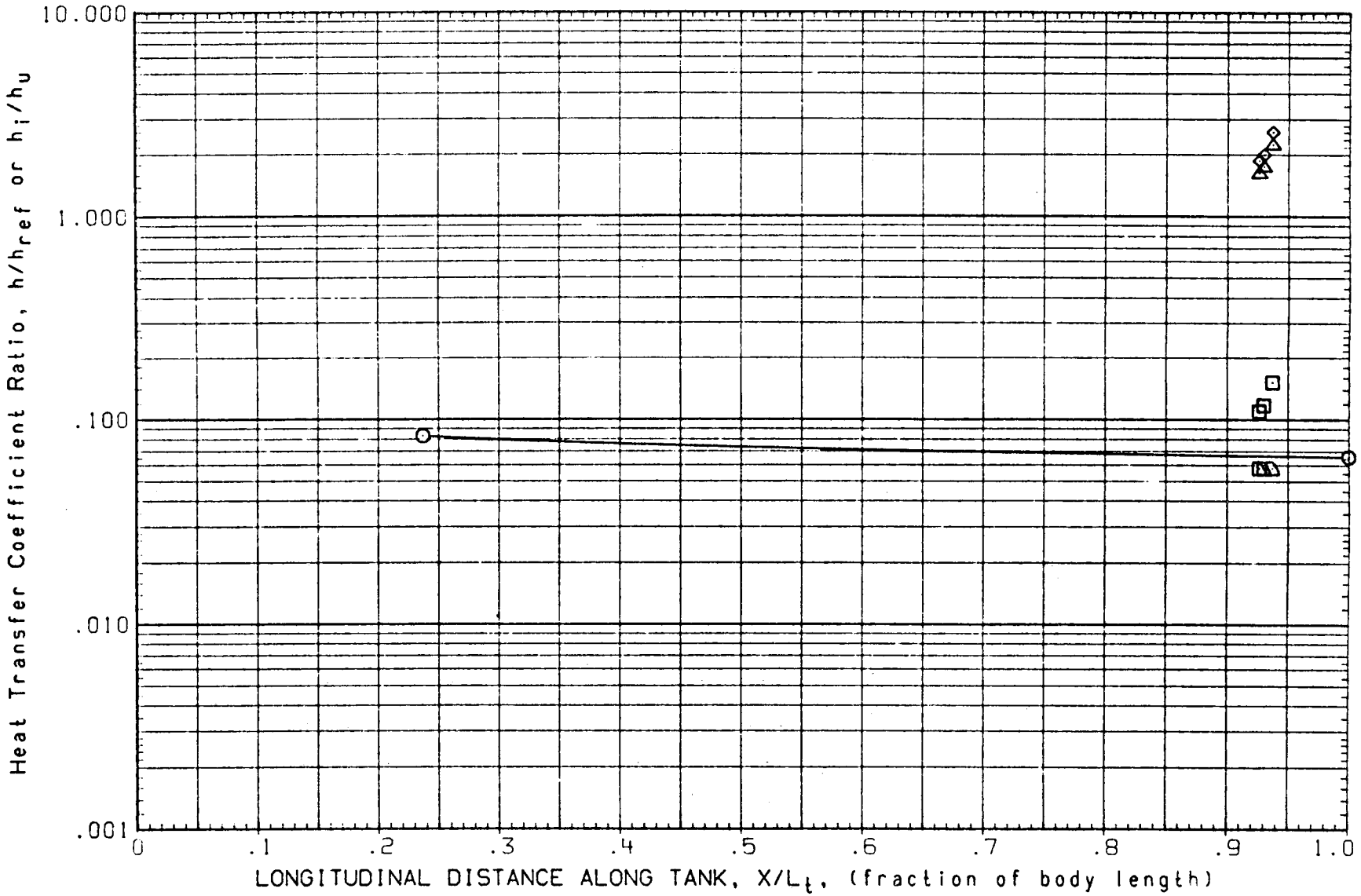

FIG. 4-11 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 250.570

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT20)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-4.500
(C3NT20)	□	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-4.500
(V4LT41)	⊡	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-4.500
(X4LT41)	◇	IH85 (W.L. TEST) OTS/ET = V4LT41/C9NT20=	HI/HU	4.020	-5.000	-4.500
(Y4LT41)	△	IH85 (W.L. THEORY) OTS/ET = V4LT41/A9NT20=	HI/HU	4.020	-5.000	-4.500

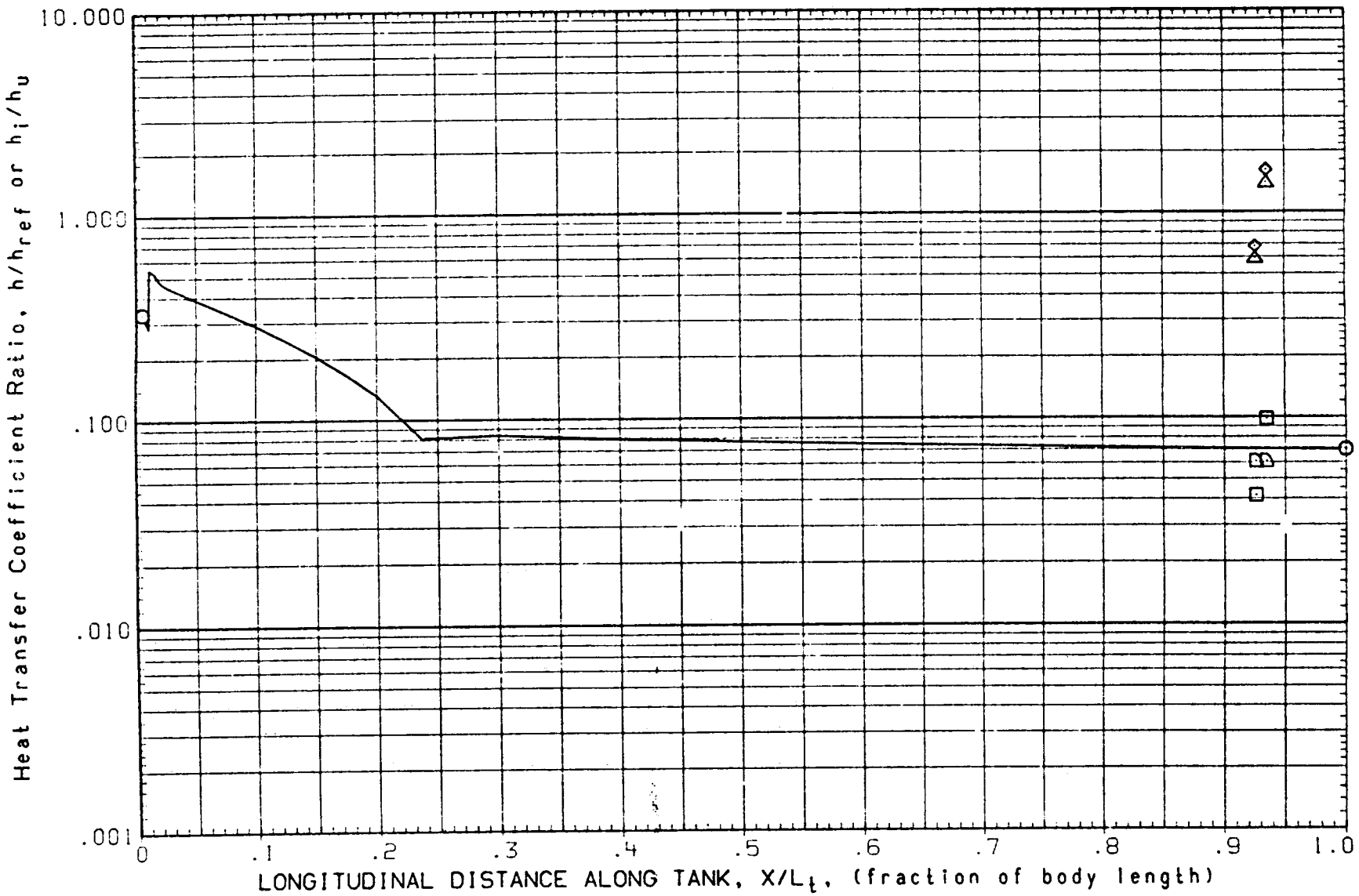

FIG. 4-11 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 258.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT20)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-4.500
(C9NT20)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-4.500
(V4LT41)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-4.500
(X4LT41)	◇	IH85 (W.L. TEST) OTS/ET = V4LT41/C9NT20=	HI/HU	4.020	-5.000	-4.500
(Y4LT41)	△	IH85 (W.L. THEORY) OTS/ET = V4LT41/A9NT20=	HI/HU	4.020	-5.000	-4.500

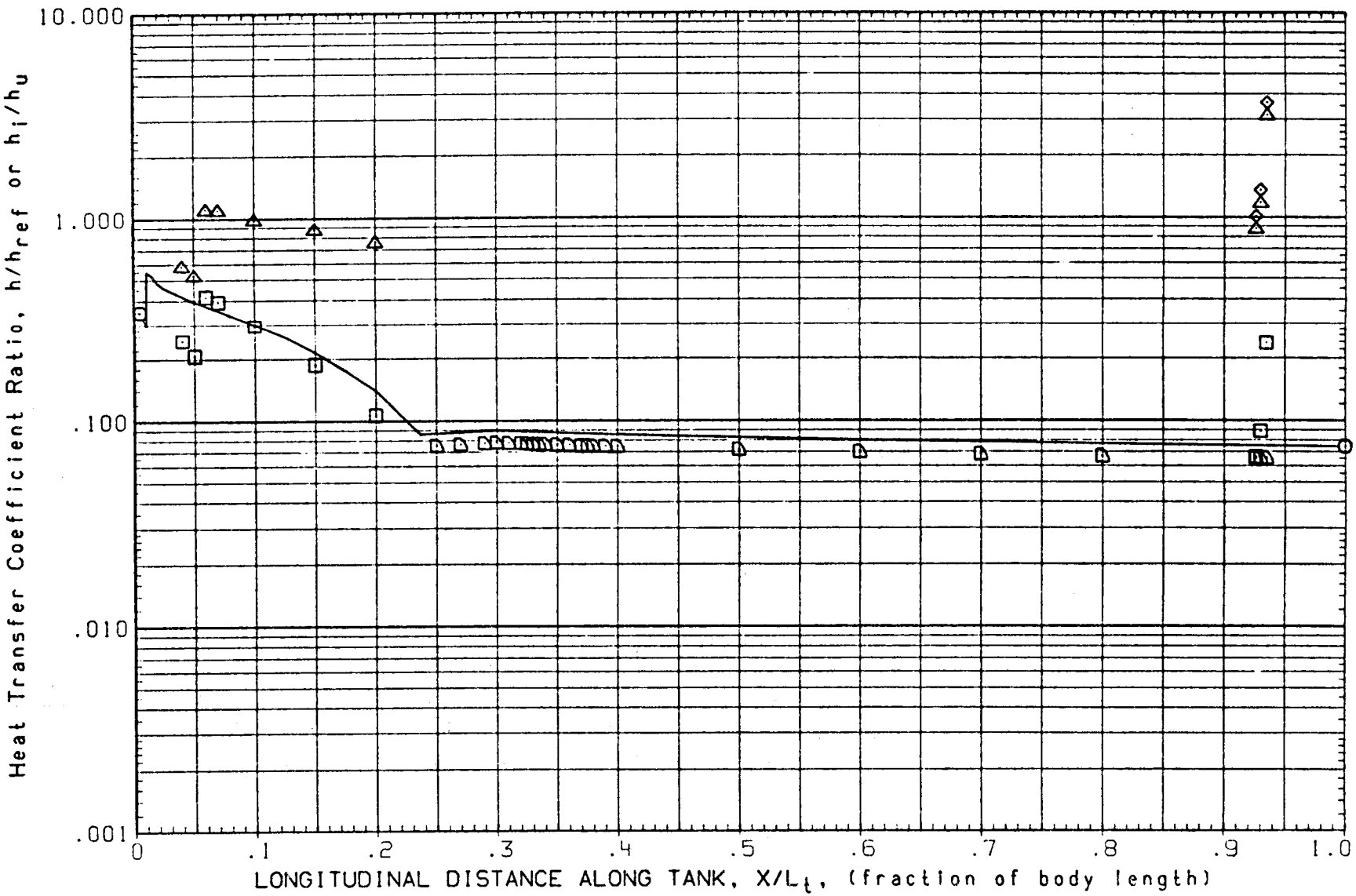

FIG. 4-11 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 270.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT20)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-4.500
(C9NT20)	⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-4.500
(V4LT41)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-4.500
(X4LT41)	◇	IH85 (W.L. TEST) OTS/ET = V4LT41/C9NT20=	HI/HU	4.020	-5.000	-4.500
(Y4LT41)	△	IH85 (W.L. THEORY) OTS/ET = V4LT41/A9NT20=	HI/HU	4.020	-5.000	-4.500

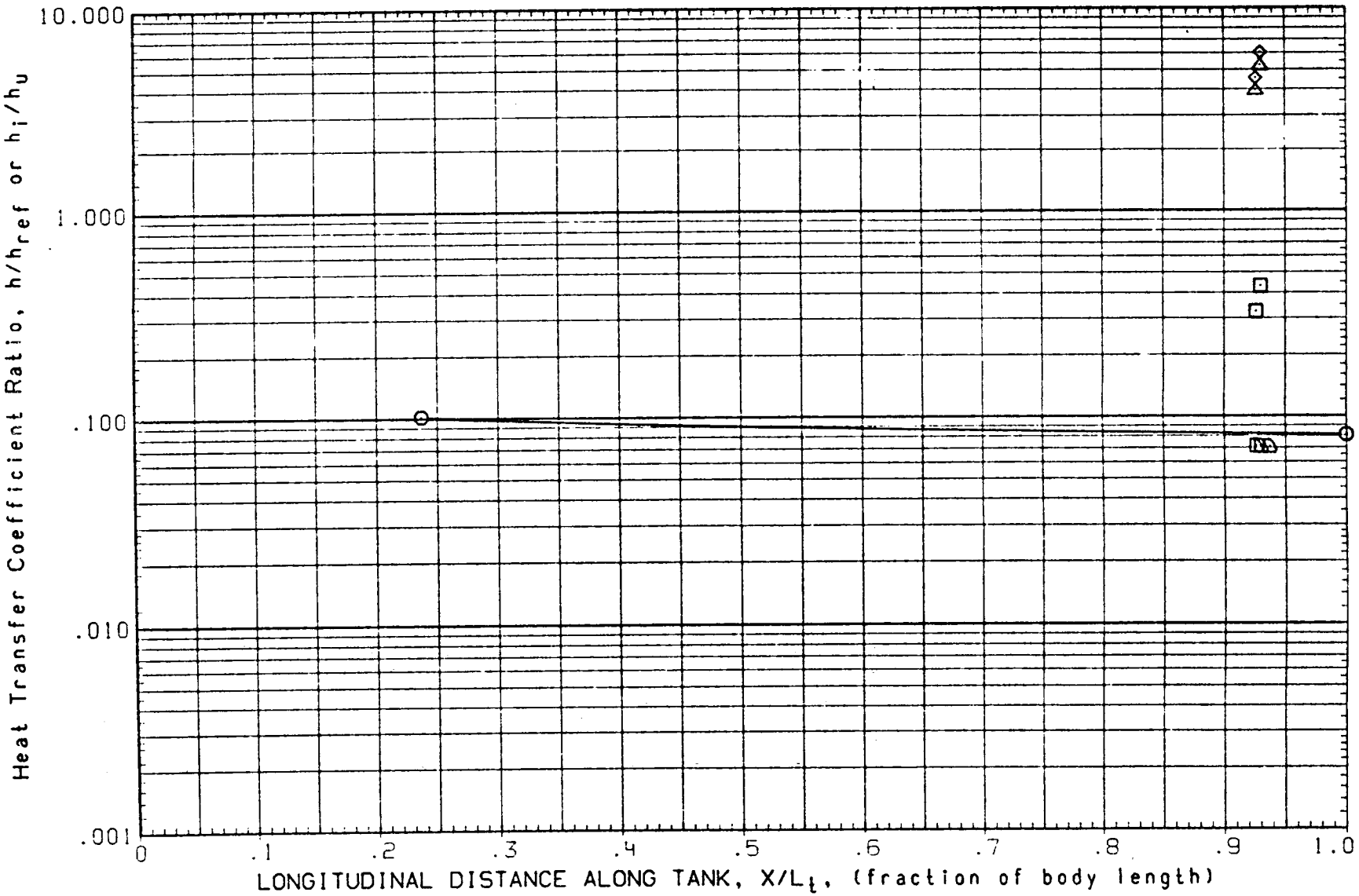

FIG. 4-11 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 289.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT20)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-4.500
(C9NT20)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-4.500
(V4LT41)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-4.500
(X4LT41)	◇	IH85 (W.L. TEST) OTS/ET = V4LT41/C9NT20=	HI/HU	4.020	-5.000	-4.500
(Y4LT41)	△	IH85 (W.L. THEORY) OTS/ET = V4LT41/A9NT20=	HI/HU	4.020	-5.000	-4.500

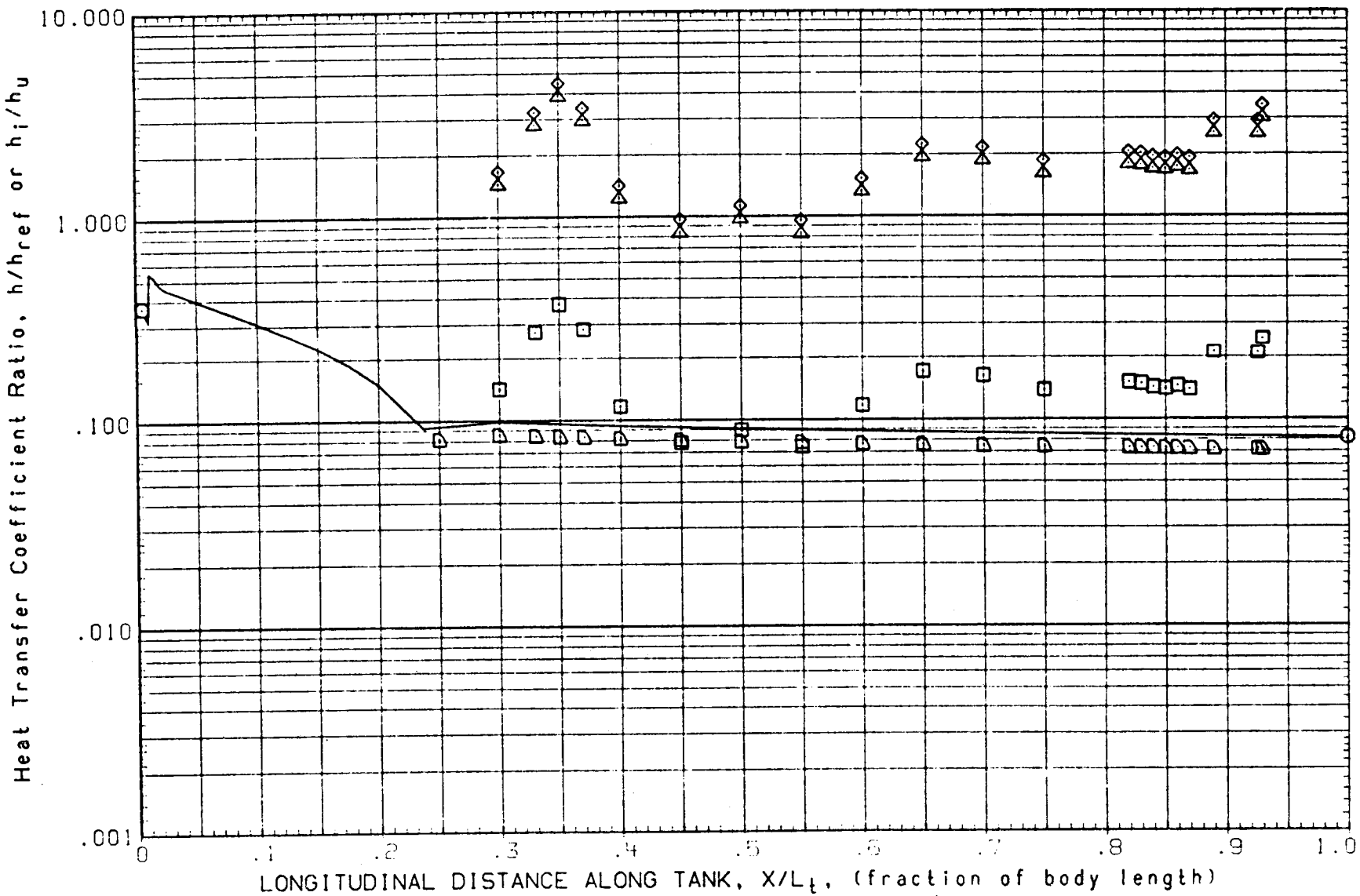

FIG. 4-11 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 232.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(C9NT20)	○	EXTERNAL TANK THEORY, N.S., TURBULENT	HU/HREF	4.020	-5.000	-4.500
(C9NT20)	□	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-4.500
(V4LT41)	□	IH85, AEDC V41A-N5, CONFIGURATION 0 (T) S		4.020	-5.000	-4.500
(X4LT41)	◇	IH85 (W.L. TEST) OTS/ET = V4LT41/C9NT20= HI/HU		4.020	-5.000	-4.500
(Y4LT41)	△	IH85 (W.L. THEORY) OTS/ET = V4LT41/ A2NT20= HI/HU		4.020	-5.000	-4.500

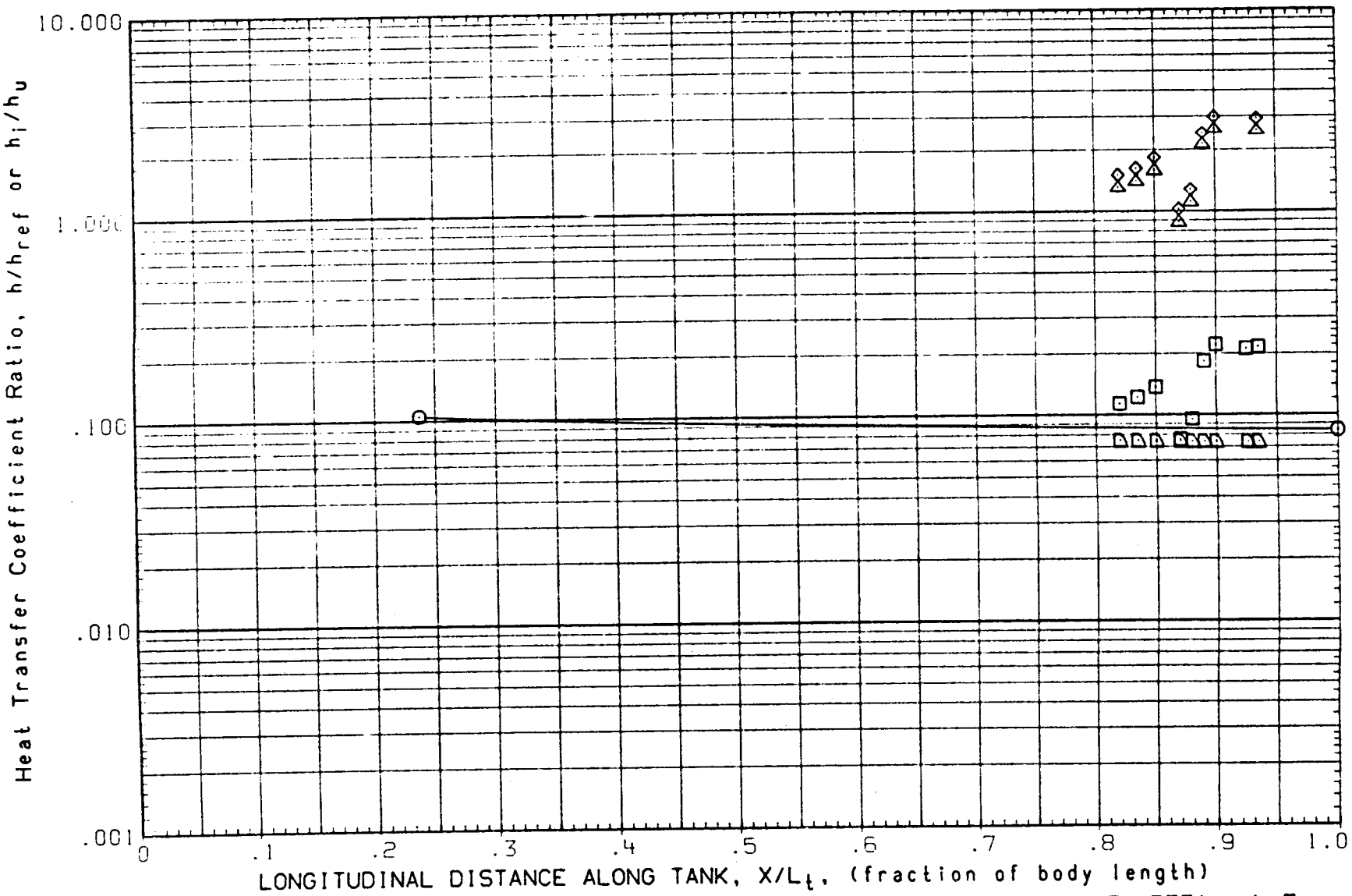

FIG. 4-11 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 301.500

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT20)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-4.500
(C9NT20)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-4.500
(V4LT41)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-4.500
(X4LT41)	◇	IH85 (W.L. TEST) OTS/ET = V4LT41/C9NT20=	HI/HU	4.020	-5.000	-4.500
(Y4LT41)	△	IH85 (W.L. THEORY) OTS/ET = V4LT41/A9NT20=	HI/HU	4.020	-5.000	-4.500

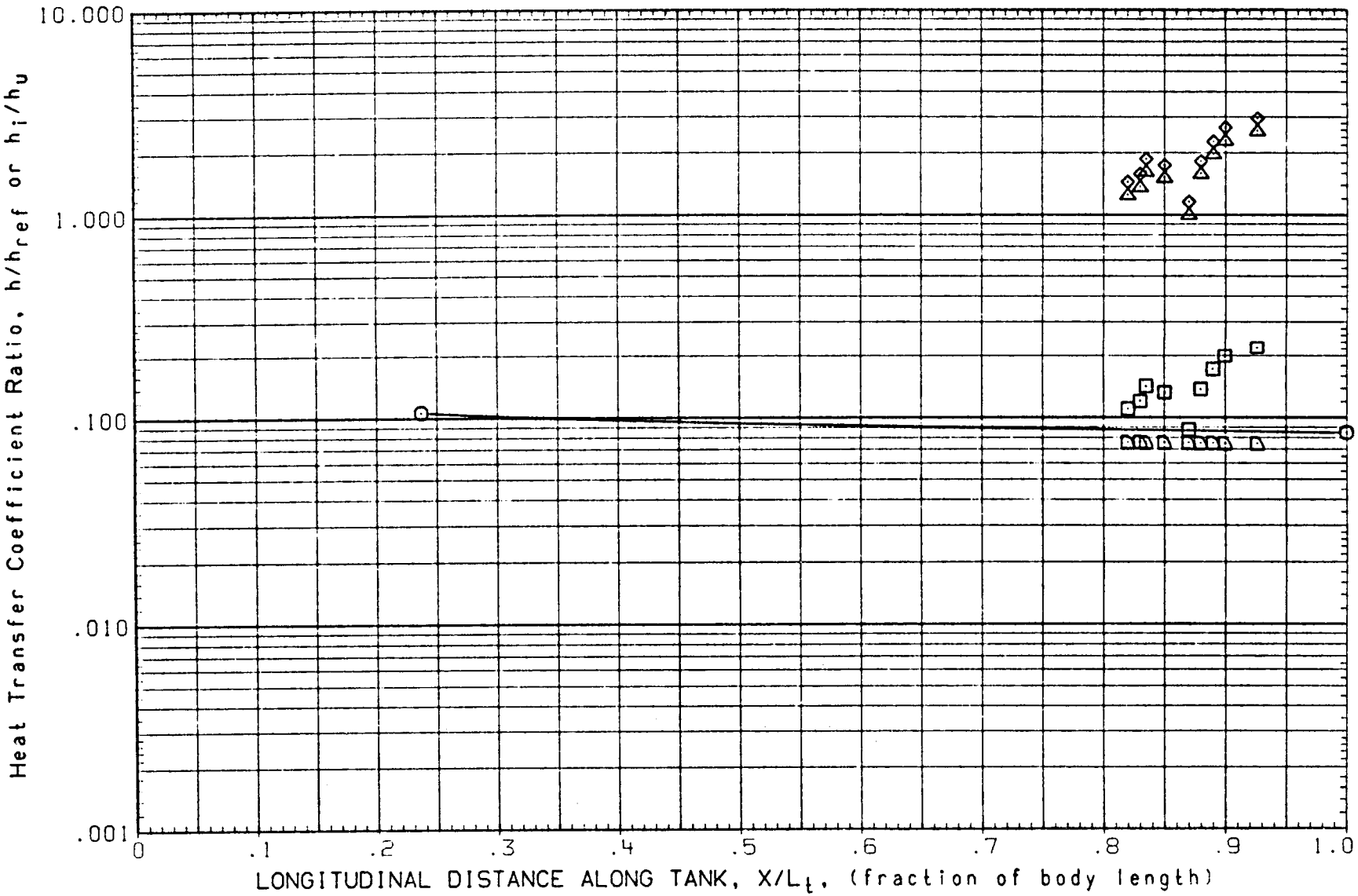

FIG. 4-11 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 305.400

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT20)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-4.500
(C9NT20)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-4.500
(V4LT41)	□	IH85, AEDC V41A-W5, CONFIGURATION C (T) S		4.020	-5.000	-4.500
(X4LT41)	◇	IH85 (W.L. TEST) OTS/ET = V4LT41/C9NT20=	HI/HU	4.020	-5.000	-4.500
(Y4LT41)	△	IH85 (W.L. THEORY) OTS/ET = V4LT41/A9NT20=	HI/HU	4.020	-5.000	-4.500

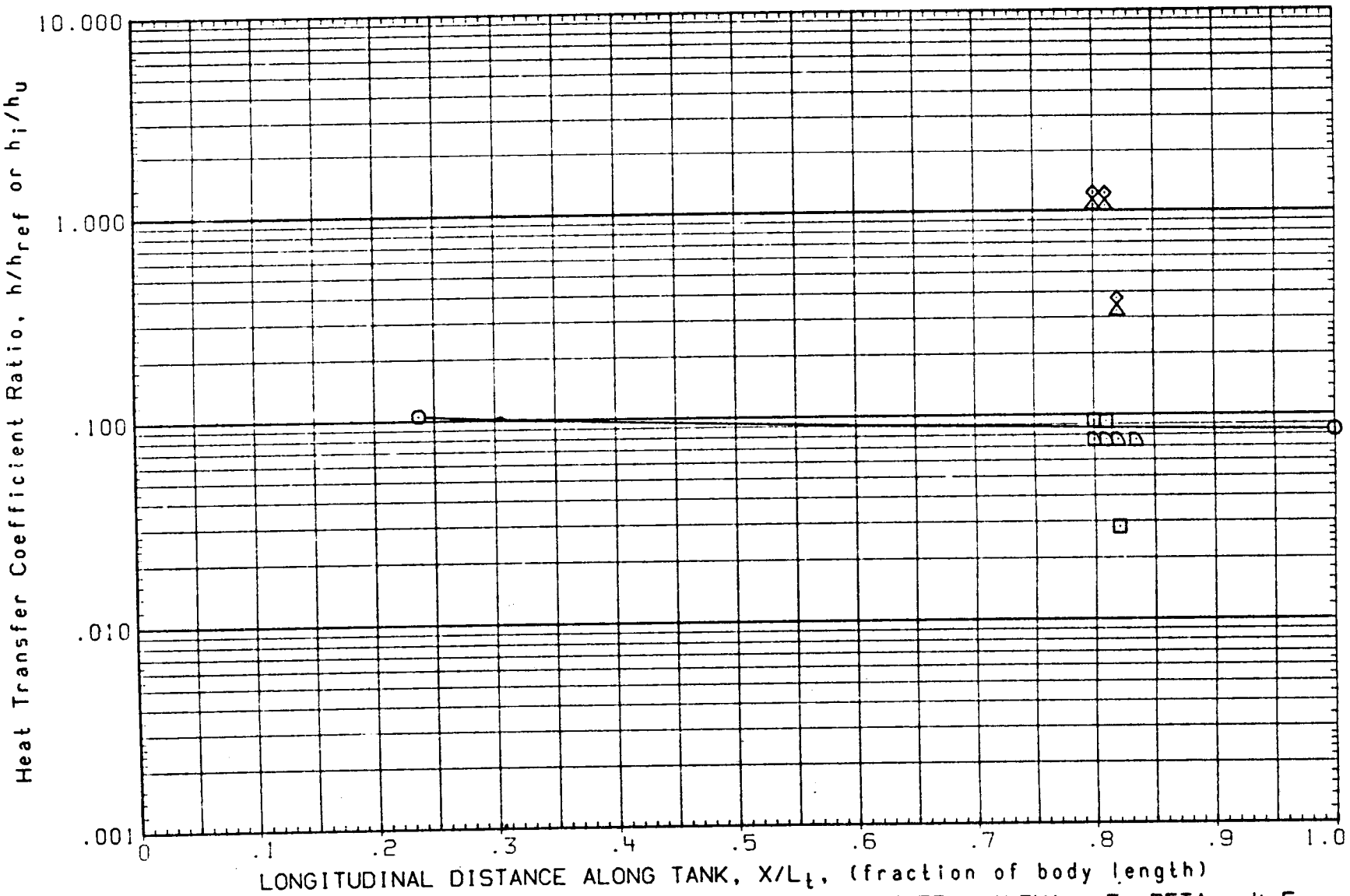

FIG. 4-11 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 309.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT20)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-4.500
(C9NT20)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-4.500
(V4LT41)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-4.500
(X4LT41)	◇	IH85 (W.L. TEST) OTS/ET = V4LT41/C9NT20=	HI/HU	4.020	-5.000	-4.500
(Y4LT41)	△	IH85 (W.L. THEORY) OTS/ET = V4LT41/A9NT20=	HI/HU	4.020	-5.000	-4.500

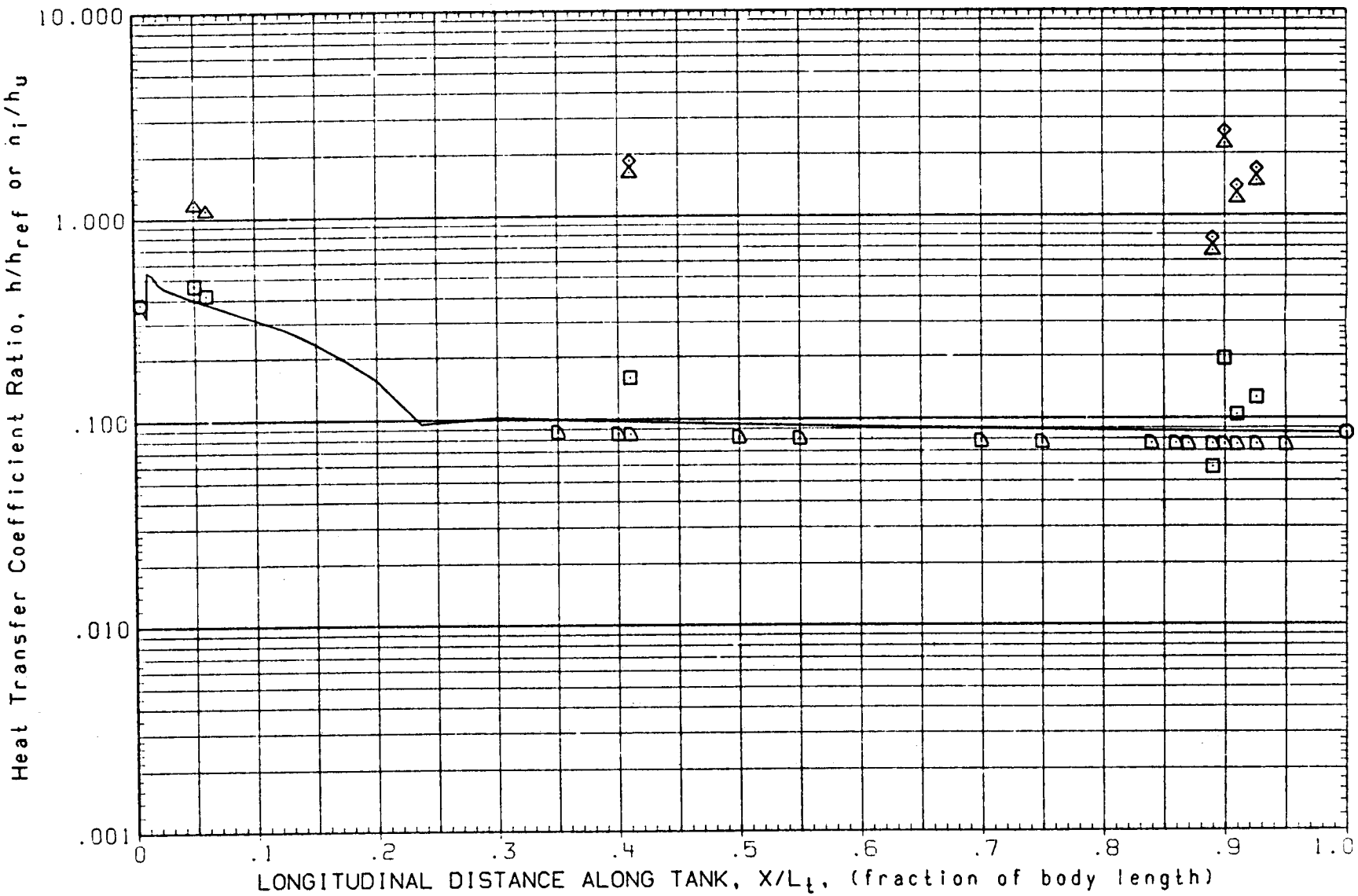

FIG. 4-11 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 315.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT20)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-4.500
(C9NT20)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-4.500
(V4LT41)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-4.500
(X4LT41)	◇	IH85 (W.L. TEST) OTS/ET = V4LT41/C9NT20=	HI/HU	4.020	-5.000	-4.500
(Y4LT41)	△	IH85 (W.L. THEORY) OTS/ET = V4LT41/A9NT20=	HI/HU	4.020	-5.000	-4.500

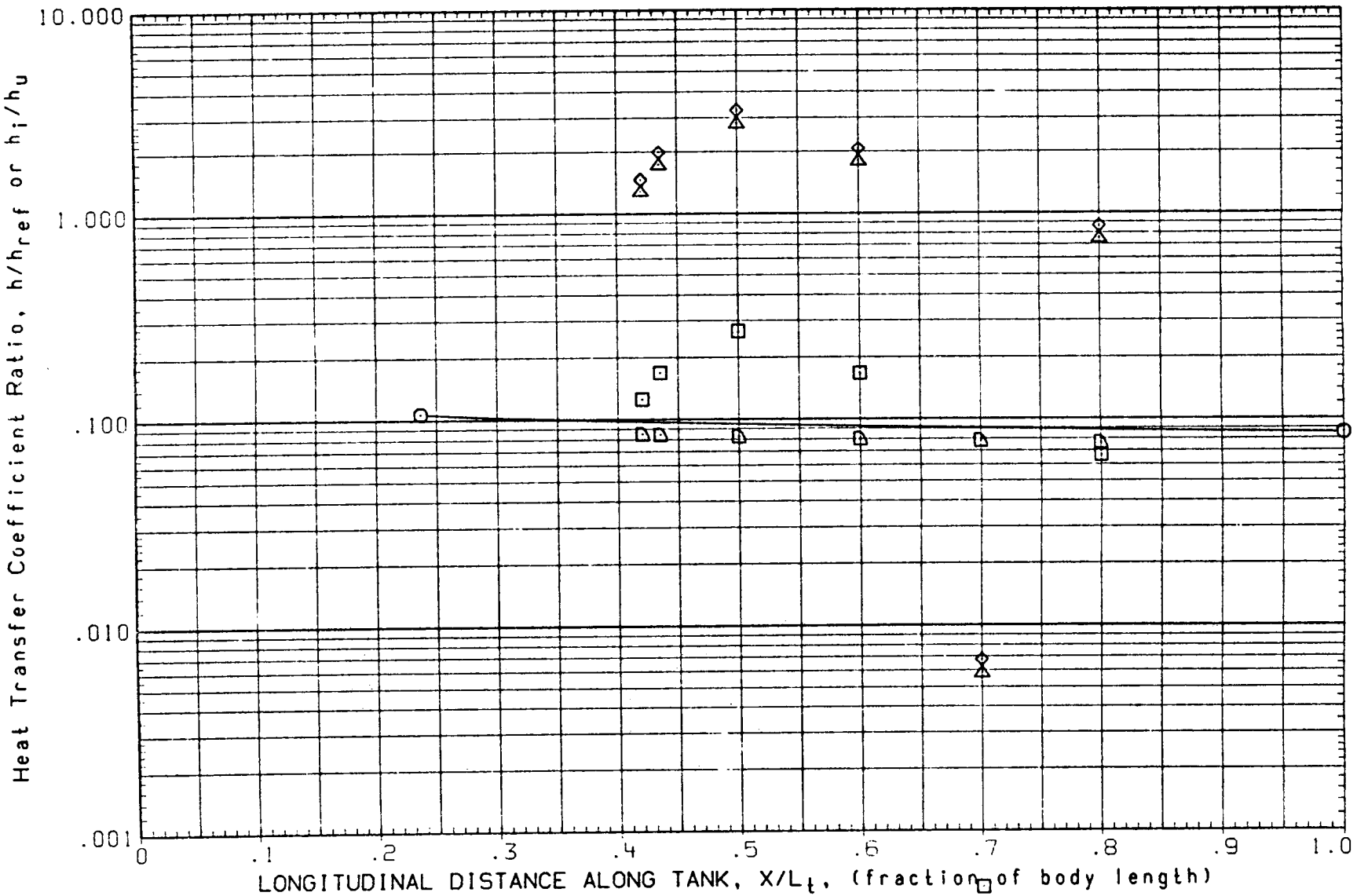

FIG. 4-11 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 322.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT20)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-4.500
(C9NT20)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-4.500
(V4LT41)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-4.500
(X4LT41)	◇	IH85 (W.L. TEST) OTS/ET = V4LT41/C9NT20=	HI/HU	4.020	-5.000	-4.500
(Y4LT41)	△	IH85 (W.L. THEORY) OTS/ET = V4LT41/A9NT20=	HI/HU	4.020	-5.000	-4.500

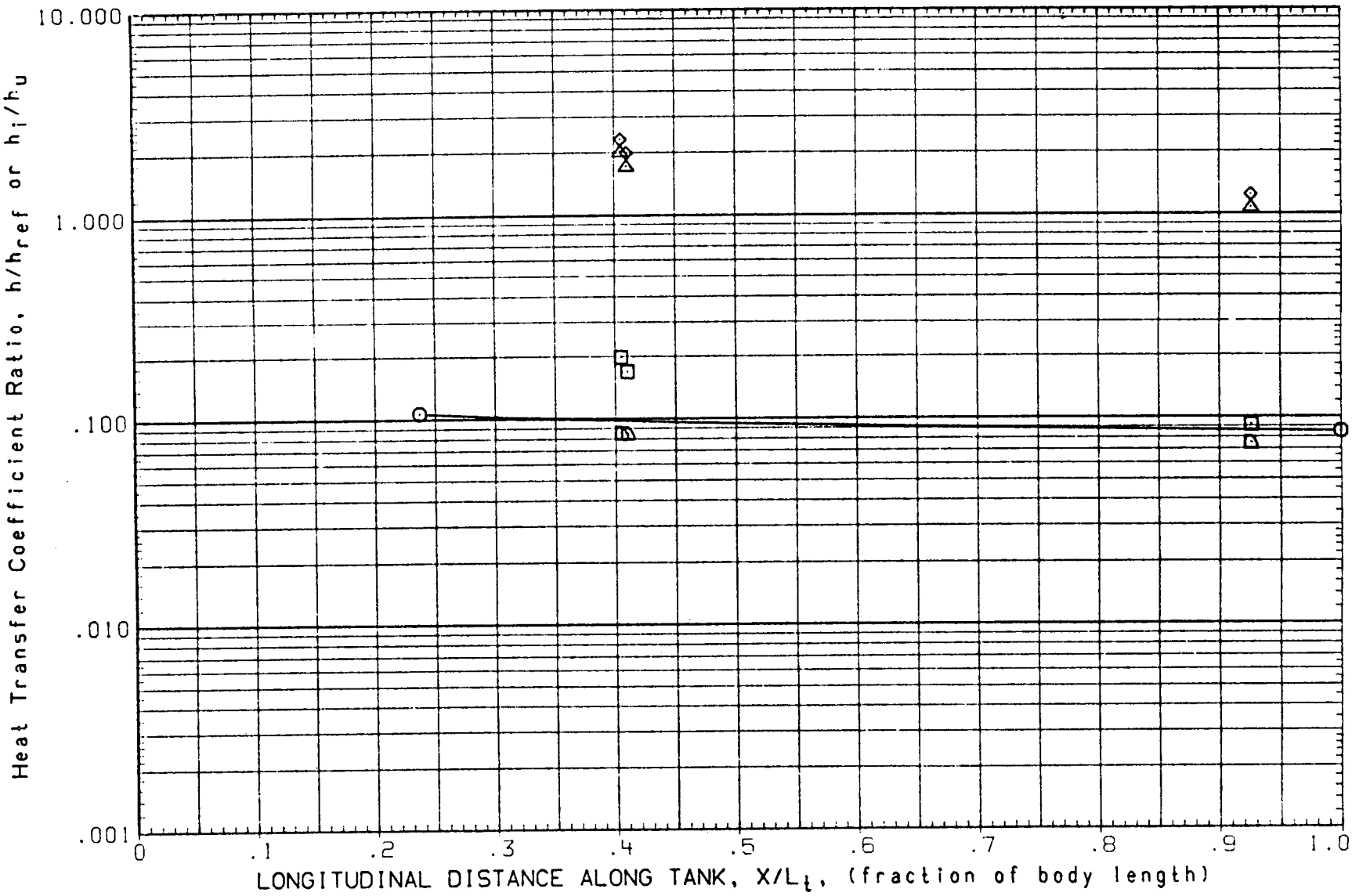

FIG. 4-11 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 324.450

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT20)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-4.500
(C9NT20)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-4.500
(V4LT41)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-4.500
(X4LT41)	◇	IH85 (W.L. TEST) OTS/ET = V4LT41/C9NT20=	HI/HU	4.020	-5.000	-4.500
(Y4LT41)	△	IH85 (W.L. THEORY) OTS/ET = V4LT41/A9NT20=	HI/HU	4.020	-5.000	-4.500

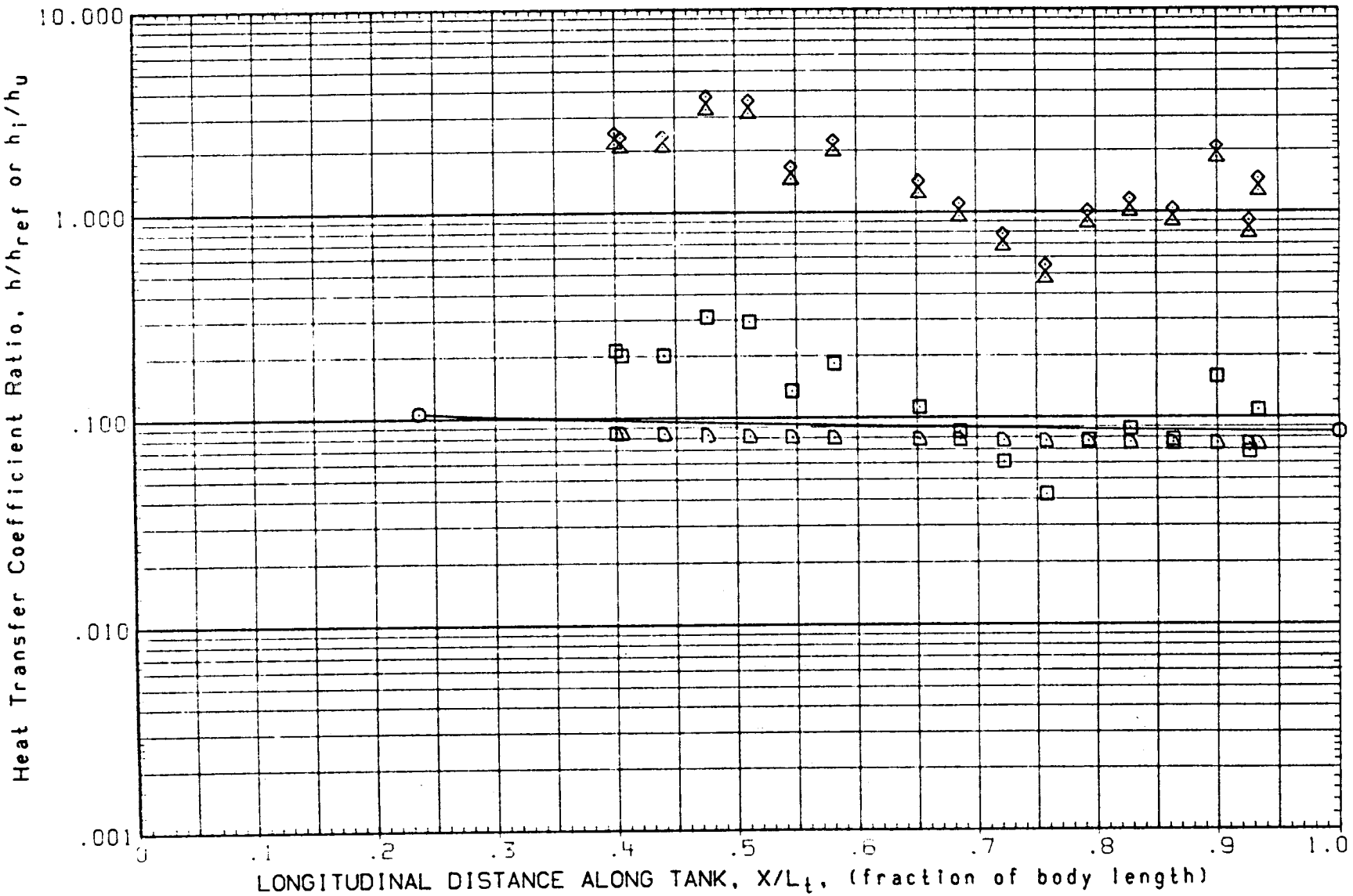

FIG. 4-11 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 326.850

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT20)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-4.500
(C9NT20)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-4.500
(V4LT41)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-4.500
(X4LT41)	◇	IH85 (W.L. TEST) OTS/ET = V4LT41/C9NT20= HI/HU		4.020	-5.000	-4.500
(Y4LT41)	△	IH85 (W.L. THEORY) OTS/ET = V4LT41/A3NT20= HI/HU		4.020	-5.000	-4.500

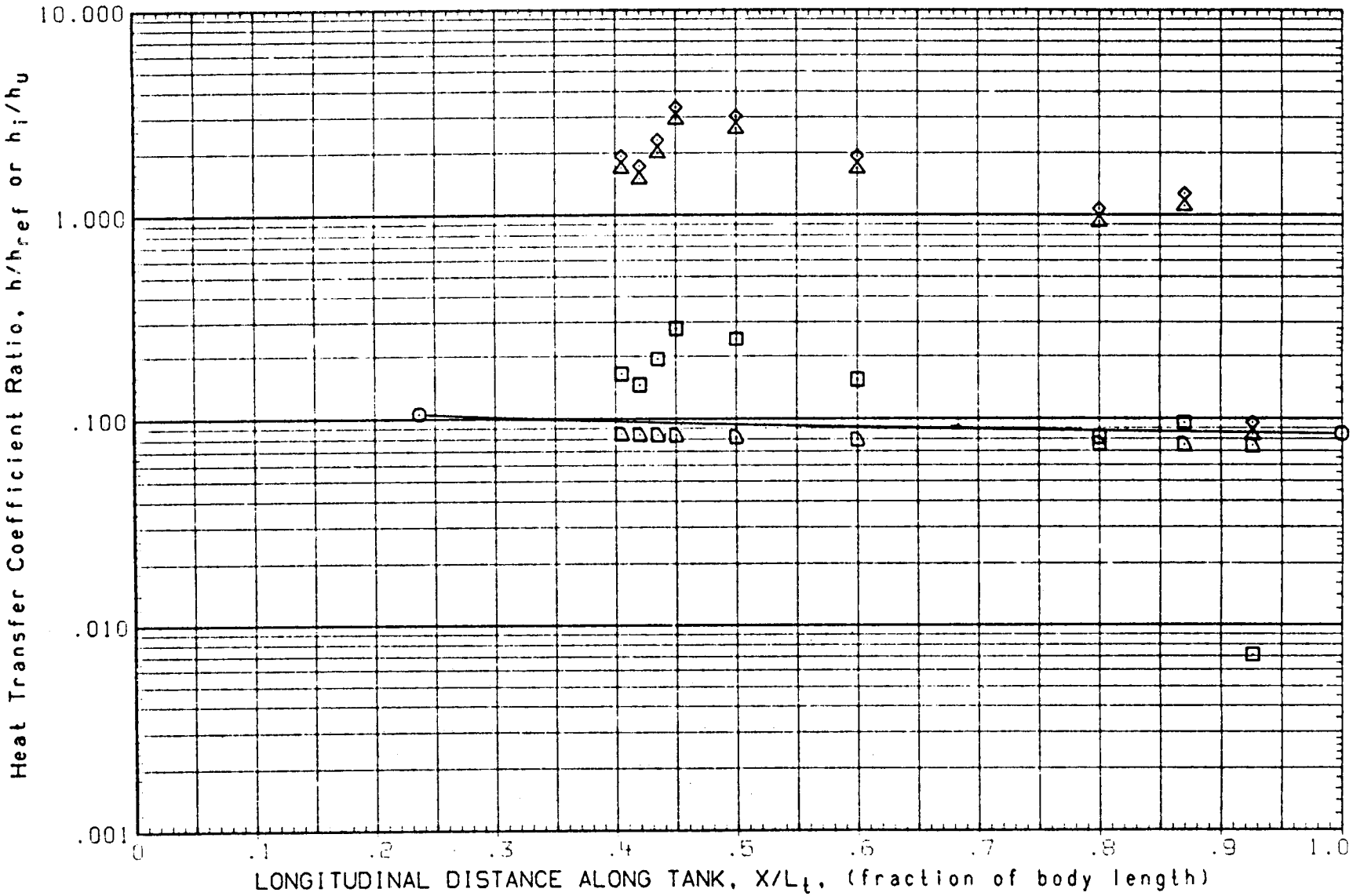

FIG. 4-11 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 330.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(C9NT20)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-4.500
(C9NT20)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-4.500
(V4LT41)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-4.500
(X4LT41)	◇	IH85 (W.L. TEST) OTS/ET = V4LT41/C9NT20=	HI/HU	4.020	-5.000	-4.500
(Y4LT41)	△	IH85 (W.L. THEORY) OTS/ET = V4LT41/A9NT20=	HI/HU	4.020	-5.000	-4.500

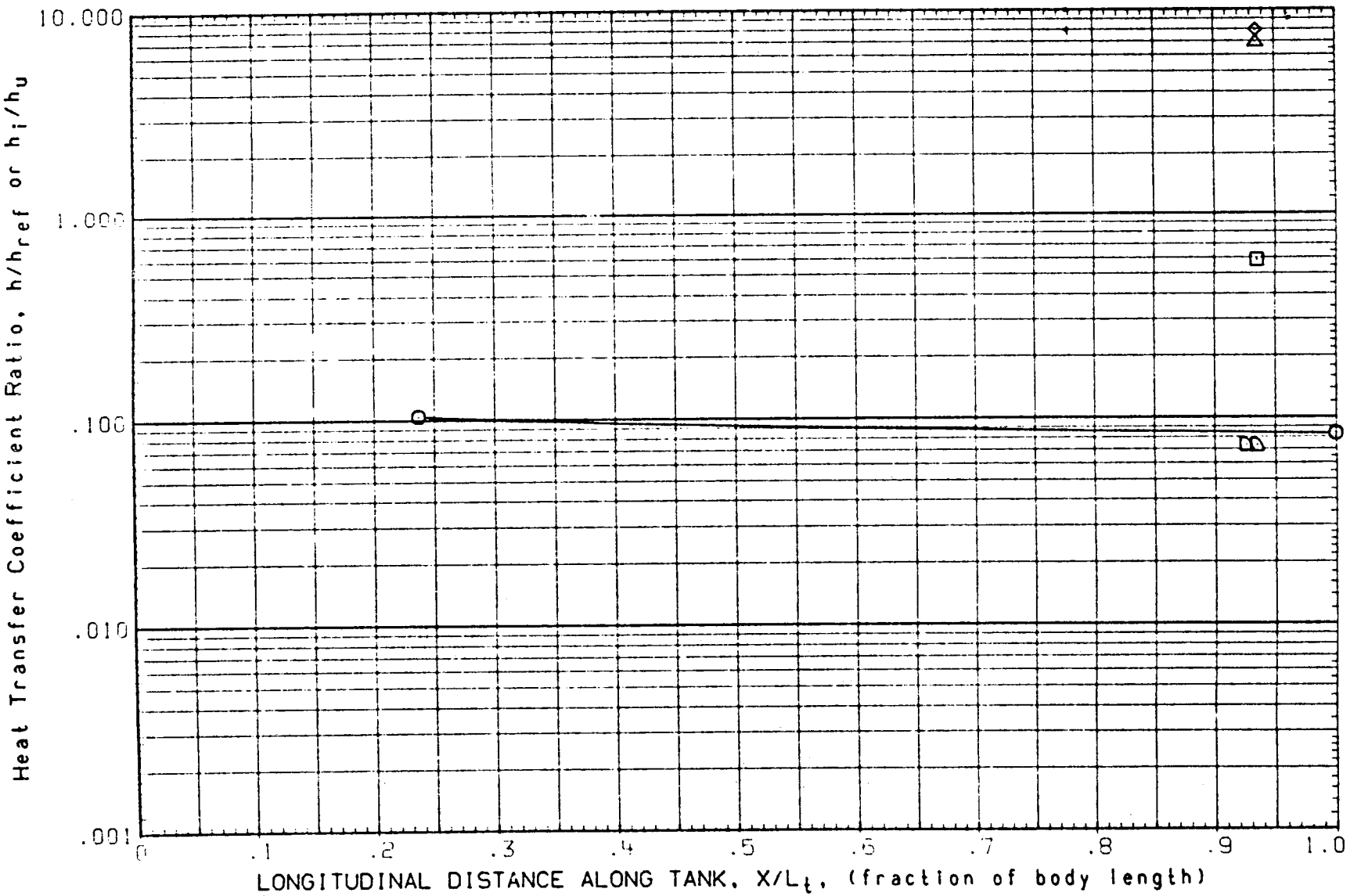

FIG. 4-11 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 334.980

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT20)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-4.500
(C9NT20)	◫	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-4.500
(V4LT41)	◫	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) 5		4.020	-5.000	-4.500
(X4LT41)	◇	IH85 (W.L. TEST) OTS-ET = V4LT41/C9NT20= HI/HU		4.020	-5.000	-4.500
(Y4LT41)	△	IH85 (W.L. THEORY) OTS-ET = V4LT41/A9NT20= HI/HU		4.020	-5.000	-4.500

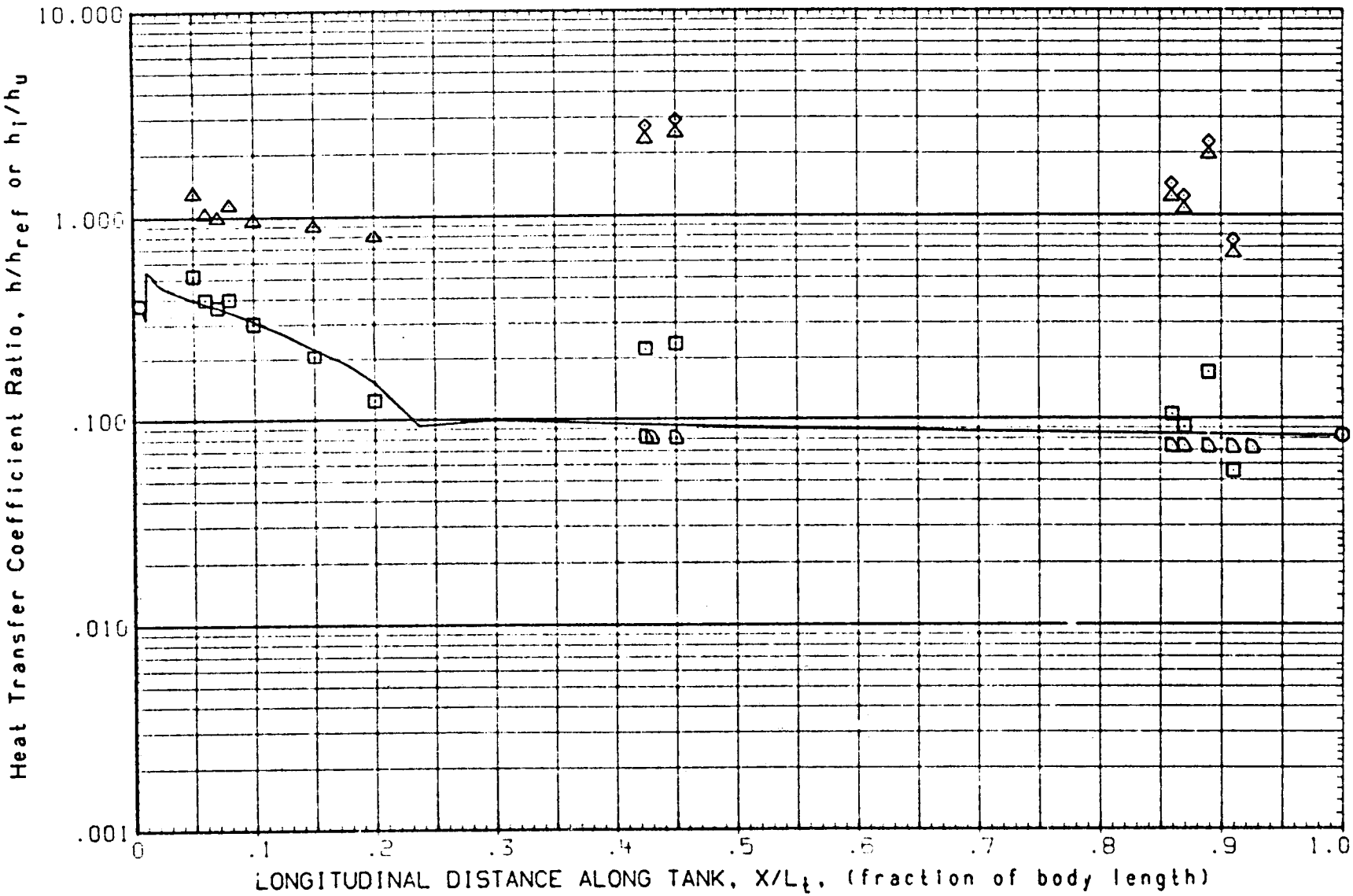

FIG. 4-11 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 337.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT20)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-4.500
(C9NT20)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-4.500
(V4LT41)	□	DATA NOT AVAILABLE		4.020	-5.000	-4.500
(X4LT41)	◇	DATA NOT AVAILABLE		4.020	-5.000	-4.500
(Y4LT41)	△	DATA NOT AVAILABLE		4.020	-5.000	-4.500

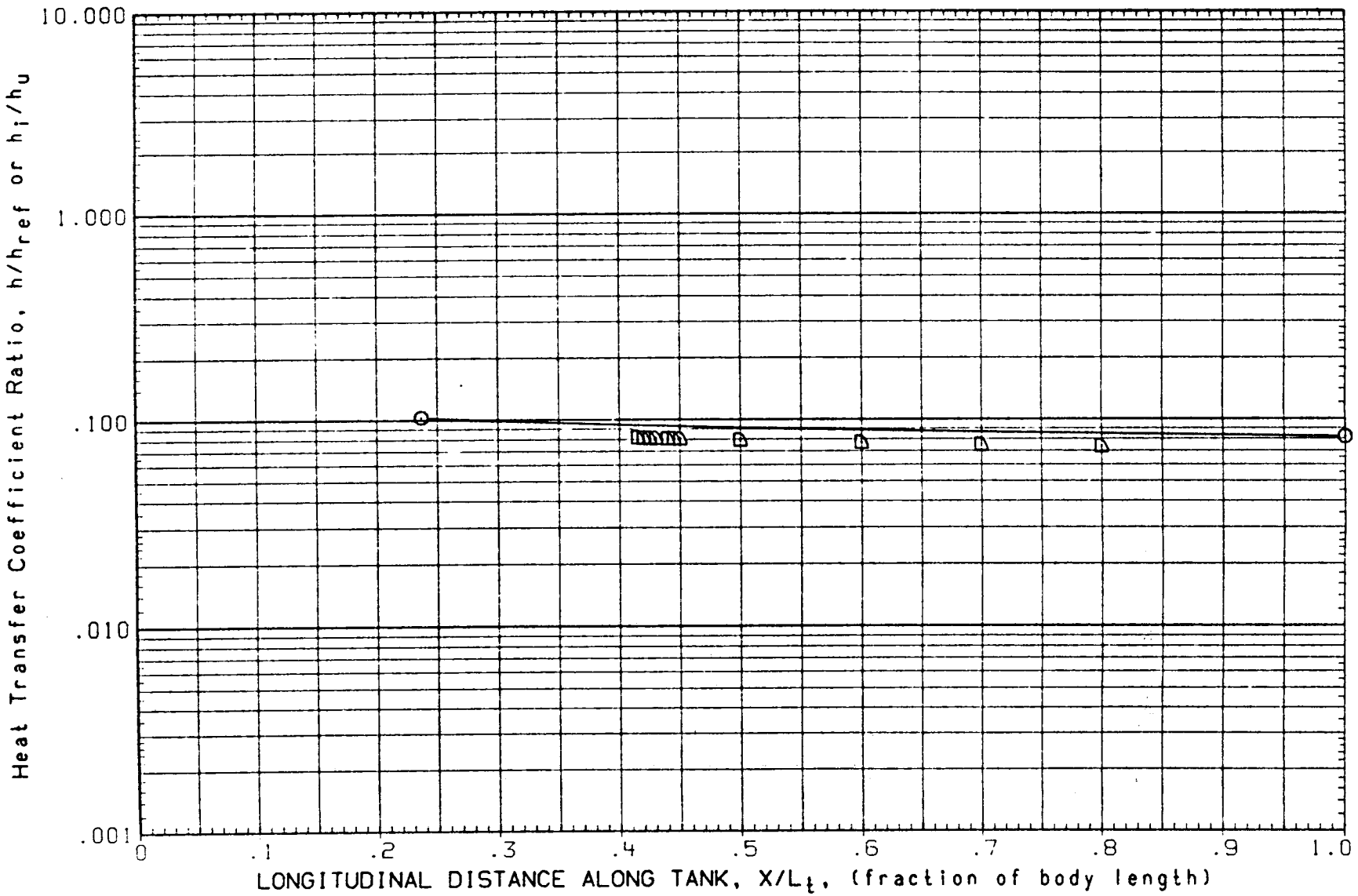

FIG. 4-11 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 343.120

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT20)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-4.500
(C9NT20)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-4.500
(V4LT41)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-4.500
(X4LT41)	◇	IH85 (W.L. TEST) OTS/ET = V4LT41/C9NT20= HI/HU		4.020	-5.000	-4.500
(Y4LT41)	△	IH85 (W.L. THEORY) OTS/ET = V4LT41/A9NT20= HI/HU		4.020	-5.000	-4.500

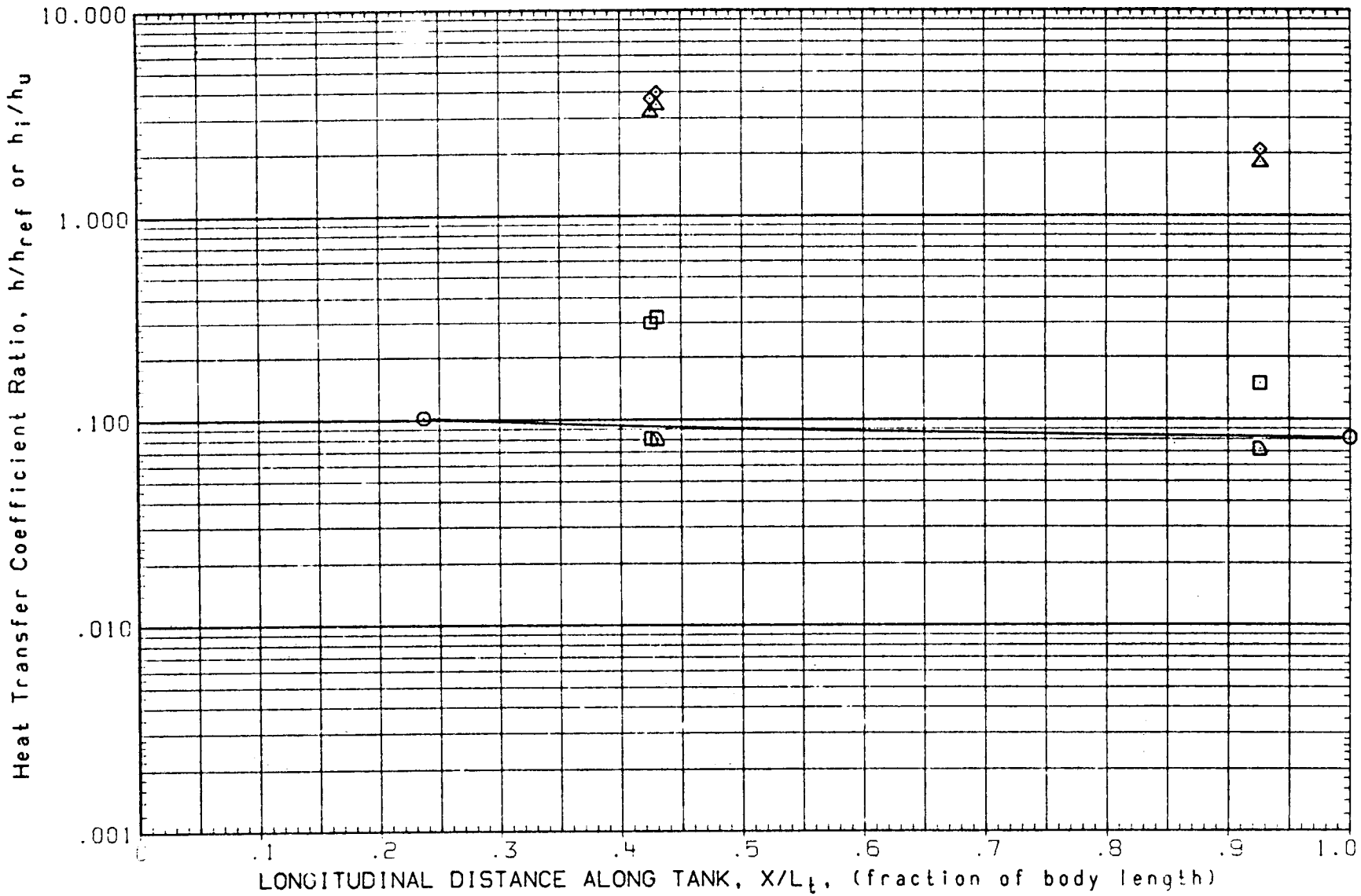

FIG. 4-11 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 345.560

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT20)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-4.500
(C9NT20)	□	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-4.500
(V4LT41)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-4.500
(X4LT41)	◇	IH85 (W.L. TEST) OTS/ET = V4LT41/C9NT20= HI/HU		4.020	-5.000	-4.500
(Y4LT41)	△	IH85 (W.L. THEORY) OTS/ET = V4LT41/A9NT20= HI/HU		4.020	-5.000	-4.500

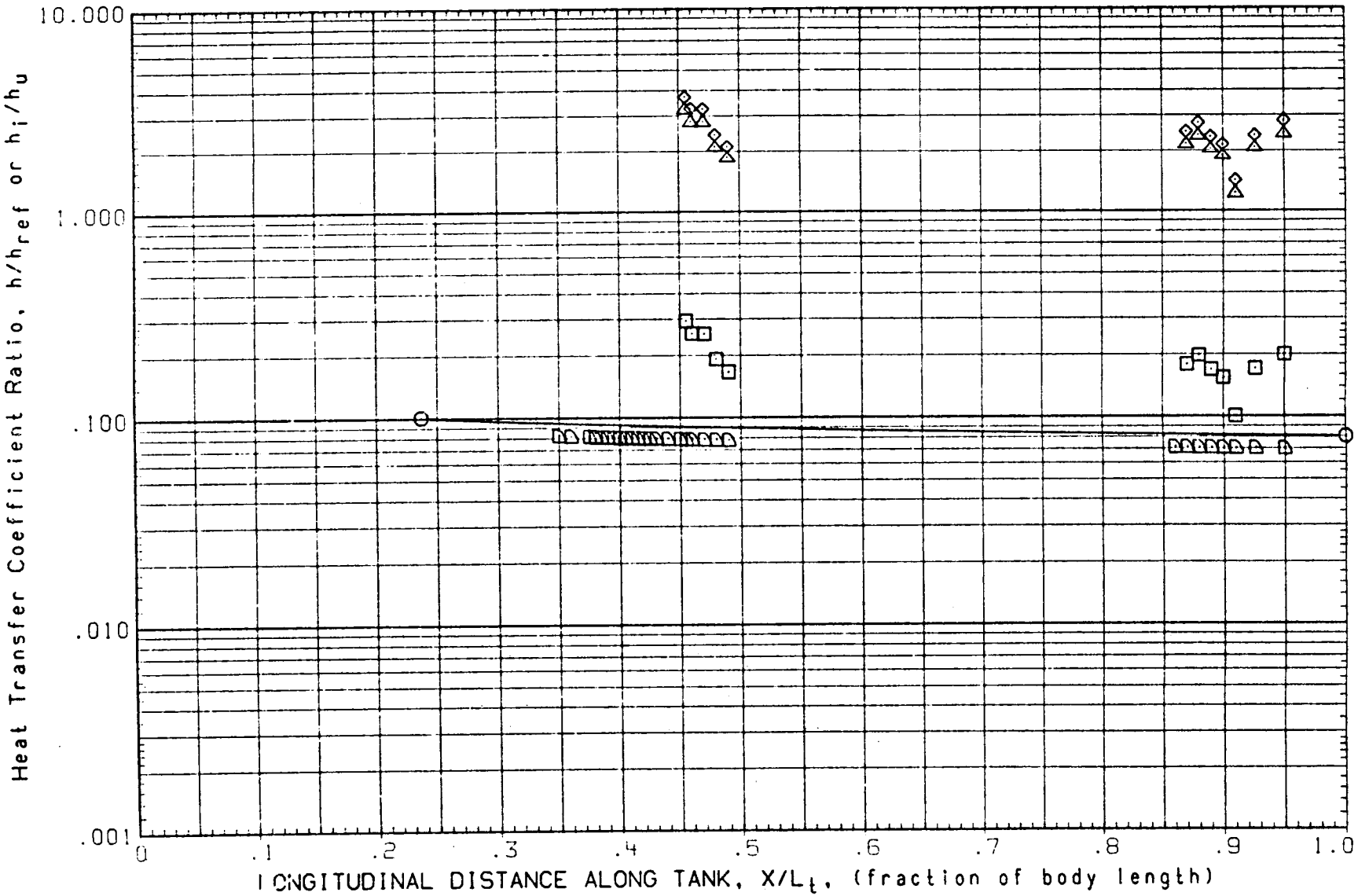

FIG. 4-11 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 348.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT20)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-4.500
(C9NT20)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-4.500
(V4LT41)	□	IH65, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-4.500
(X4LT41)	◇	IH85 (W.L. TEST) OTS/ET = V4LT41/C9NT20=	HI/HU	4.020	-5.000	-4.500
(Y4LT41)	△	IH85 (W.L. THEORY) OTS/ET = V4LT41/A9NT20=	HI/HU	4.020	-5.000	-4.500

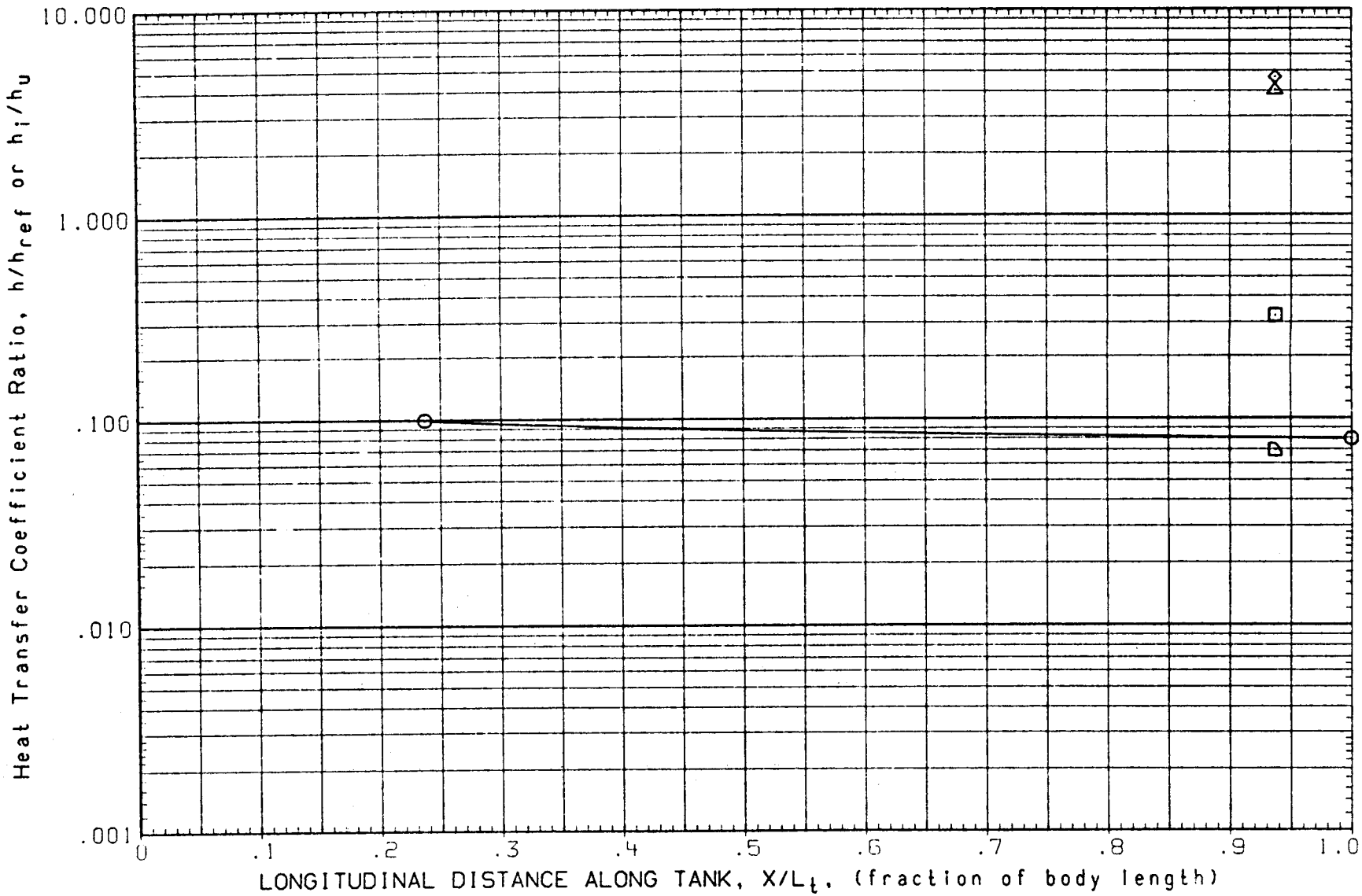

FIG. 4-11 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 352.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT20)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-4.500
(C9NT20)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	-4.500
(V4LT41)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	-4.500
(X4LT41)	◇	IH85 (W.L. TEST) OTS/ET = V4LT41/C9NT20=	HI/HU	4.020	-5.000	-4.500
(Y4LT41)	△	IH85 (W.L. THEORY) OTS/ET = V4LT41/A9NT20=	HI/HU	4.020	-5.000	-4.500

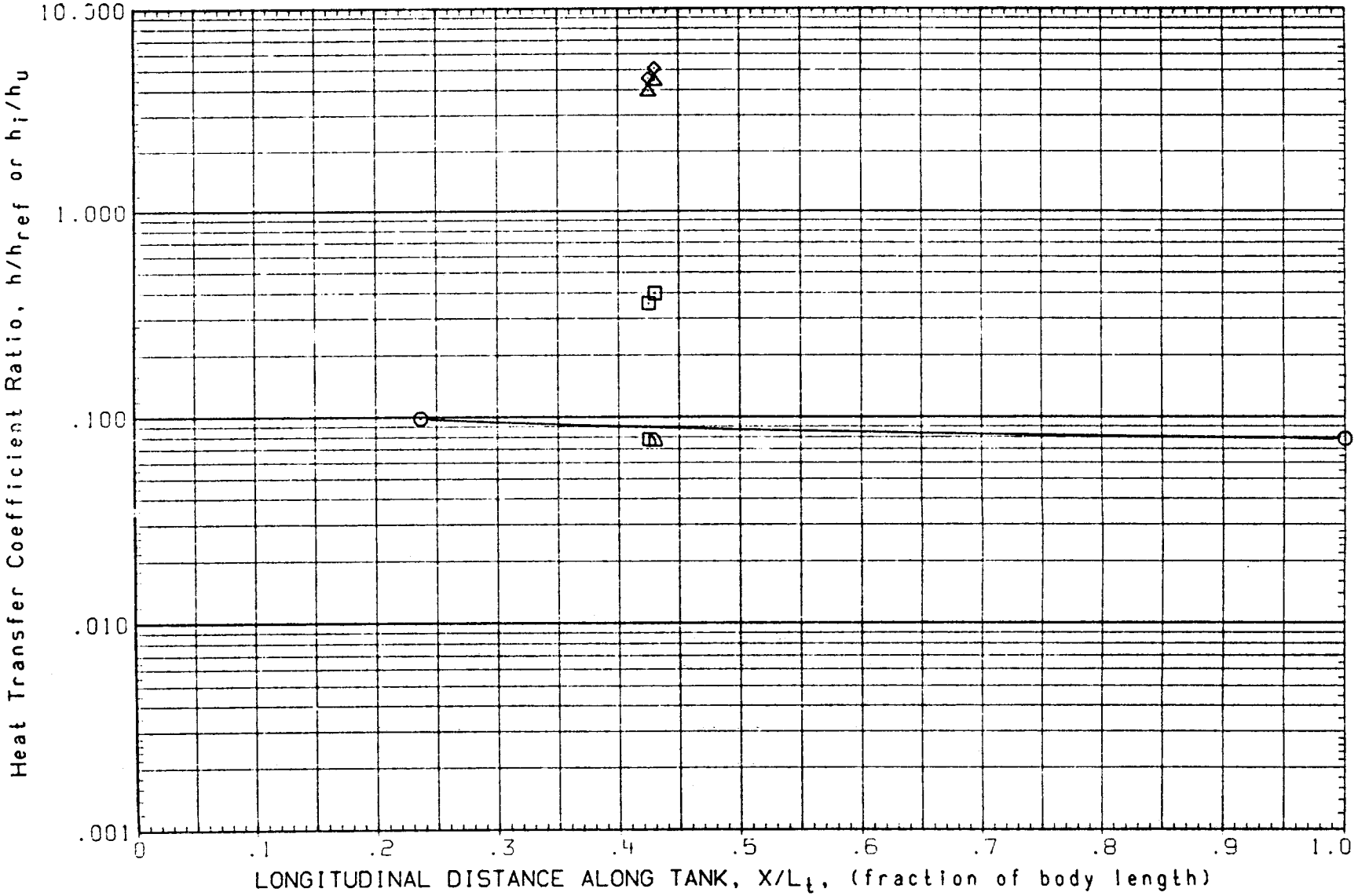

FIG. 4-11 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 354.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT20)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-4.500
(C9NT20)	⬠	DATA NOT AVAILABLE		4.020	-5.000	-4.500
(Y4LT41)	□	DATA NOT AVAILABLE		4.020	-5.000	-4.500
(X4LT41)	◇	DATA NOT AVAILABLE		4.020	-5.000	-4.500
(Y4LT41)	△	DATA NOT AVAILABLE		4.020	-5.000	-4.500

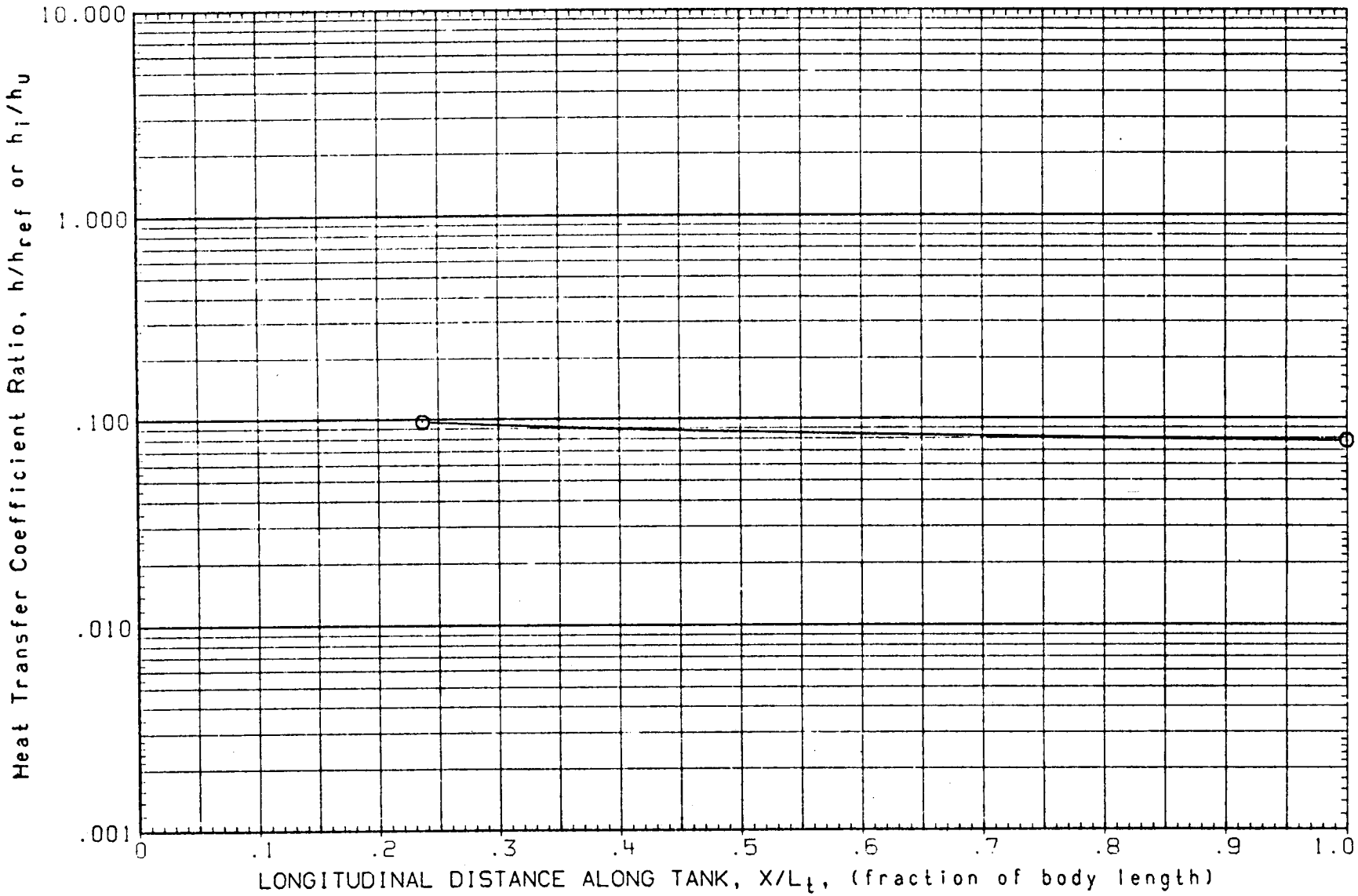

FIG. 4-11 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 355.160

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT20)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	-4.500
(C9NT20)	⬡	DATA NOT AVAILABLE		4.020	-5.000	-4.500
(V4LT41)	□	DATA NOT AVAILABLE		4.020	-5.000	-4.500
(X4LT41)	◇	DATA NOT AVAILABLE		4.020	-5.000	-4.500
(Y4LT41)	△	DATA NOT AVAILABLE		4.020	-5.000	-4.500

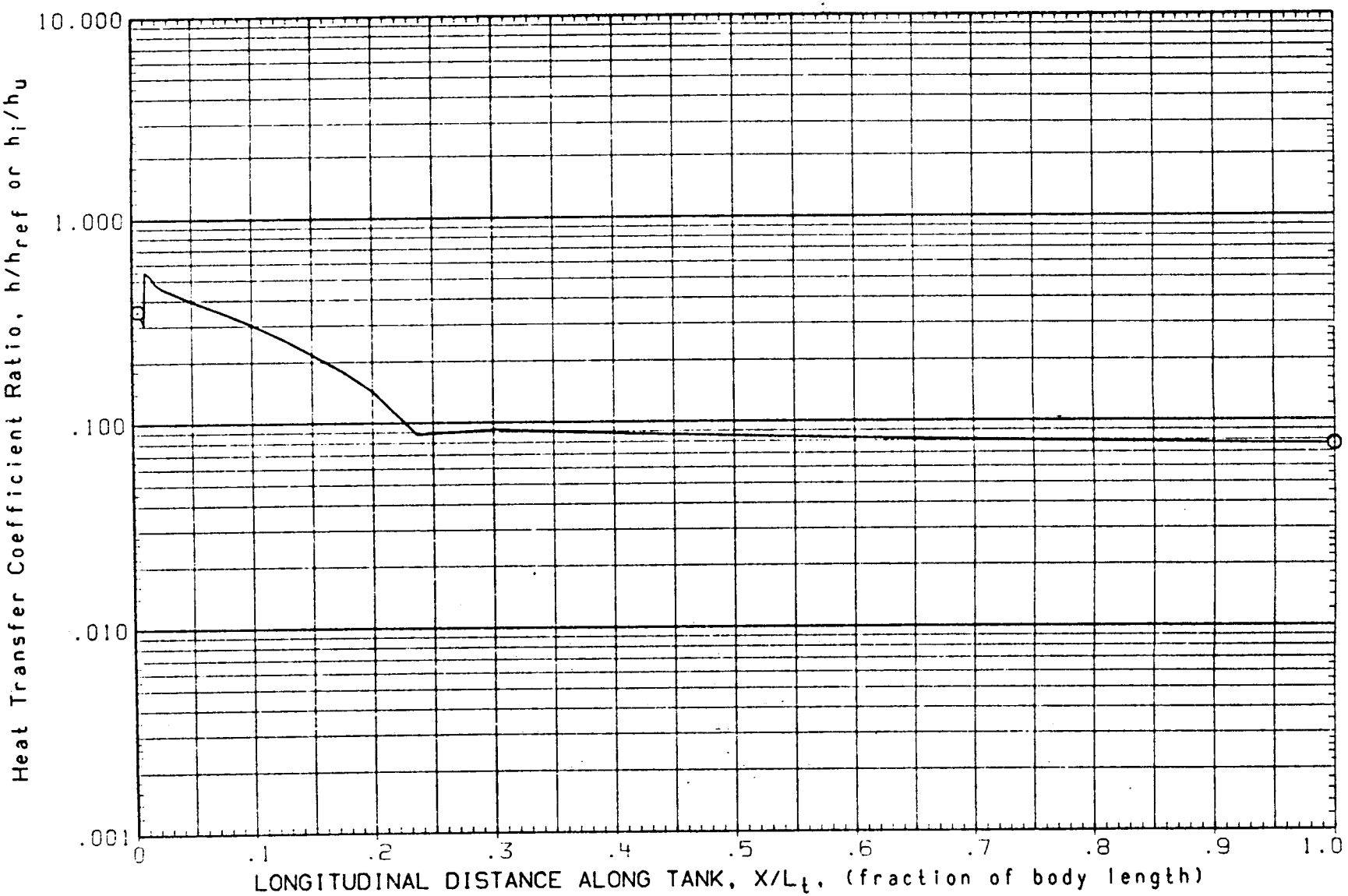

FIG. 4-11 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 360.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT23)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	3.000
(C9NT23)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	3.000
(V4LT44)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	3.000
(X4LT44)	◇	IH85 (W.L. TEST) OTS/ET = V4LT44/C9NT23= HI/HU		4.020	-5.000	3.000
(Y4LT44)	△	IH85 (W.L. THEORY) OTS/ET = V4LT44/A9NT23= HI/HU		4.020	-5.000	3.000

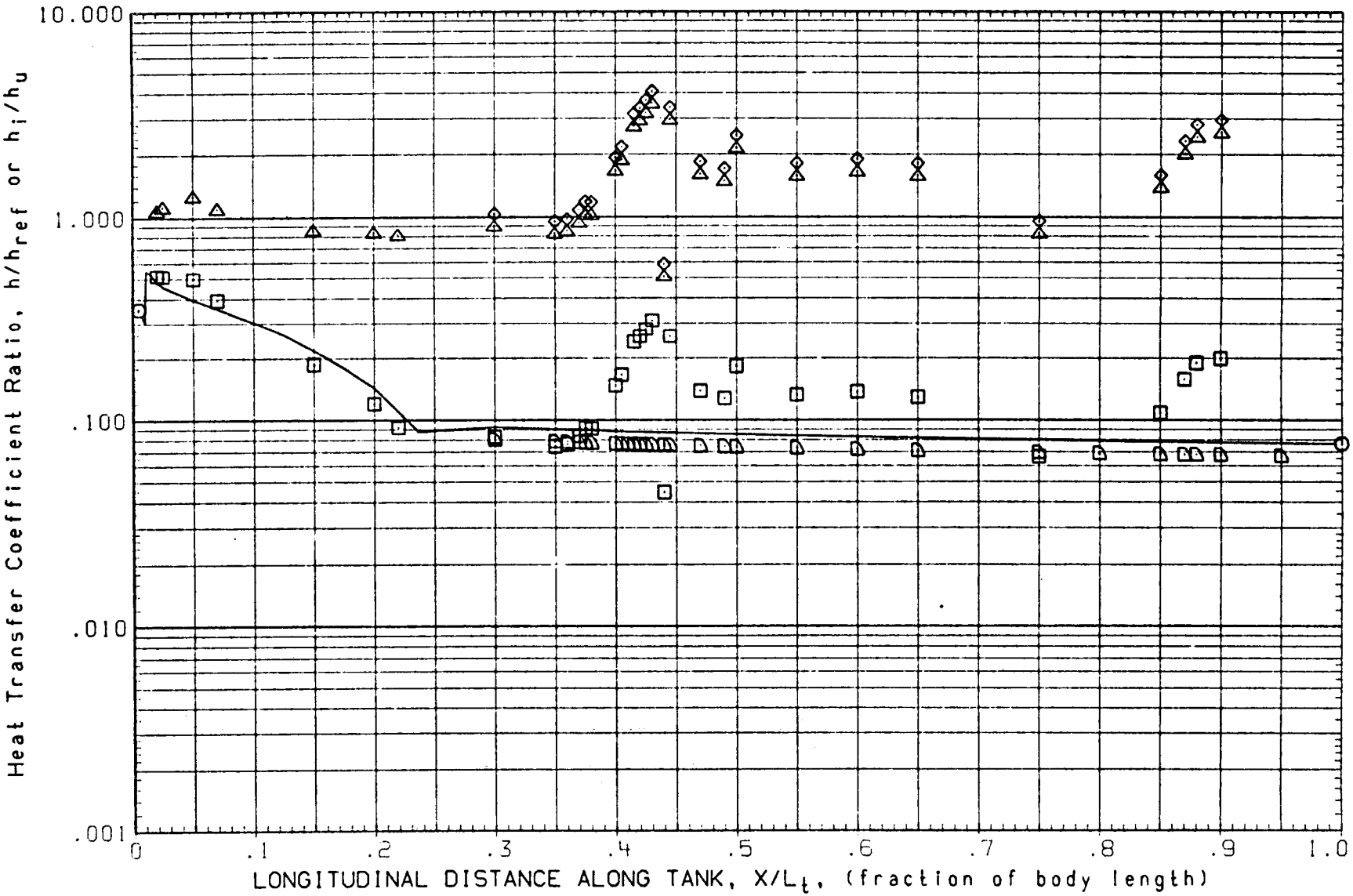

FIG. 4-12 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = .000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT23)	○	DATA NOT AVAILABLE	4.020	-5.000	3.000
(C9NT23)	⬠	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	4.020	-5.000	3.000
(V4LT44)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	-5.000	3.000
(X4LT44)	◇	IH85 (W.L. TEST) OTS/ET = V4LT44/C9NT23= HI/HU	4.020	-5.000	3.000
(Y4LT44)	△	IH85 (W.L. THEORY) OTS/ET = V4LT44/A9NT23= HI/HU	4.020	-5.000	3.000

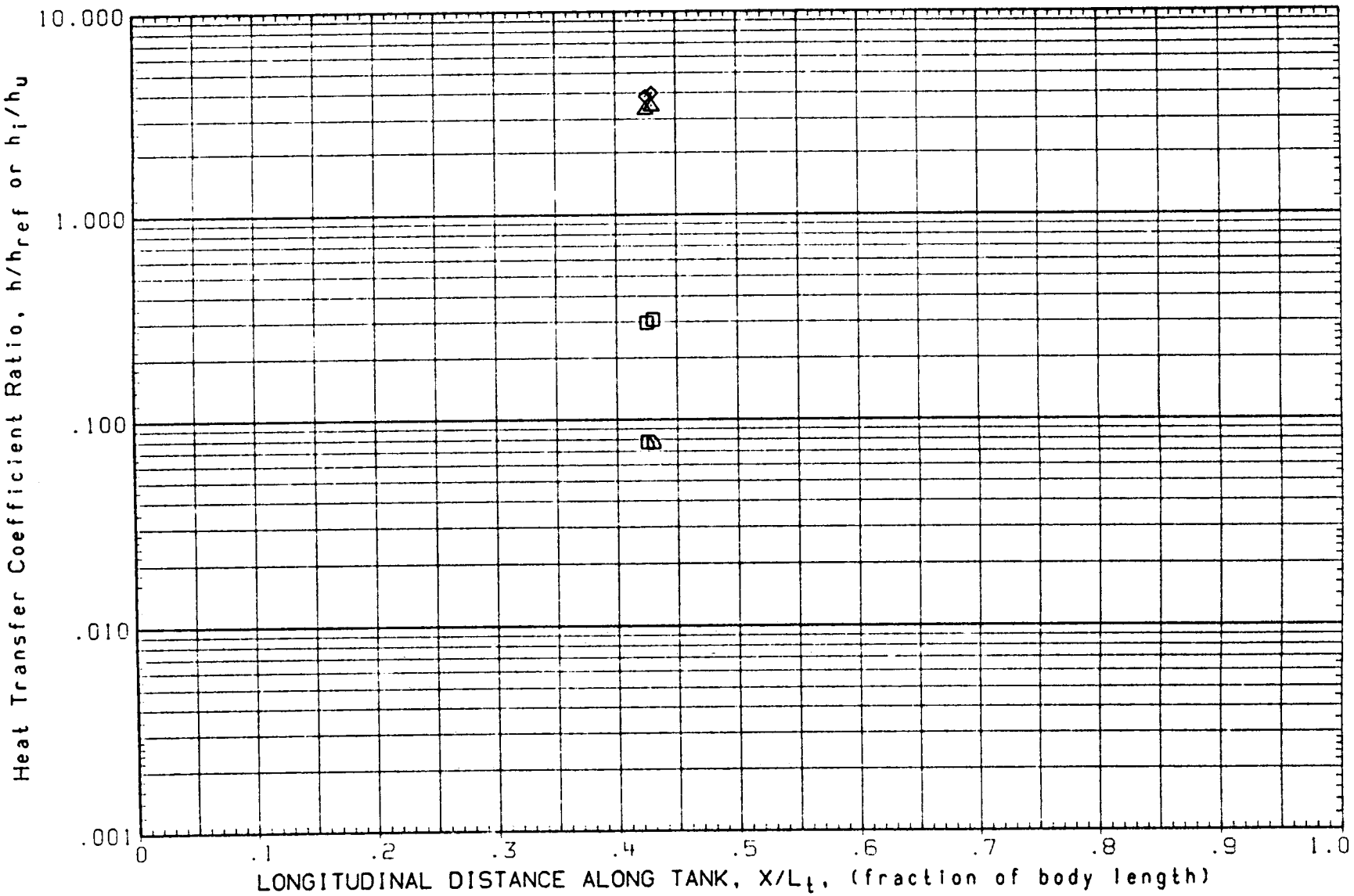

FIG. 4-12 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 5.625

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT23)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	3.000
(C9NT23)	⬠	DATA NOT AVAILABLE		4.020	-5.000	3.000
(V4LT44)	□	DATA NOT AVAILABLE		4.020	-5.000	3.000
(X4LT44)	◇	DATA NOT AVAILABLE		4.020	-5.000	3.000
(Y4LT44)	△	DATA NOT AVAILABLE		4.020	-5.000	3.000

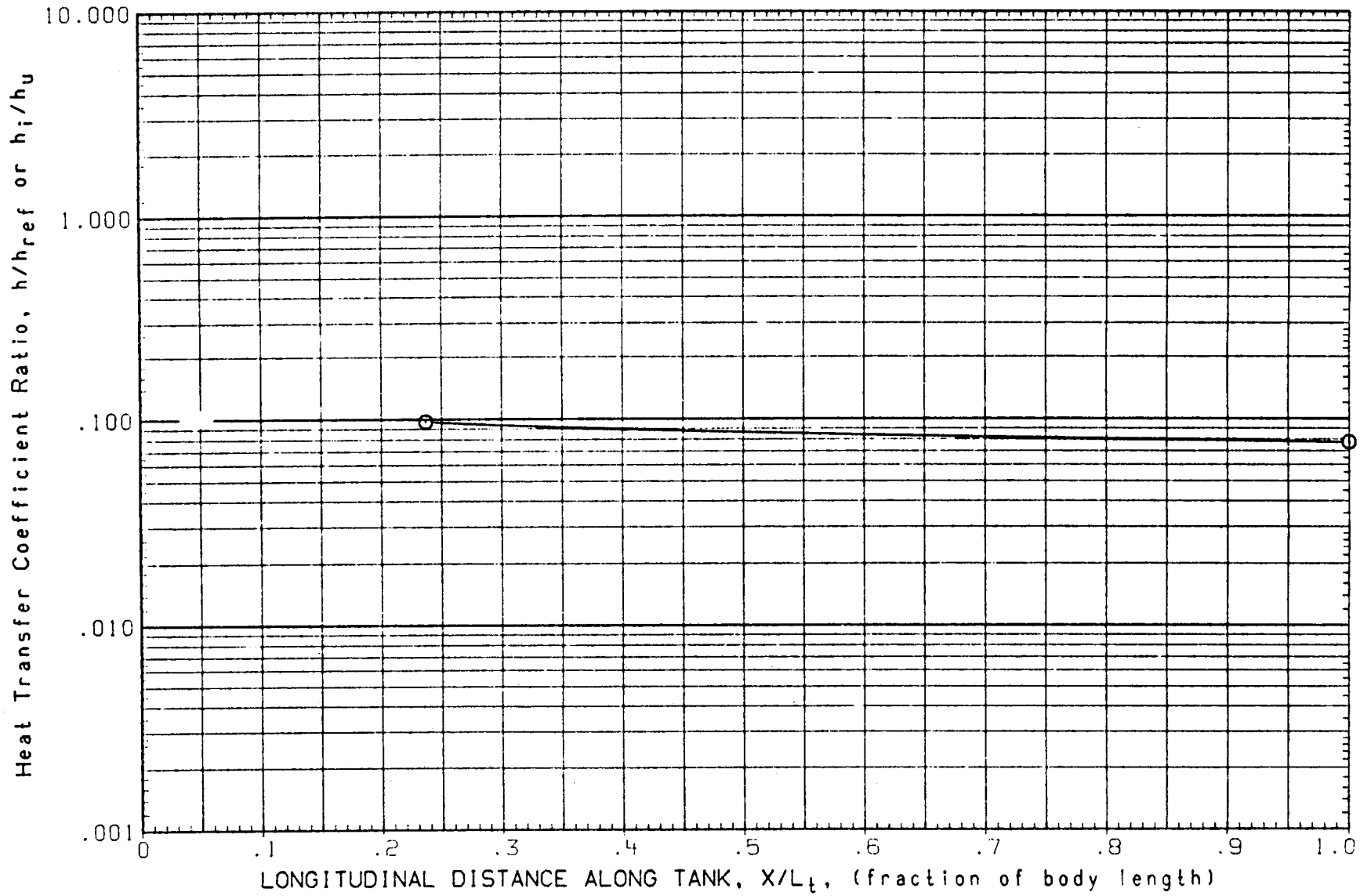

FIG. 4-12 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 HI = 5.630

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT23)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	3.000
(C9NT23)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	3.000
(V4LT44)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	3.000
(X4LT44)	◇	IH85 (W.L. TEST) OTS/ET = V4LT44/C9NT23=	HI/HU	4.020	-5.000	3.000
(Y4LT44)	△	IH85 (W.L. THEORY) OTS/ET = V4LT44/A9NT23=	HI/HU	4.020	-5.000	3.000

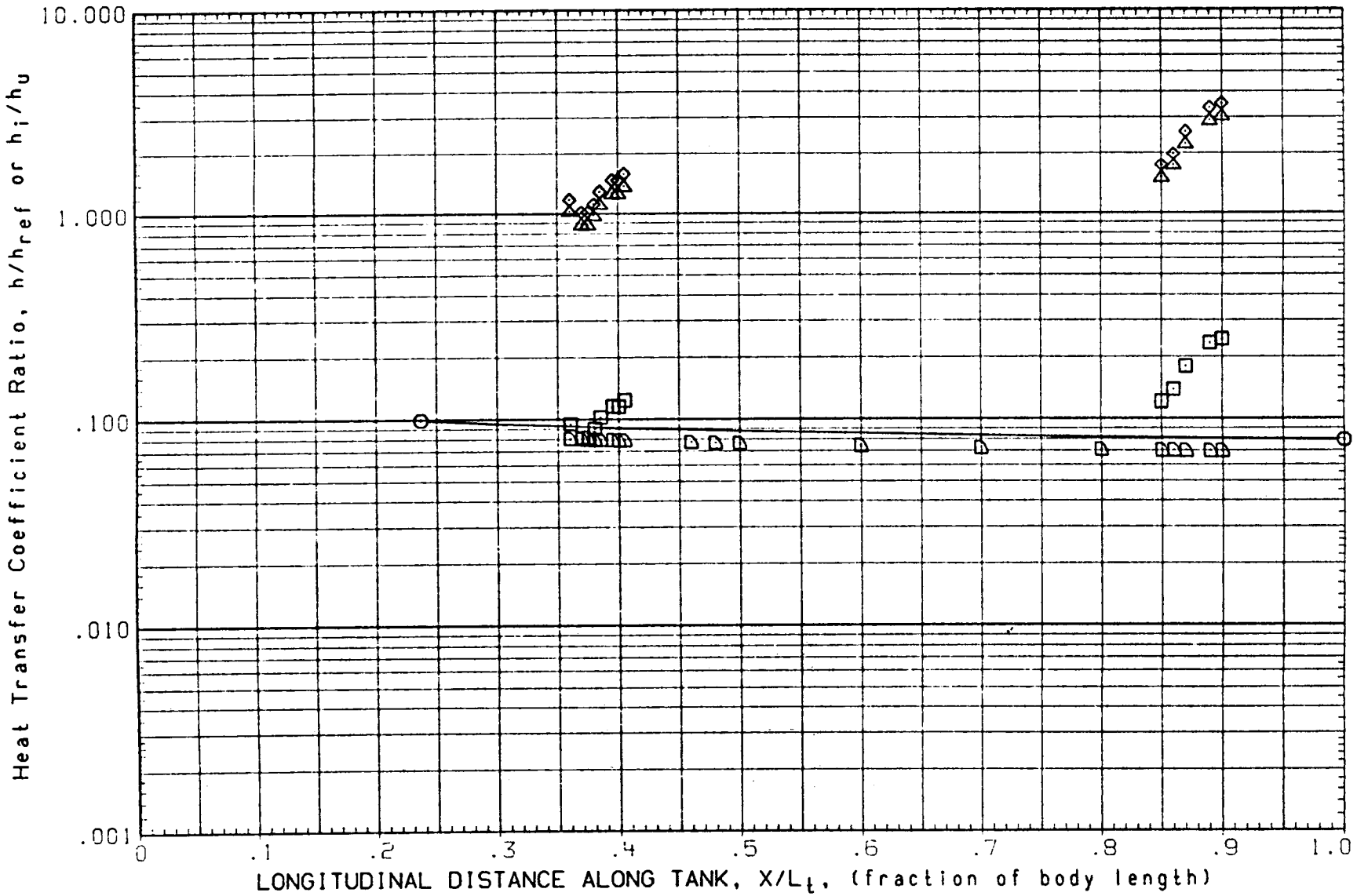

FIG. 4-12 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 11.250

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT23)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	3.000
(C9NT23)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	3.000
(V4LT44)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	3.000
(X4LT44)	◇	IH85 (W.L. TEST) OTS/ET = V4LT44/C9NT23= HI/HU		4.020	-5.000	3.000
(Y4LT44)	△	IH85 (W.L. THEORY) OTS/ET = V4LT44/A9NT23= HI/HU		4.020	-5.000	3.000

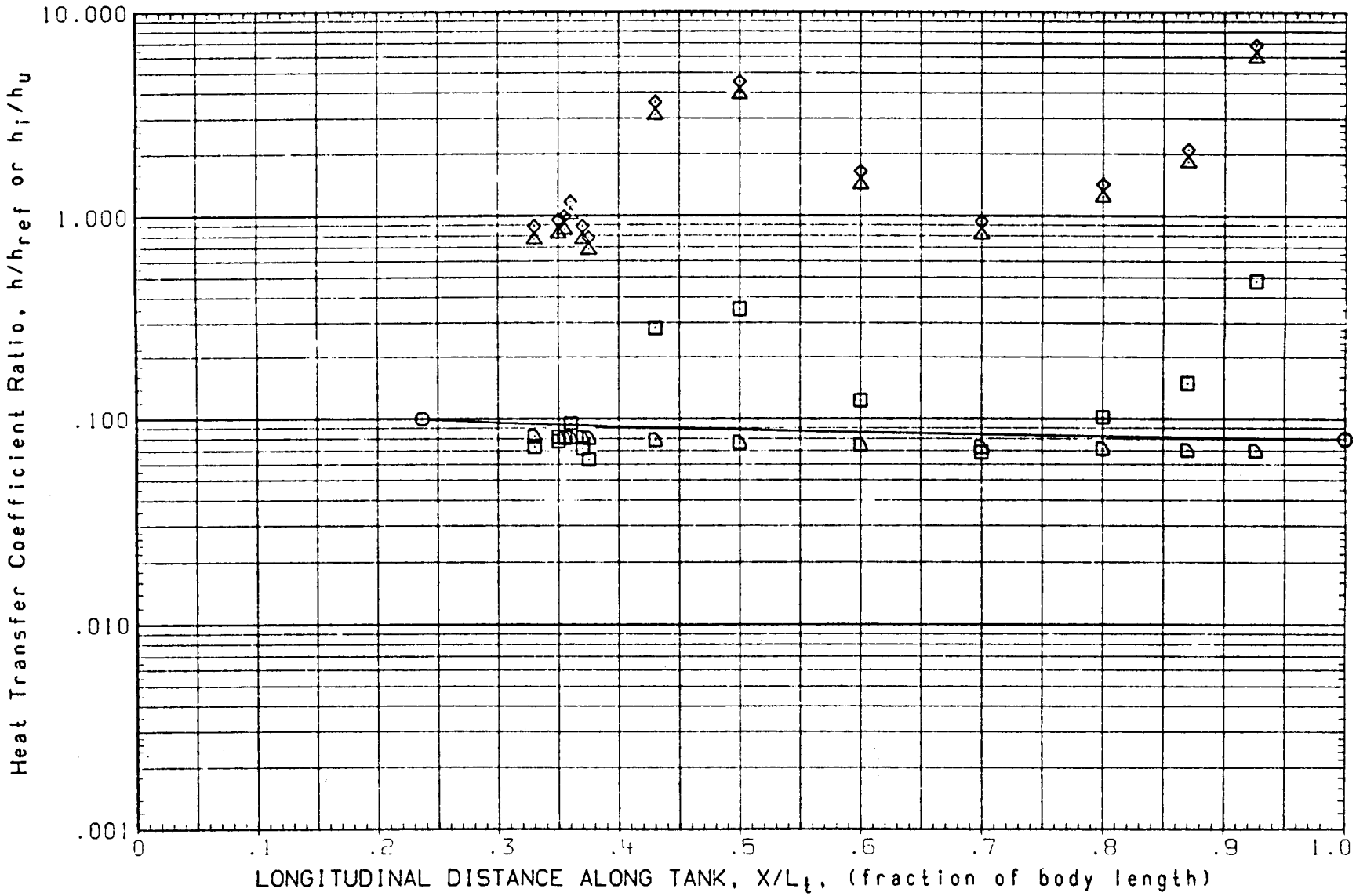

FIG. 4-12 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 17.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT23)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	3.000
(C9NT23)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	3.000
(V4LT44)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	3.000
(X4LT44)	◇	IH85 (W.L. TEST) OTS/ET = V4LT44/C9NT23=	HI/HU	4.020	-5.000	3.000
(Y4LT44)	△	IH85 (W.L. THEORY) OTS/ET = V4LT44/A9NT23=	HI/HU	4.020	-5.000	3.000

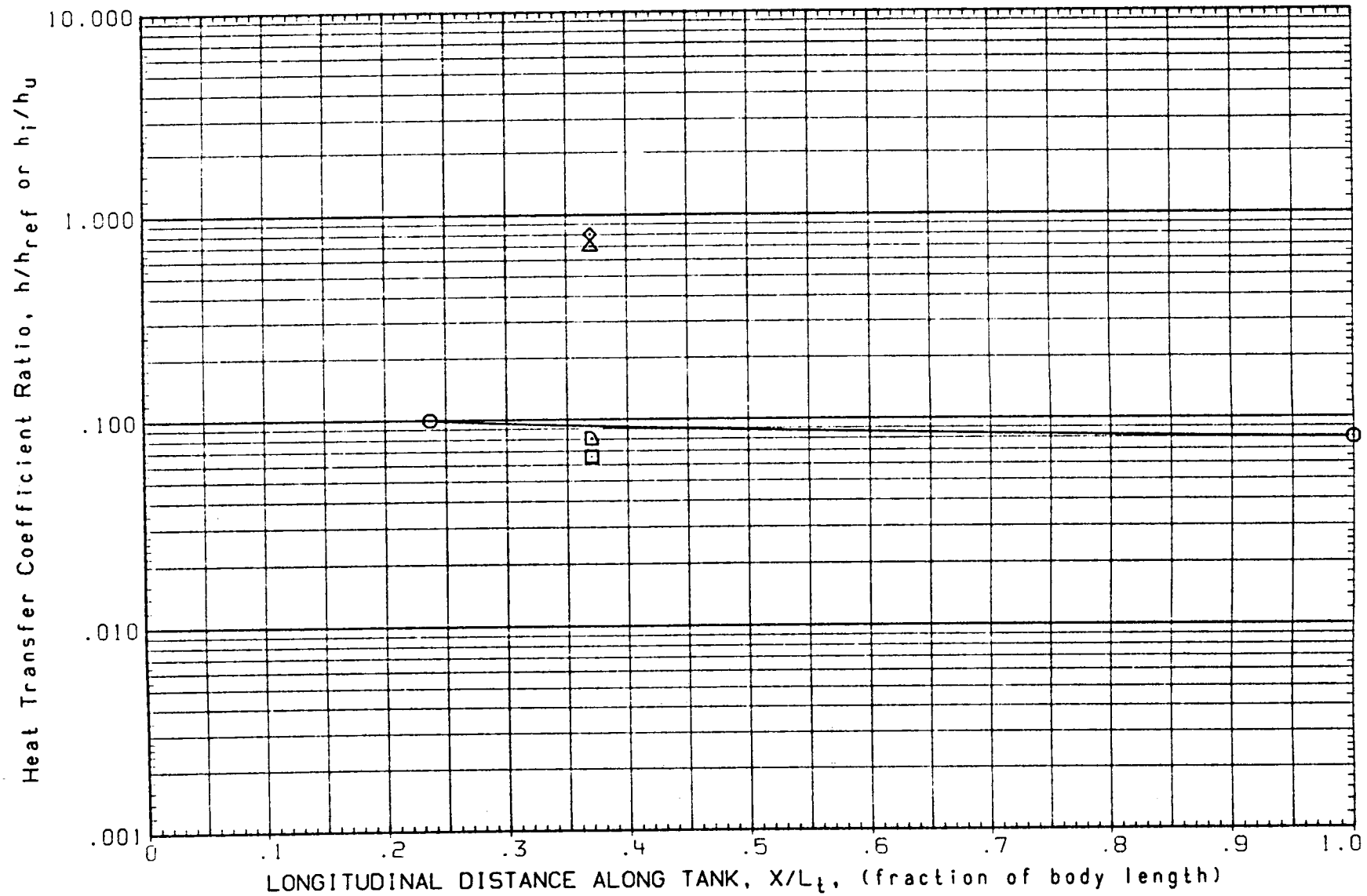

FIG. 4-12 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 20.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT23)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	3.000
(C9NT23)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	3.000
(V4LT44)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	3.000
(X4LT44)	◇	IH85 (W.L. TEST) OTS/ET = V4LT44/C9NT23=	HI/HU	4.020	-5.000	3.000
(Y4LT44)	△	IH85 (W.L. THEORY) OTS/ET = V4LT44/A9NT23=	HI/HU	4.020	-5.000	3.000

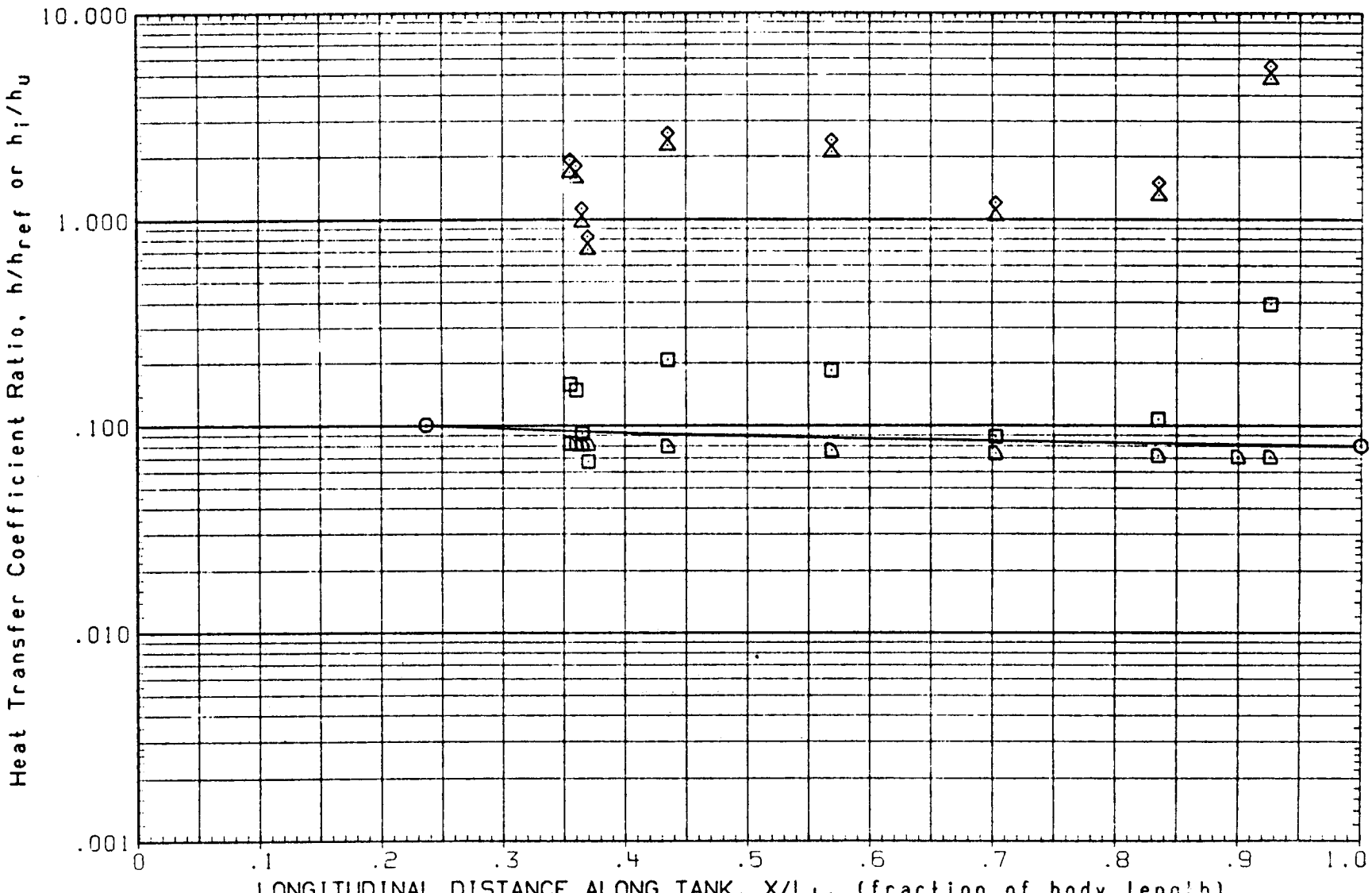

FIG. 4-12 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 23.070

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT23)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	3.000
(C9NT23)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	3.000
(V4LT44)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	3.000
(X4LT44)	◇	IH85 (W.L. TEST) OTS/ET = V4LT44/C9NT23=	HI/HU	4.020	-5.000	3.000
(Y4LT44)	△	IH85 (W.L. THEORY) OTS/ET = V4LT44/A9NT23=	HI/HU	4.020	-5.000	3.000

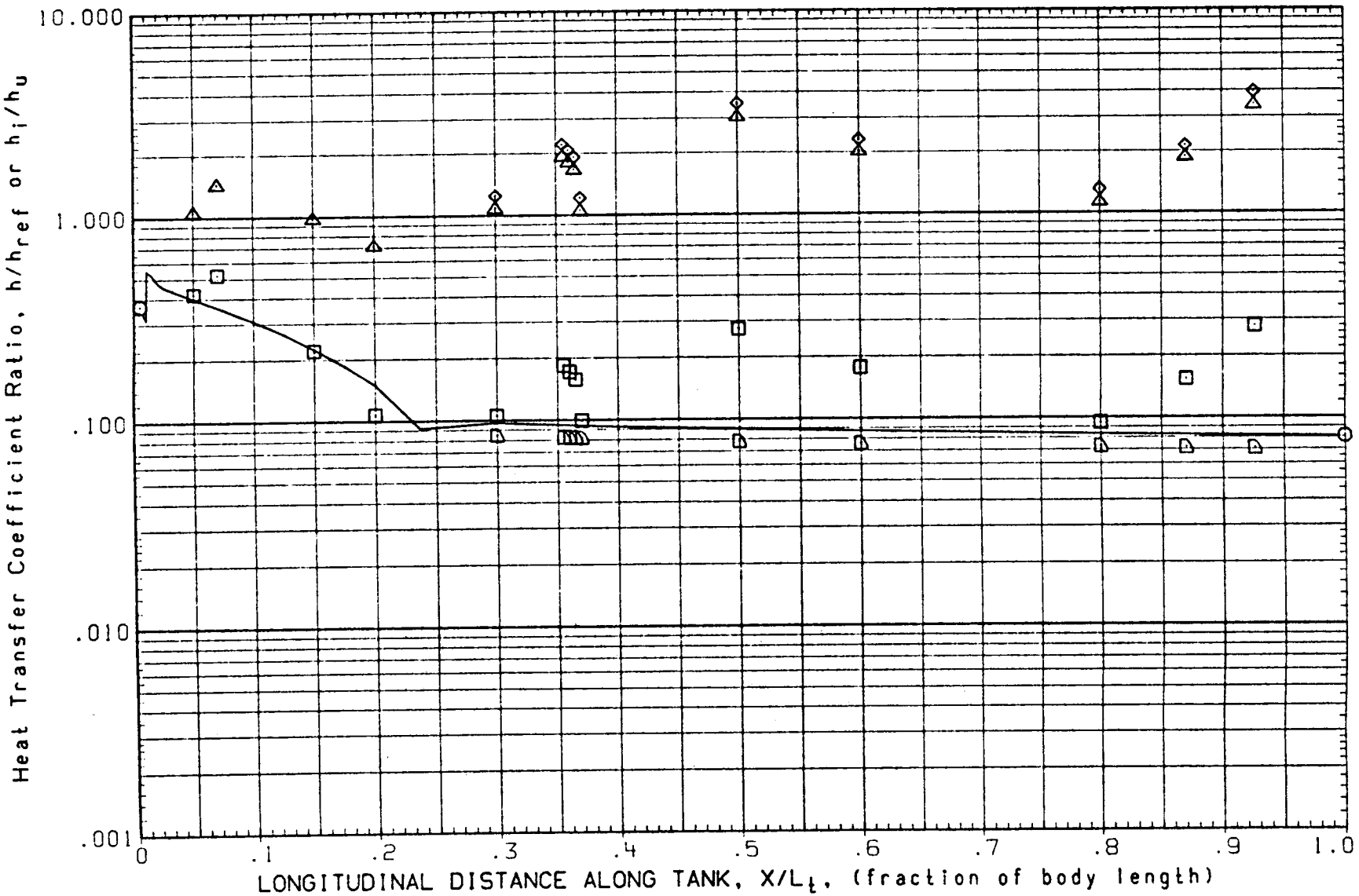

FIG. 4-12 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 3
0 < X/LT < 1.0 (L_tNEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 29.800

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT23)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	3.000
(C9NT23)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	3.000
(V4LT44)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	3.000
(X4LT44)	◇	IH85 (W.L. TEST) OTS/ET = V4LT44/C9NT23=	HI/HU	4.020	-5.000	3.000
(Y4LT44)	△	IH85 (W.L. THEORY) OTS/ET = V4LT44/A9NT23=	HI/HU	4.020	-5.000	3.000

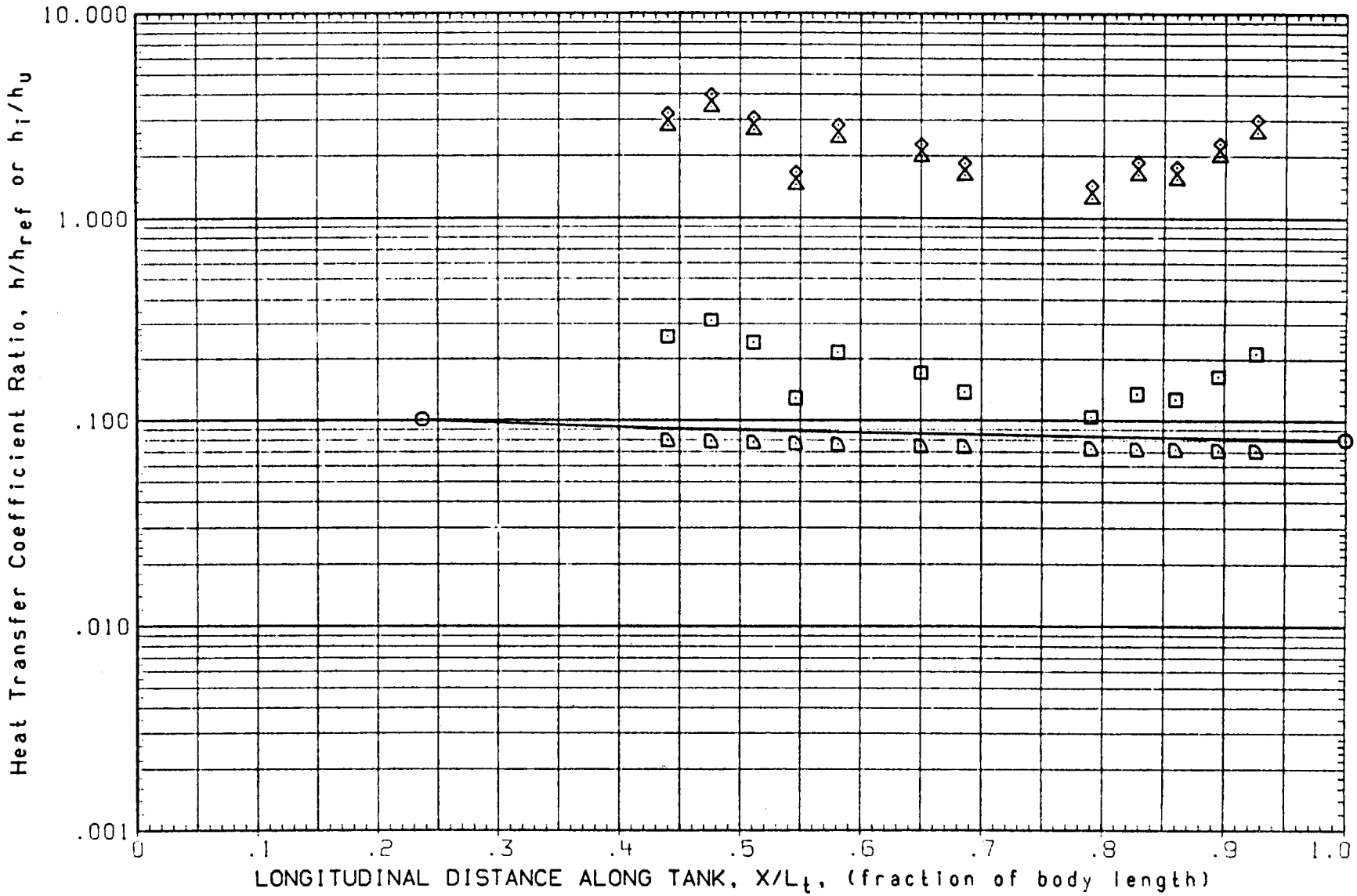

FIG. 4-12 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 31.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT23)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	3.000
(C9NT23)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	3.000
(V4LT44)	□	IH35, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	3.000
(X4LT44)	◇	IH85 (W.L. TEST) OTS/ET = V4LT44/C9NT23= HI/HU		4.020	-5.000	3.000
(Y4LT44)	△	IH85 (W.L. THEORY) OTS/ET = V4LT44/A9NT23= HI/HU		4.020	-5.000	3.000

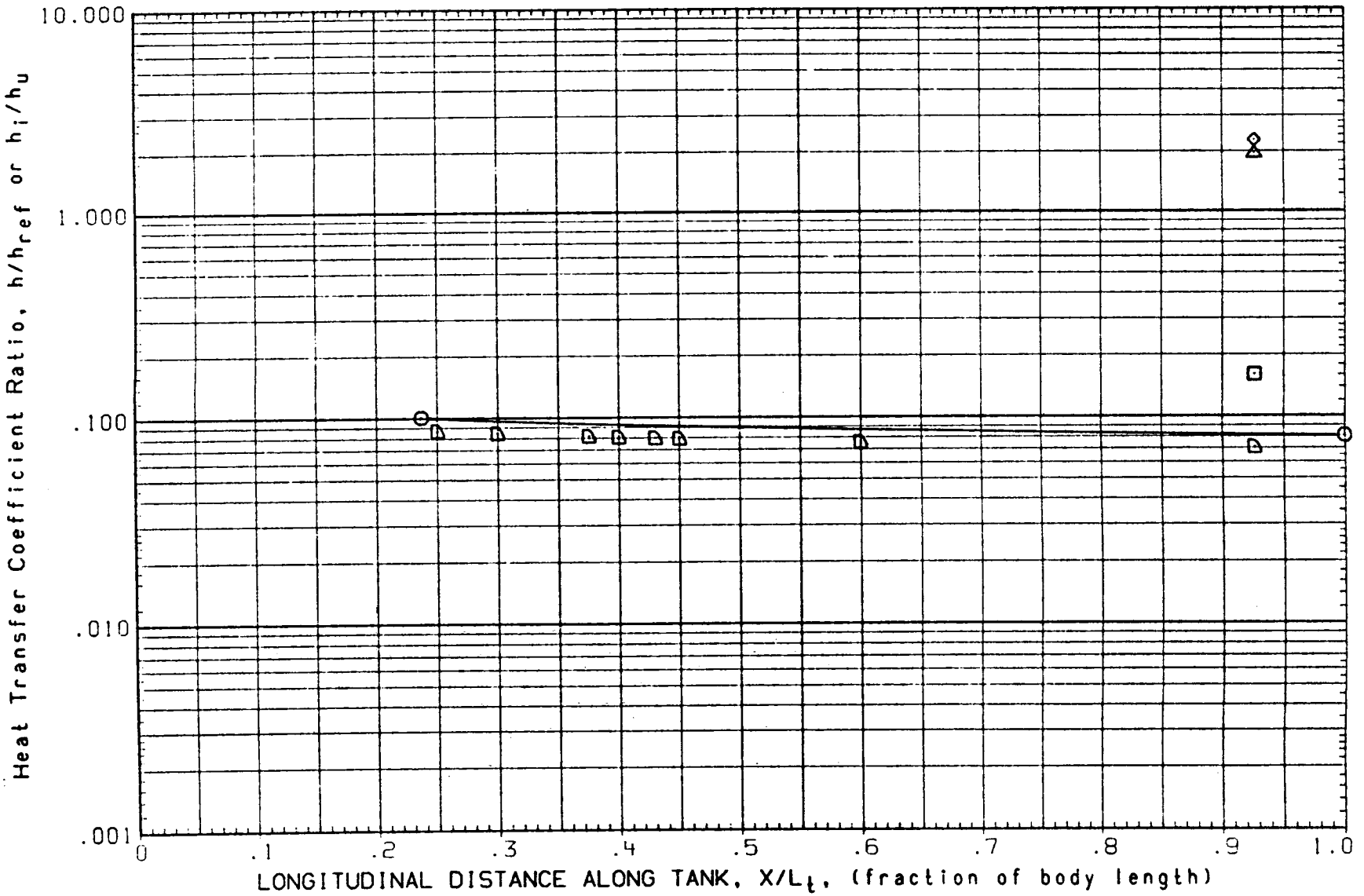

FIG. 4-12 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 33.750

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT23)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	4.020	-5.000	3.000
(C9NT23)	⌂	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	4.020	-5.000	3.000
(V4LT44)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	-5.000	3.000
(X4LT44)	◇	IH85 (W.L. TEST) OTS/ET = V4LT44/C9NT23= HI/HU	4.020	-5.000	3.000
(Y4LT44)	△	IH85 (W.L. THEORY) OTS/ET = V4LT44/A9NT23= HI/HU	4.020	-5.000	3.000

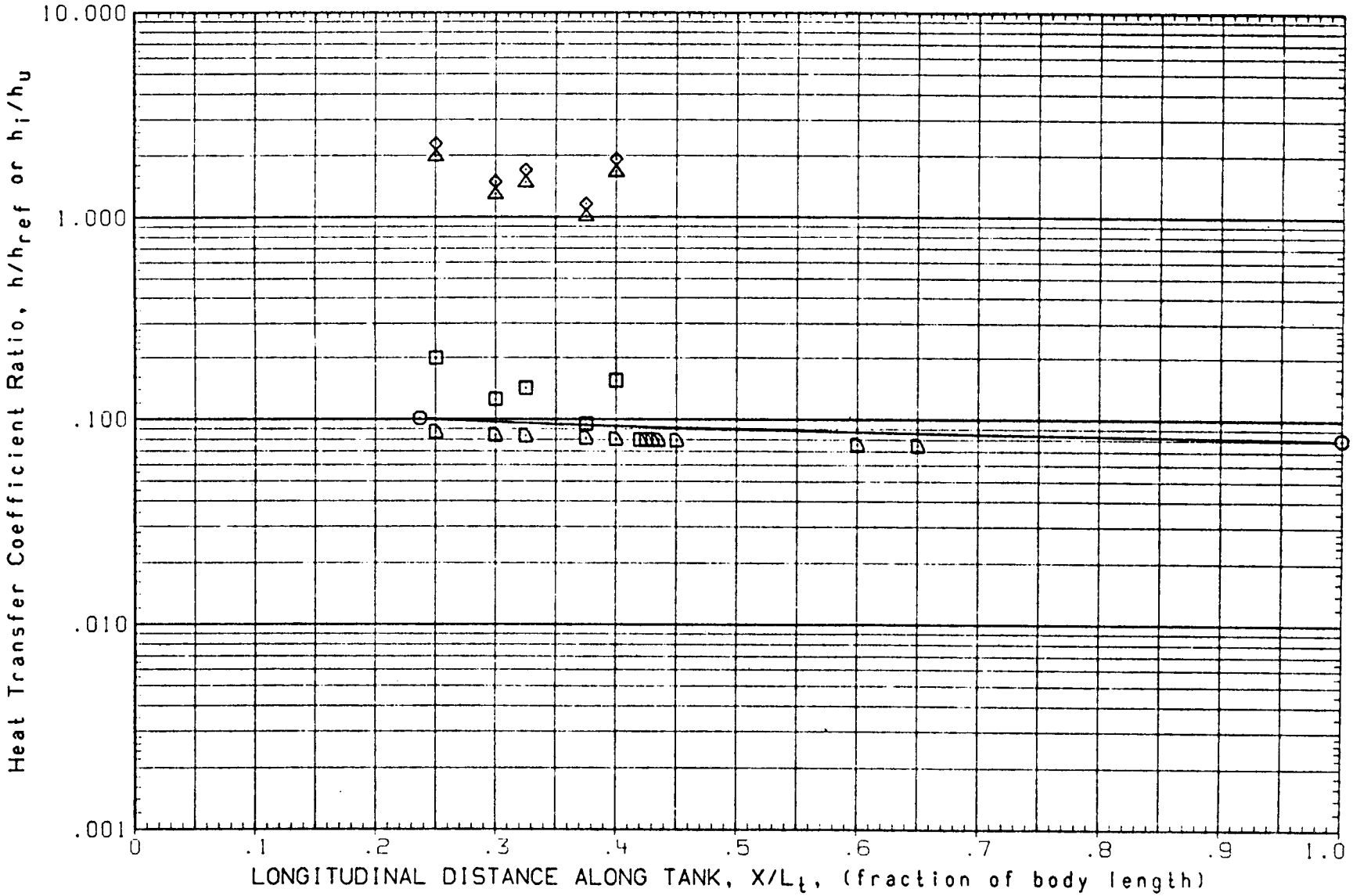

FIG. 4-12 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 F.H = 36.320

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(09NT23)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	3.000
(C9NT23)	□	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	3.000
(V4LT44)	⊠	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	3.000
(X4LT44)	◇	IH85 (W.L. TEST) OTS/ET = V4LT44/C9NT23=	HI/HU	4.020	-5.000	3.000
(Y4LT44)	△	IH85 (W.L. THEORY) OTS/ET = V4LT44/A9NT23=	HI/HU	4.020	-5.000	3.000

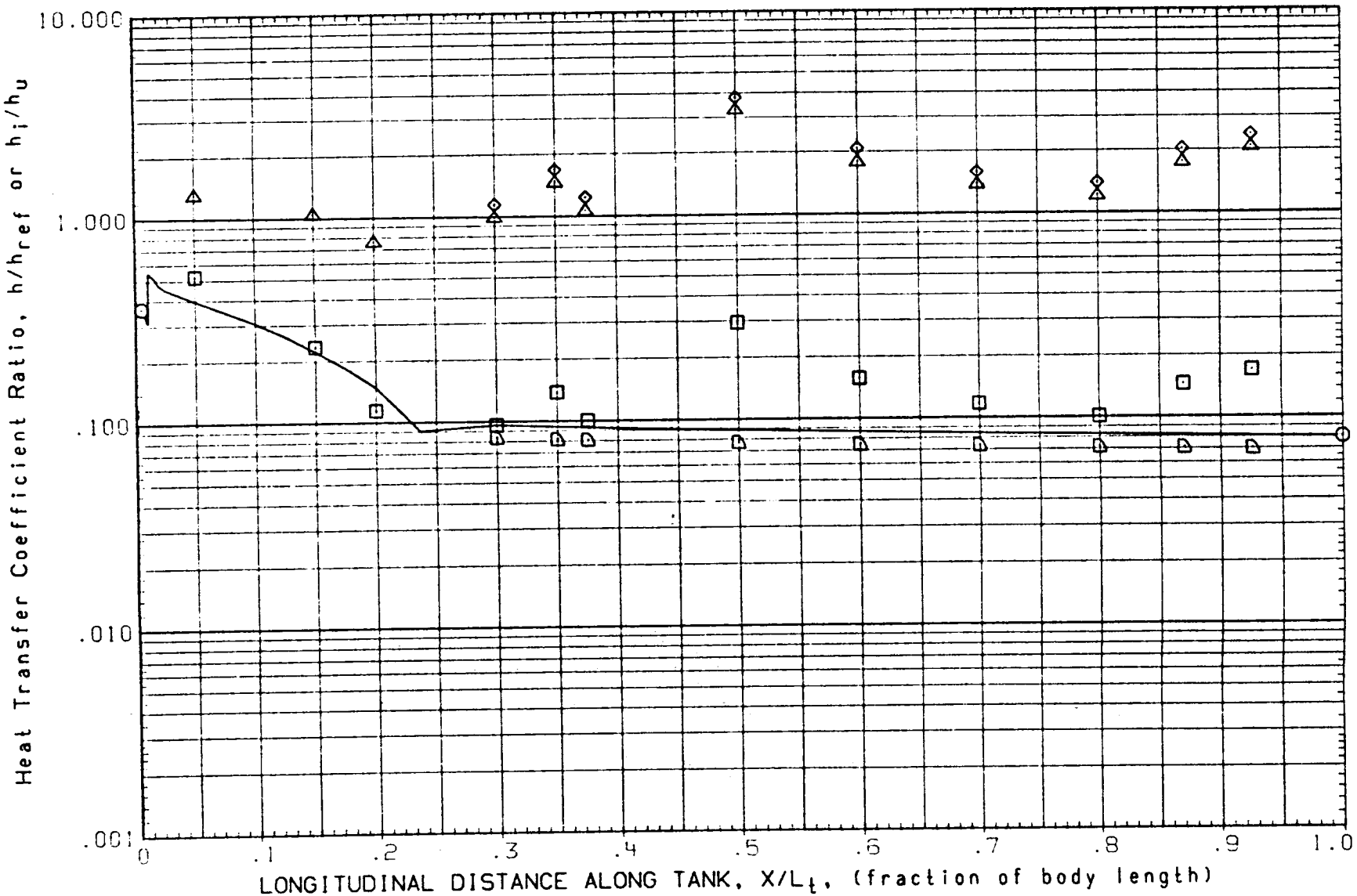

FIG. 4-12 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 3
⊠ 0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 37.700

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT23)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	3.000
(C9NT23)	⌂	DATA NOT AVAILABLE		4.020	-5.000	3.000
(V4LT44)	□	DATA NOT AVAILABLE		4.020	-5.000	3.000
(X4LT44)	◇	DATA NOT AVAILABLE		4.020	-5.000	3.000
(Y4LT44)	△	DATA NOT AVAILABLE		4.020	-5.000	3.000

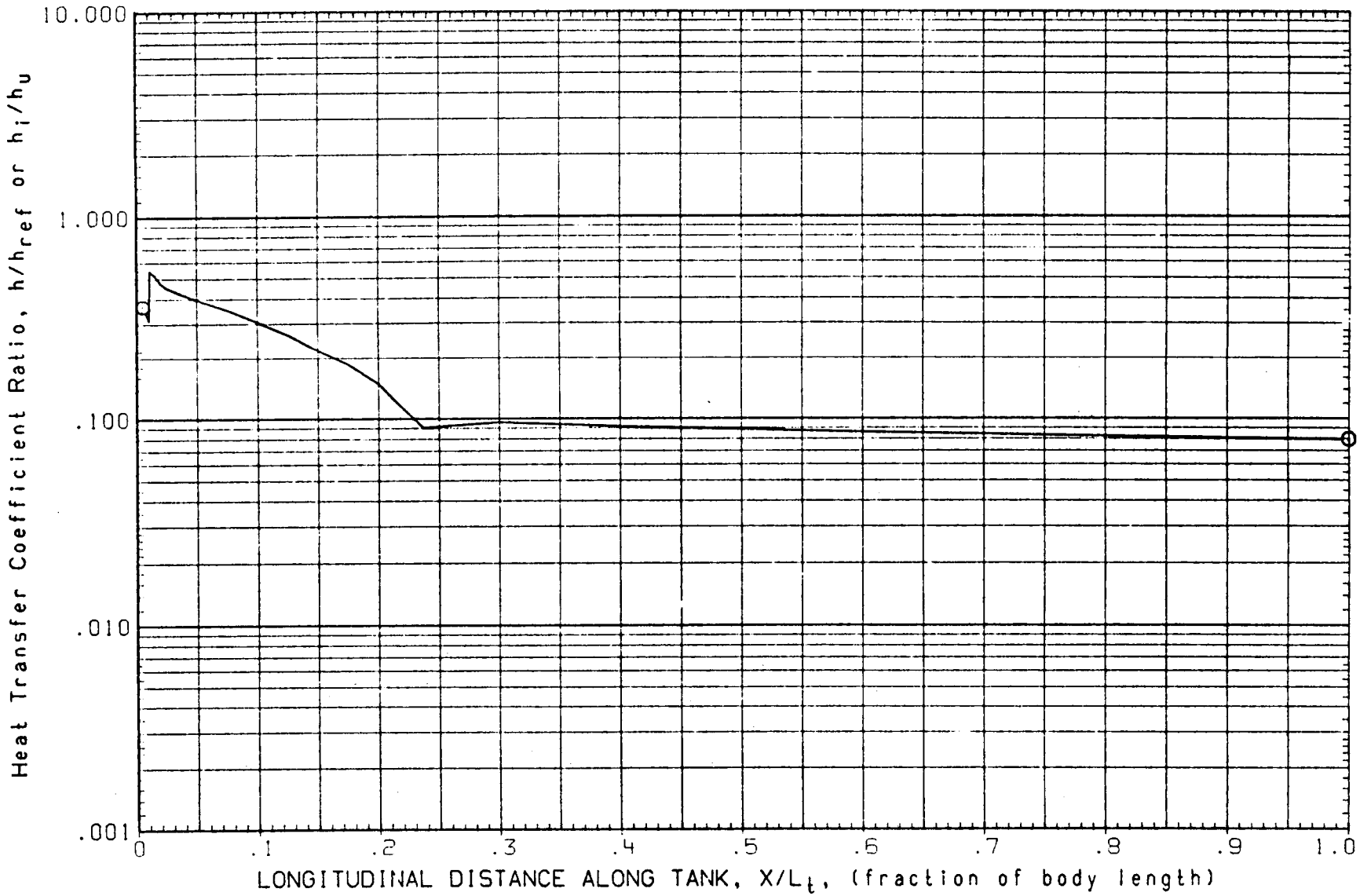

FIG. 4-12 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 39.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT23)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	3.000
(C9NT23)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	3.000
(V4LT44)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	3.000
(X4LT44)	◇	IH85 (W.L. TEST) OTS/ET = V4LT44/C9NT23= HI/HU		4.020	-5.000	3.000
(Y4LT44)	△	IH85 (W.L. THEORY) OTS/ET = V4LT44/A9NT23= HI/HU		4.020	-5.000	3.000

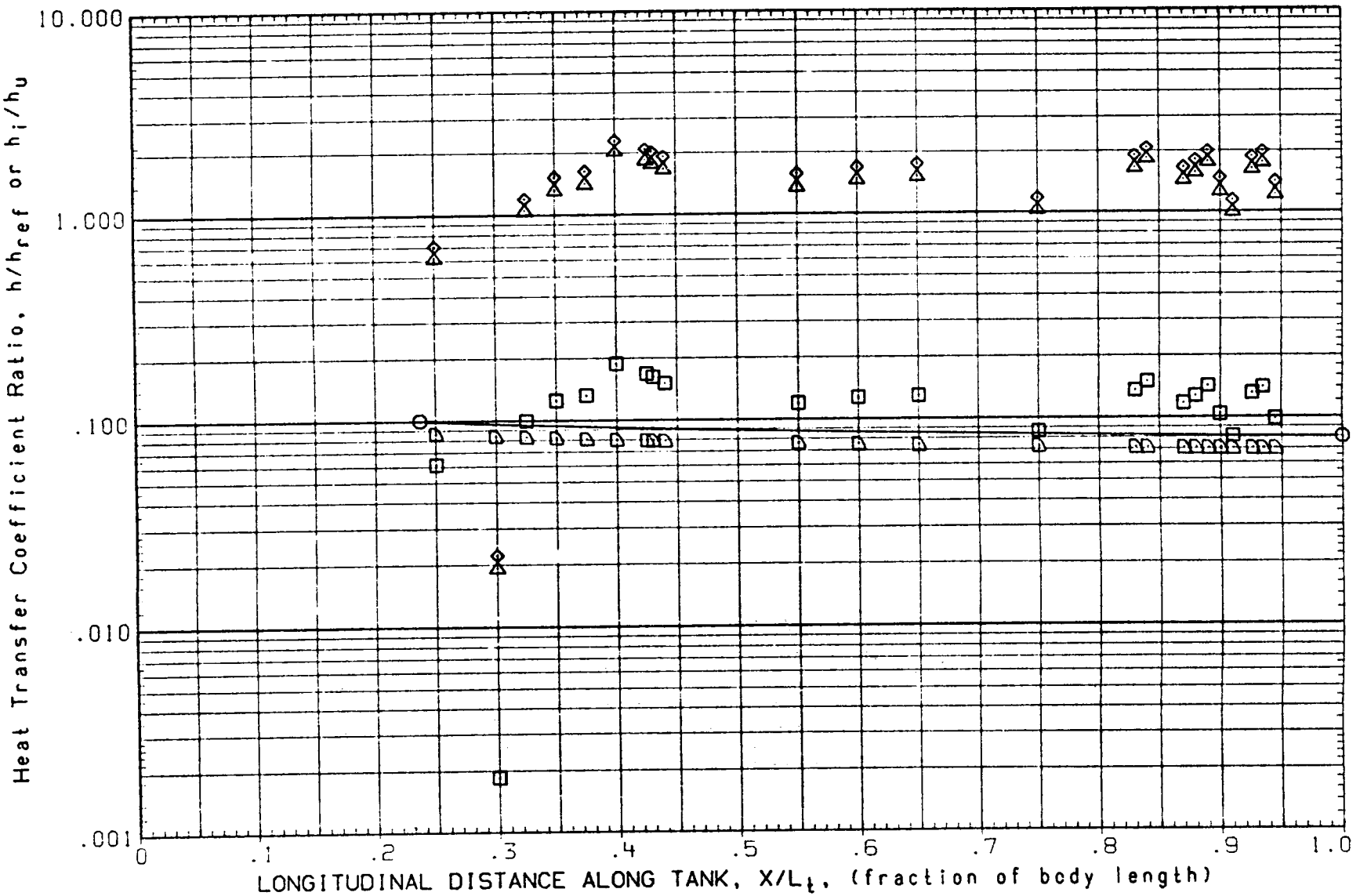

FIG. 4-12 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 45.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT23)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	4.020	-5.000	3.000
(C9NT23)	⌂	DATA NOT AVAILABLE	4.020	-5.000	3.000
(V4LT44)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	-5.000	3.000
(X4LT44)	◇	DATA NOT AVAILABLE	4.020	-5.000	3.000
(Y4LT44)	△	IH85 (W,L, THEORY) OTS/ET = V4LT44/A9NT23= HI/HU	4.020	-5.000	3.000

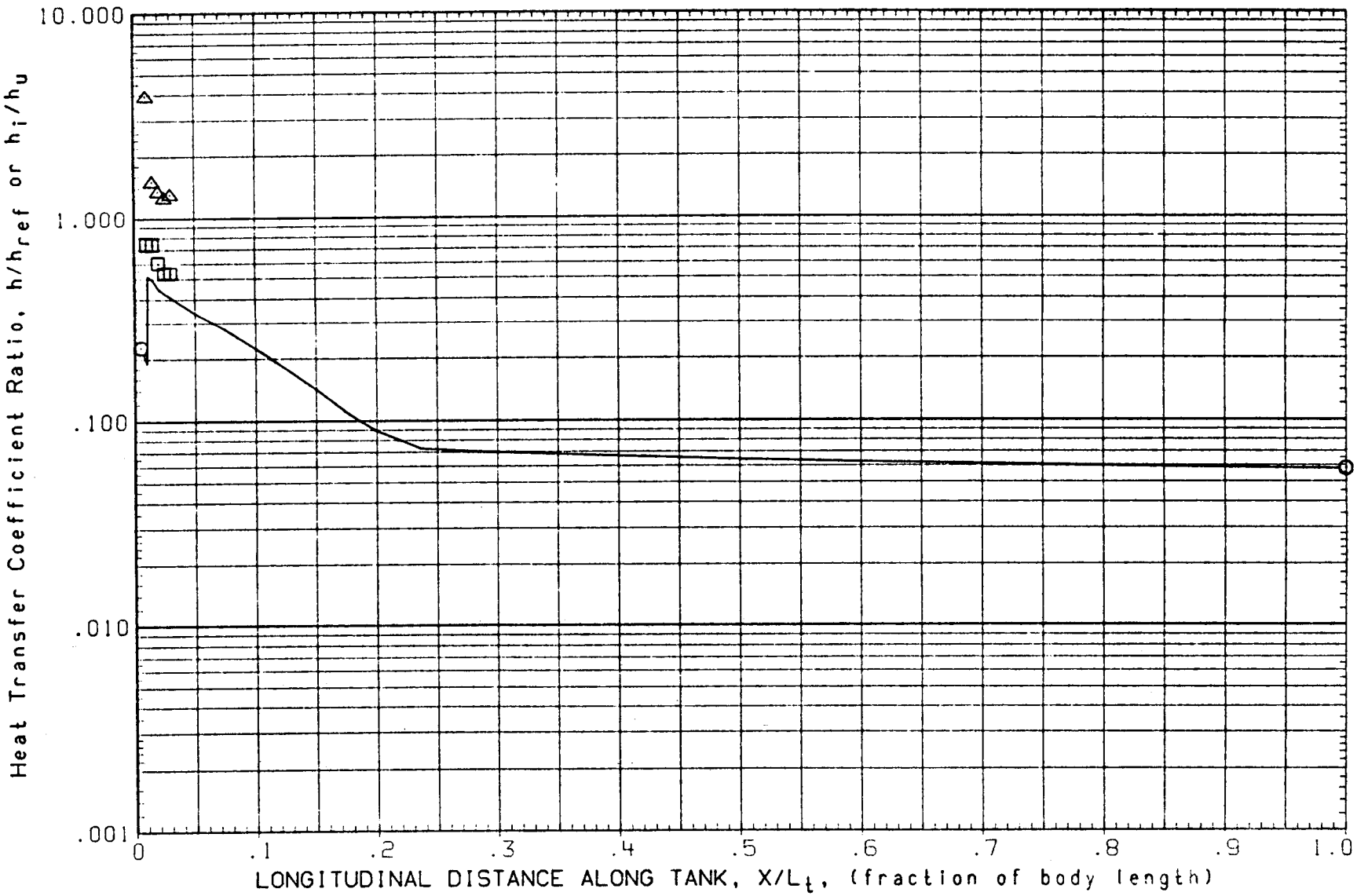

FIG. 4-12 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 180.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT23)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	3.000
(C9NT23)	⌂	DATA NOT AVAILABLE		4.020	-5.000	3.000
(Y4LT44)	□	DATA NOT AVAILABLE		4.020	-5.000	3.000
(X4LT44)	◇	DATA NOT AVAILABLE		4.020	-5.000	3.000
(Y4LT44)	△	DATA NOT AVAILABLE		4.020	-5.000	3.000

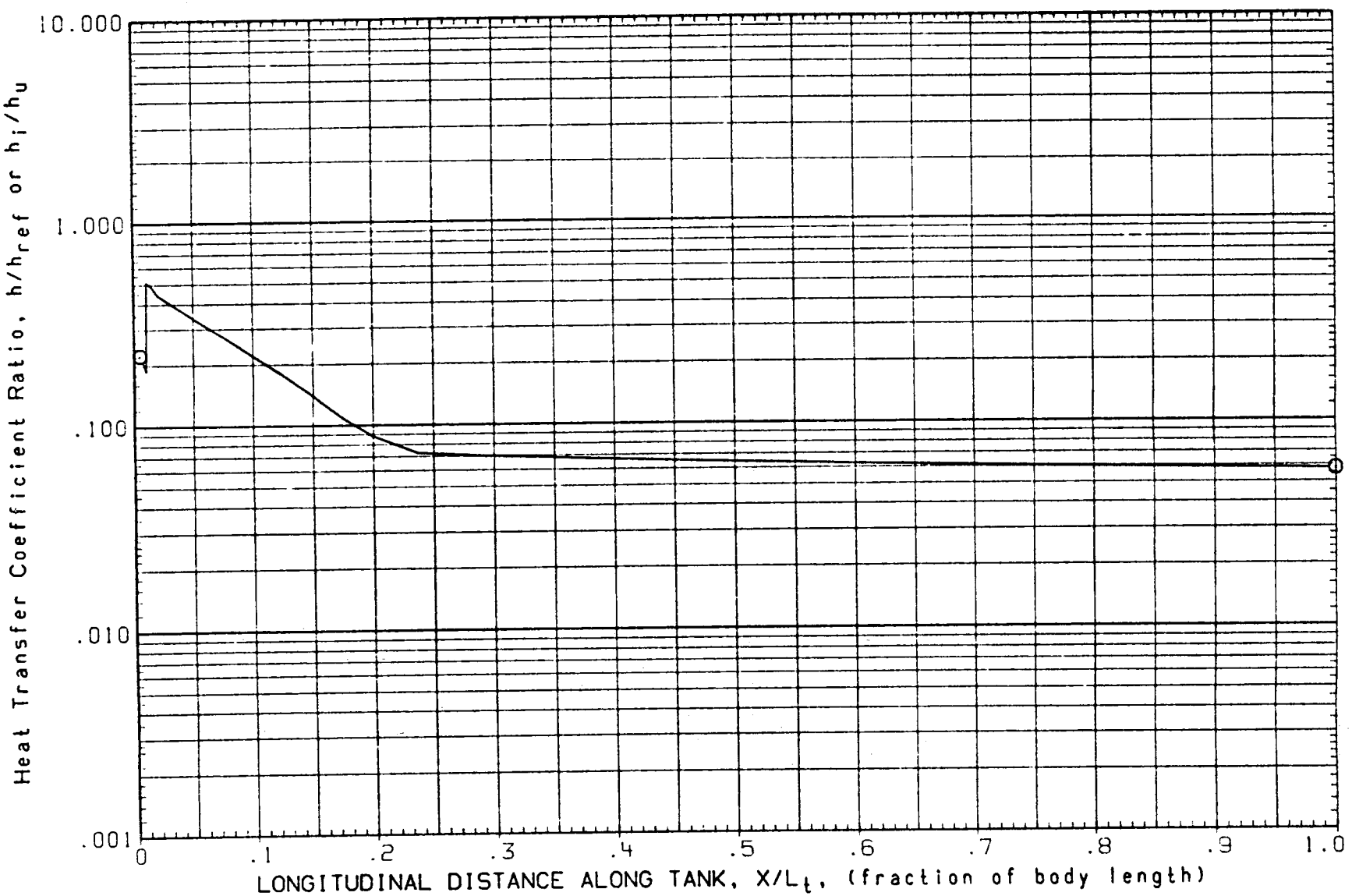

FIG. 4-12 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 235.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT23)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	3.000
(C9NT23)	△	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	3.000
(V4LT44)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	3.000
(X4LT44)	◇	IH85 (W.L. TEST) OTS/ET = V4LT44/C9NT23= HI/HU		4.020	-5.000	3.000
(Y4LT44)	△	IH85 (W.L. THEORY) OTS/ET = V4LT44/A9NT23= HI/HU		4.020	-5.000	3.000

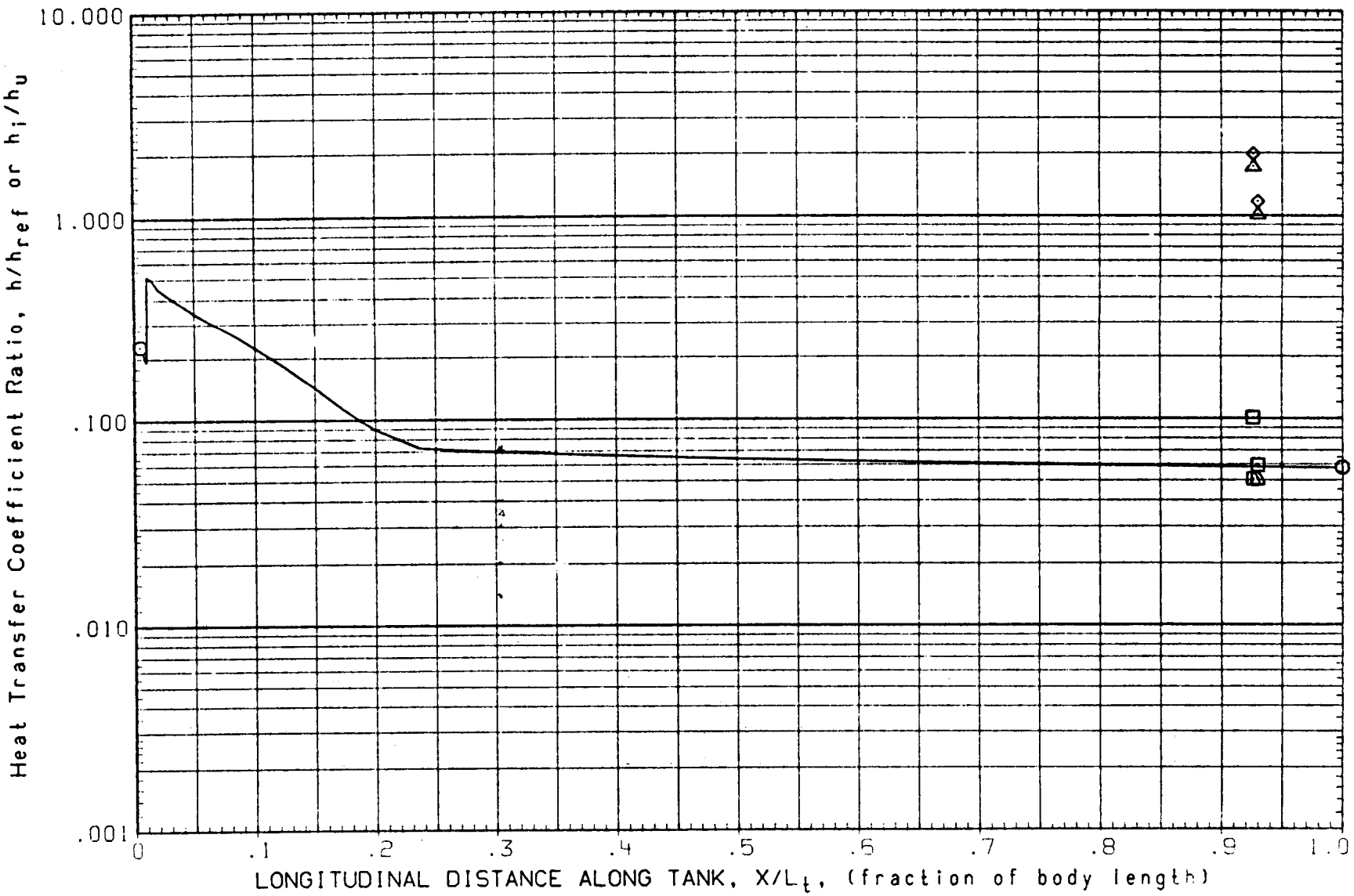

FIG. 4-12 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 247.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT23)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	3.000
(C9NT23)	⬠	DATA NOT AVAILABLE		4.020	-5.000	3.000
(V4LT44)	□	DATA NOT AVAILABLE		4.020	-5.000	3.000
(X4LT44)	◇	DATA NOT AVAILABLE		4.020	-5.000	3.000
(Y4LT44)	△	DATA NOT AVAILABLE		4.020	-5.000	3.000

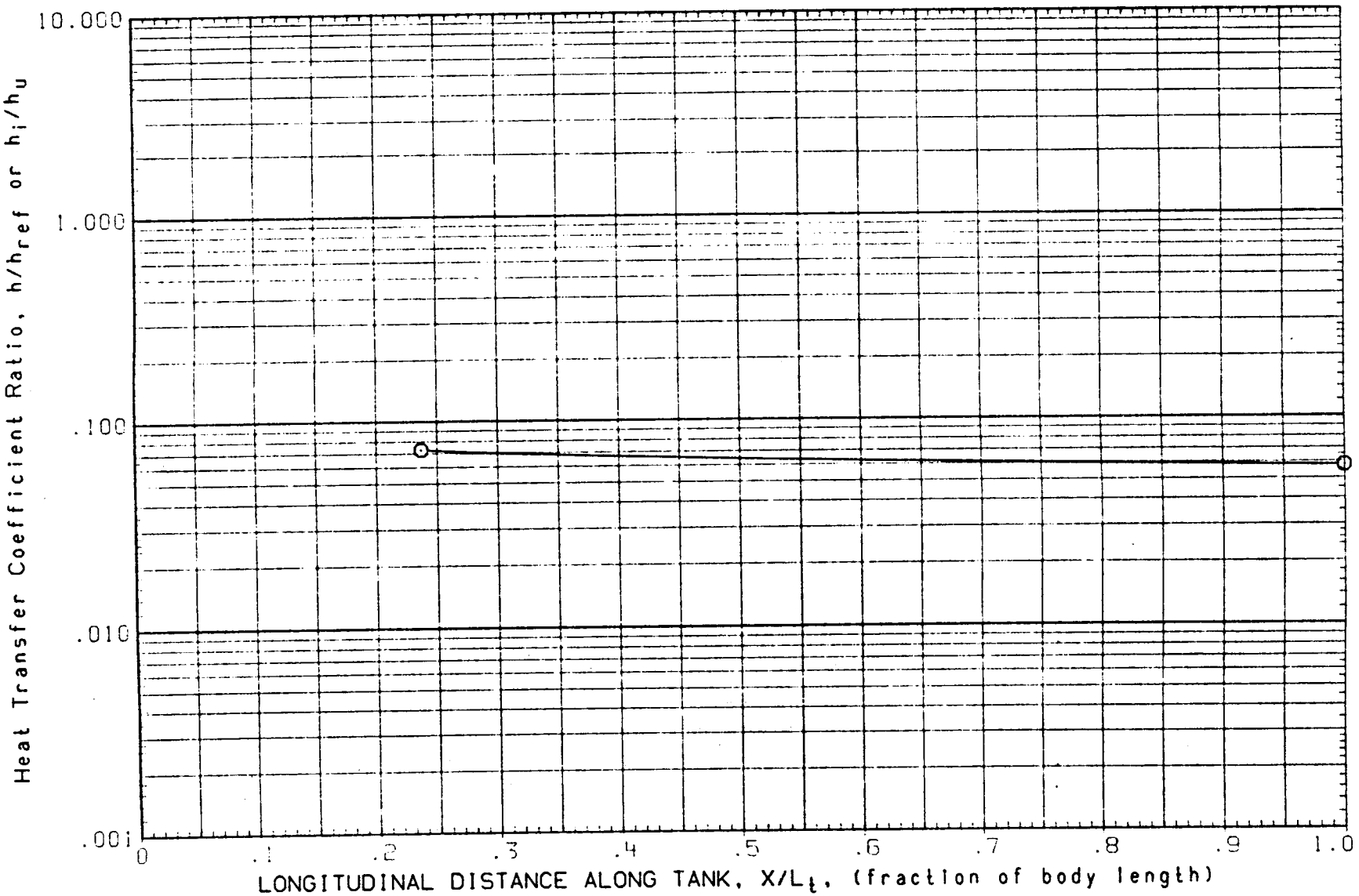

FIG. 4-12 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 247.500

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT23)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	3.000
(C9NT23)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	3.000
(V4LT44)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	3.000
(X4LT44)	◇	IH85 (W.L. TEST) QTS/ET = V4LT44/C9NT23=	HI/HU	4.020	-5.000	3.000
(Y4LT44)	△	IH85 (W.L. THEORY) QTS/ET = V4LT44/A9NT23=	HI/HU	4.020	-5.000	3.000

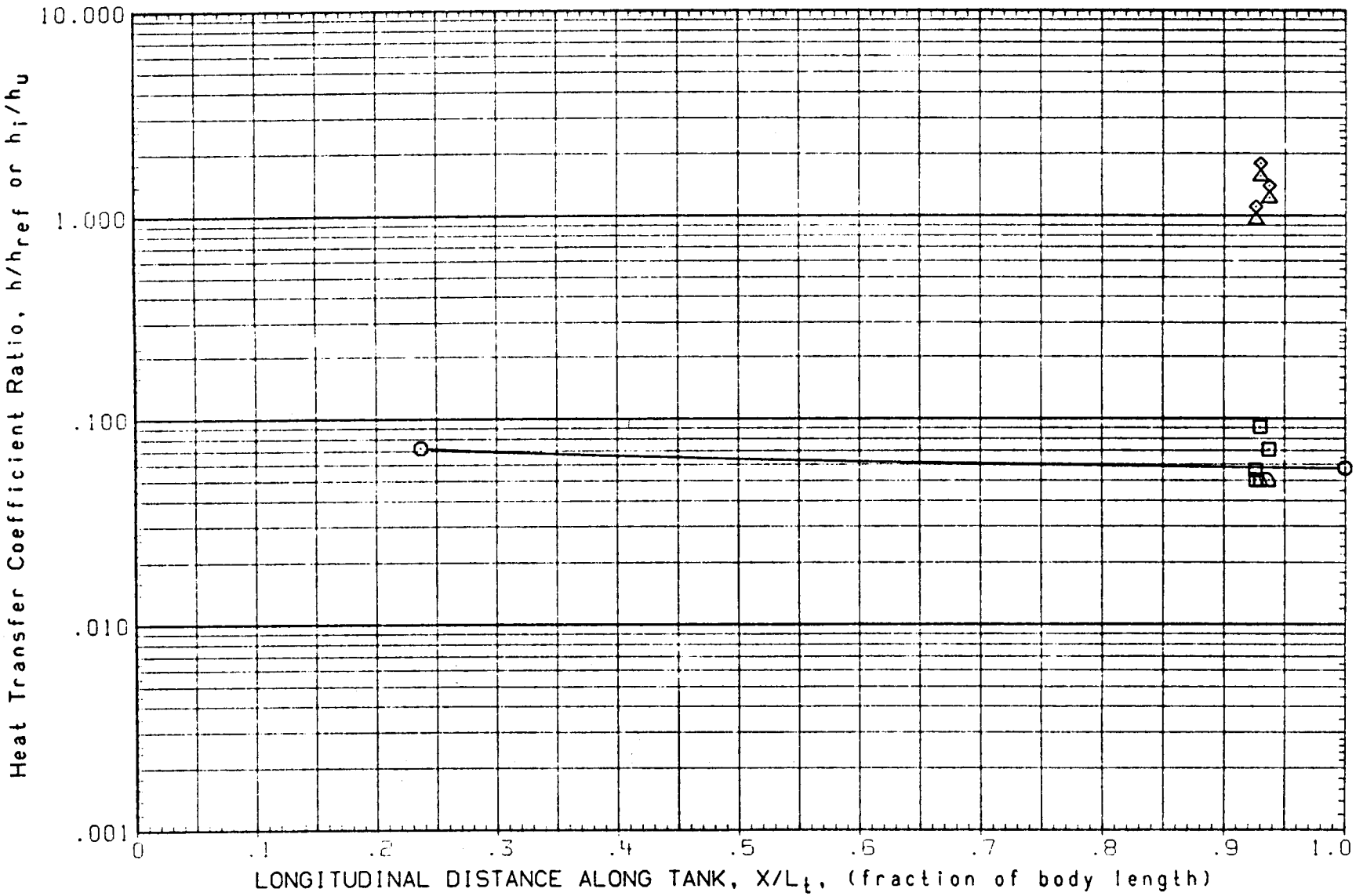

FIG. 4-12 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 250.570

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT23)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	3.000
(C9NT23)	⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	3.000
(V4LT44)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	3.000
(X4LT44)	◇	IH85 (W.L. TEST) OTS/ET = V4LT44/C9NT23=	HI/HU	4.020	-5.000	3.000
(Y4LT44)	△	IH85 (W.L. THEORY) OTS/ET = V4LT44/A9NT23=	HI/HU	4.020	-5.000	3.000

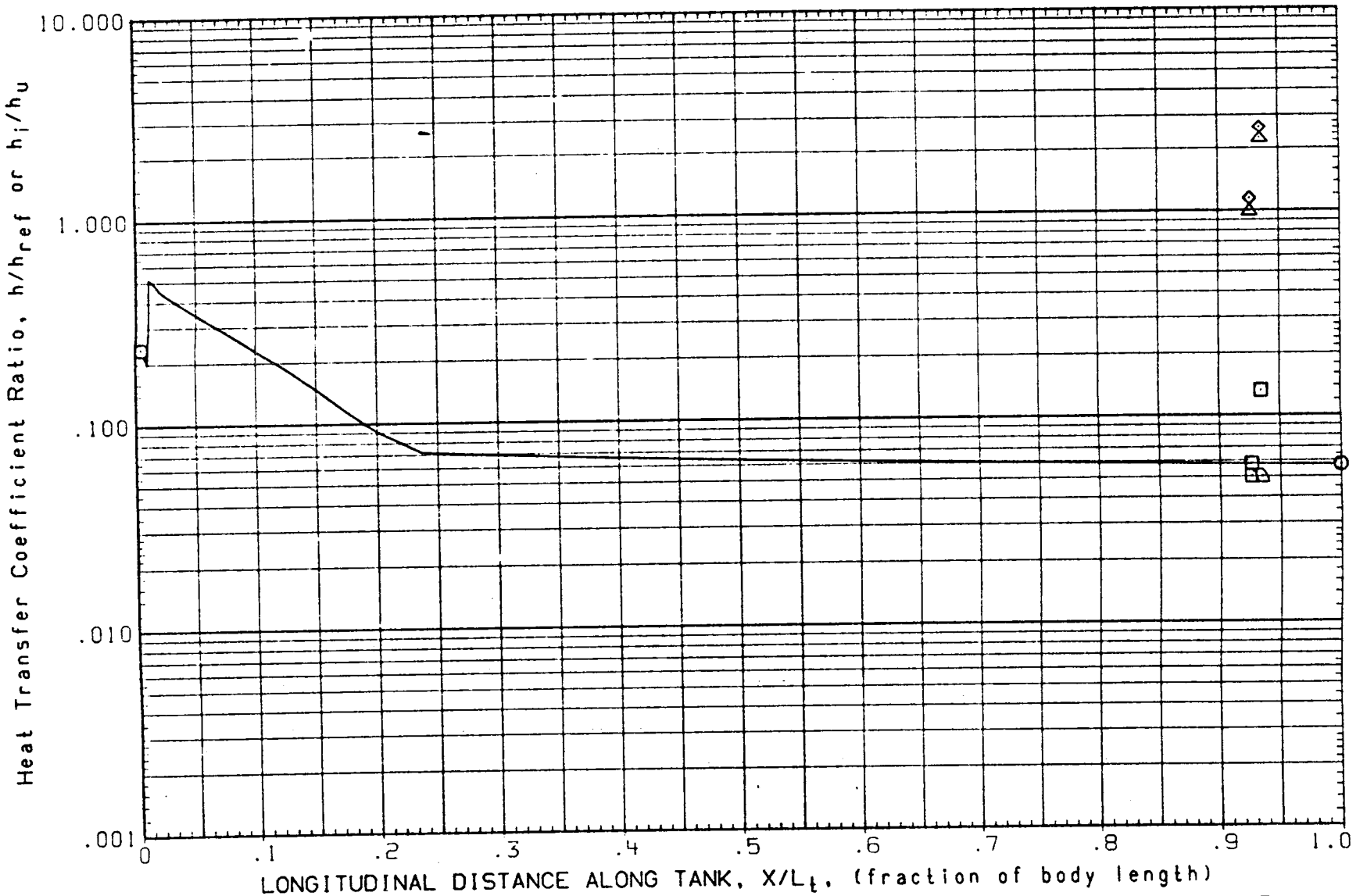

FIG. 4-12 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 258.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT23)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	3.000
(C9NT23)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	3.000
(V4LT44)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	3.000
(X4LT44)	◇	IH85 (W.L. TEST) OTS/ET = V4LT44/C9NT23=	HI/HU	4.020	-5.000	3.000
(Y4LT44)	△	IH85 (W.L. THEORY) OTS/ET = V4LT44/A9NT23=	HI/HU	4.020	-5.000	3.000

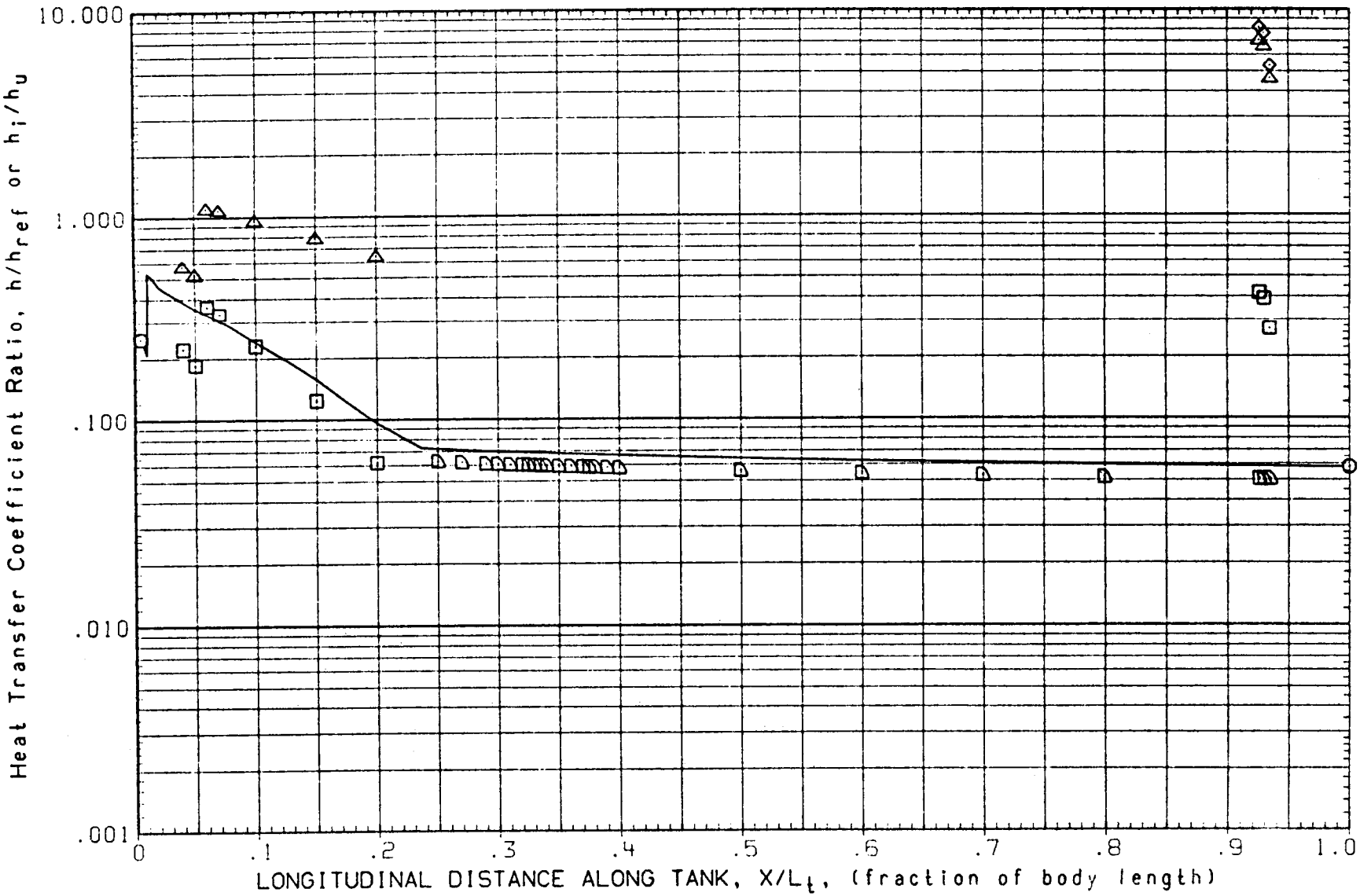

FIG. 4-12 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 270.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT23)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	3.000
(C9NT23)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	3.000
(V4LT44)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	3.000
(X4LT44)	◇	IH85 (W.L. TEST) OTS/ET = V4LT44/C9NT23= HI/HU		4.020	-5.000	3.000
(Y4LT44)	△	IH85 (W.L. THEORY) OTS/ET = V4LT44/A9NT23= HI/HU		4.020	-5.000	3.000

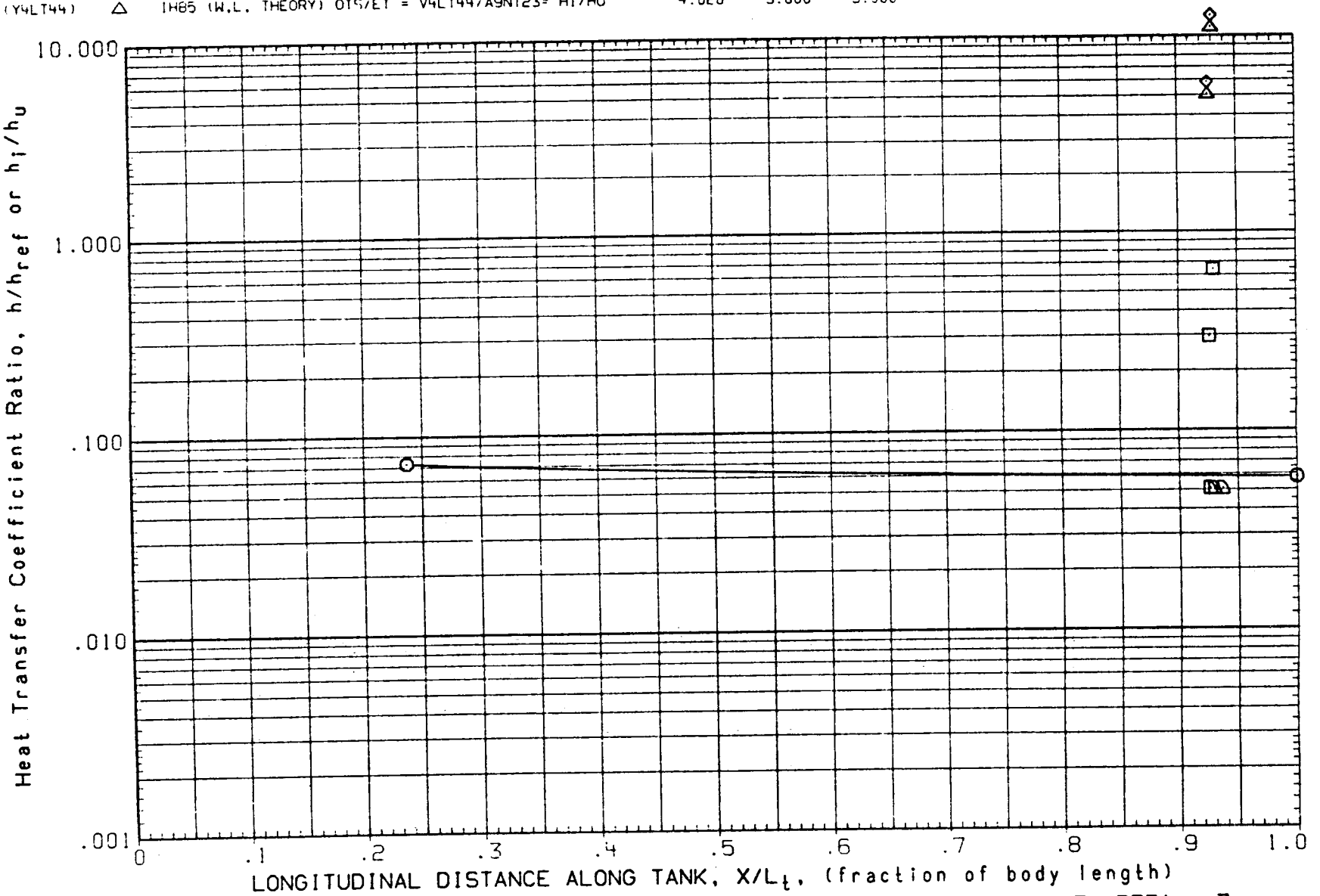

FIG. 4-12 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 289.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT23)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	3.000
(C9NT23)	⊿	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	3.000
(V4LT44)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	3.000
(X4LT44)	◇	IH85 (W.L. TEST) OTS/ET = V4LT44/C9NT23=	HI/HU	4.020	-5.000	3.000
(Y4LT44)	△	IH85 (W.L. THEORY) OTS/ET = V4LT44/A9NT23=	HI/HU	4.020	-5.000	3.000

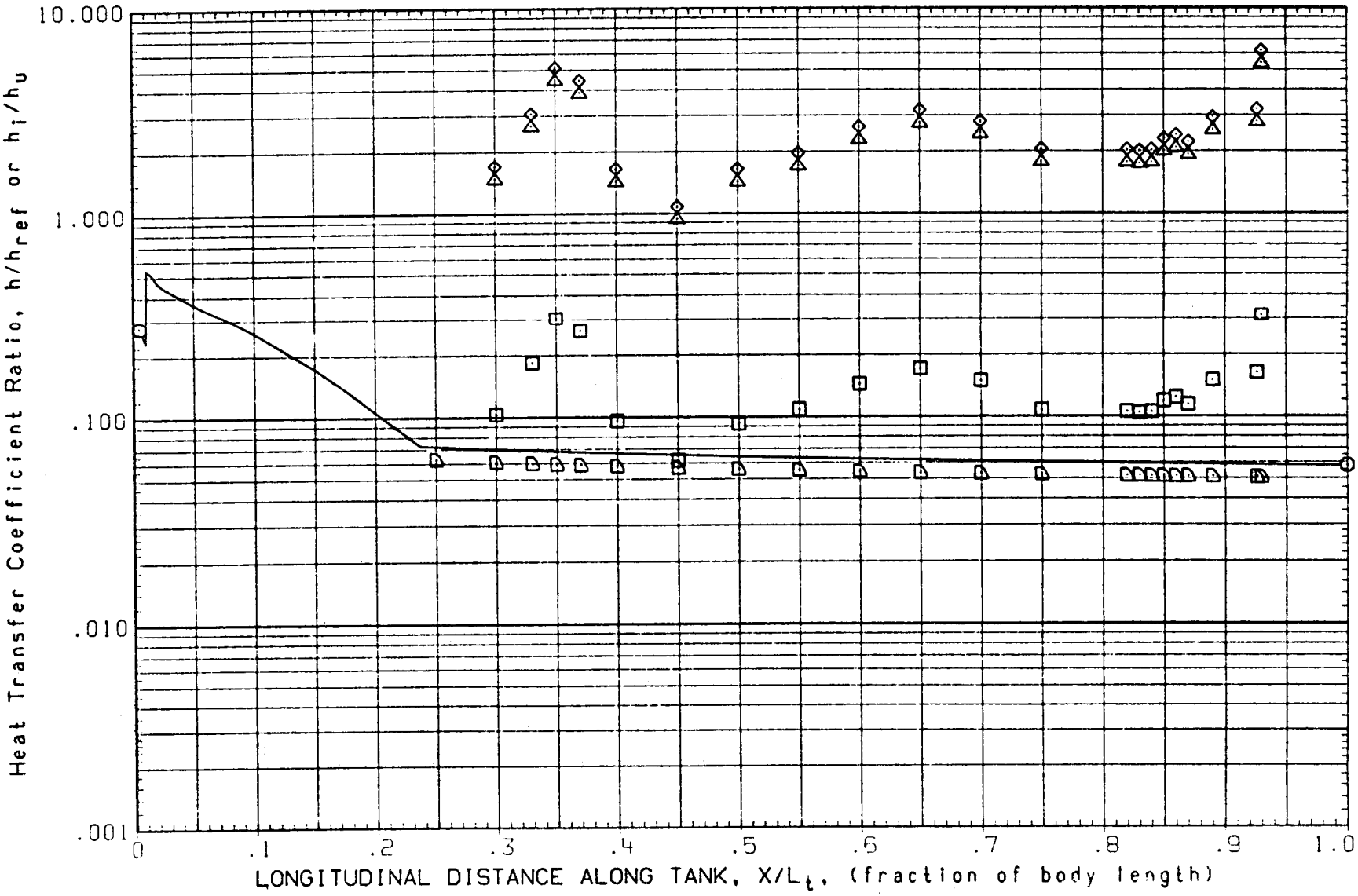

FIG. 4-12 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 292.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT23)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	3.000
(C9NT23)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	3.000
(V4LT44)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	3.000
(X4LT44)	◇	IH85 (W.L. TEST) OTS/ET = V4LT44/C9NT23=	HI/HU	4.020	-5.000	3.000
(Y4LT44)	△	IH85 (W.L. THEORY) OTS/ET = V4LT44/A9NT23=	HI/HU	4.020	-5.000	3.000

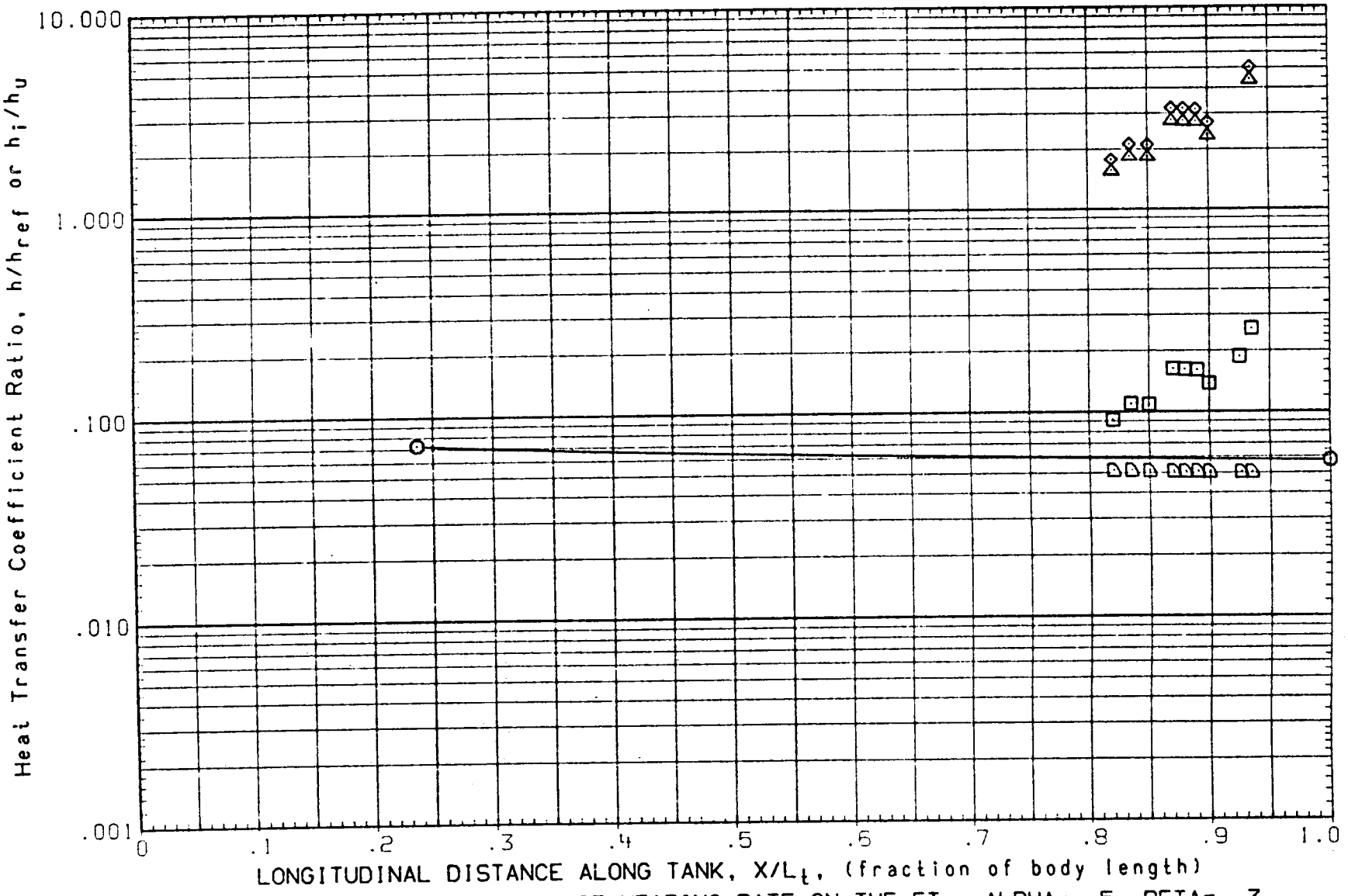

FIG. 4-12 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 301.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT23)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	3.000
(C9NT23)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	3.000
(V4LT44)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	3.000
(X4LT44)	◇	IH85 (W.L. TEST) OTS/ET = V4LT44/C9NT23= HI/HU		4.020	-5.000	3.000
(Y4LT44)	△	IH85 (W.L. THEORY) OTS/ET = V4LT44/A9NT23= HI/HU		4.020	-5.000	3.000

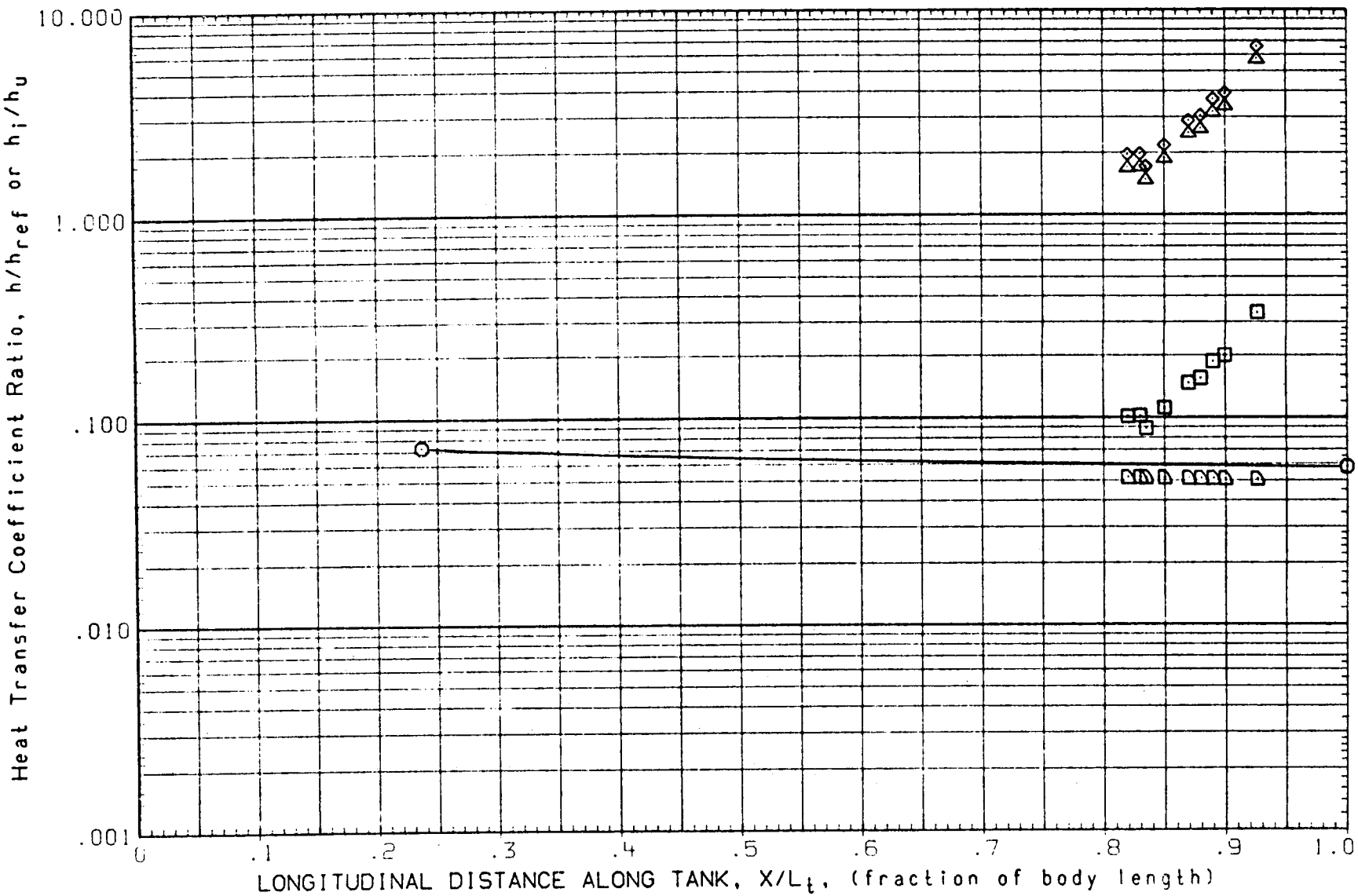

FIG. 4-12 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 305.400

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT23)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	3.000
(C9NT23)	□	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	3.000
(V4LT44)	□	IH85, AEDC V4TA-W5, CONFIGURATION 0 (T) S		4.020	-5.000	3.000
(X4LT44)	◇	IH85 (W.L. TEST) OTS/ET = V4LT44/C9NT23=	HI/HU	4.020	-5.000	3.000
(Y4LT44)	△	IH85 (W.L. THEORY) OTS/ET = V4LT44/A9NT23=	HI/HU	4.020	-5.000	3.000

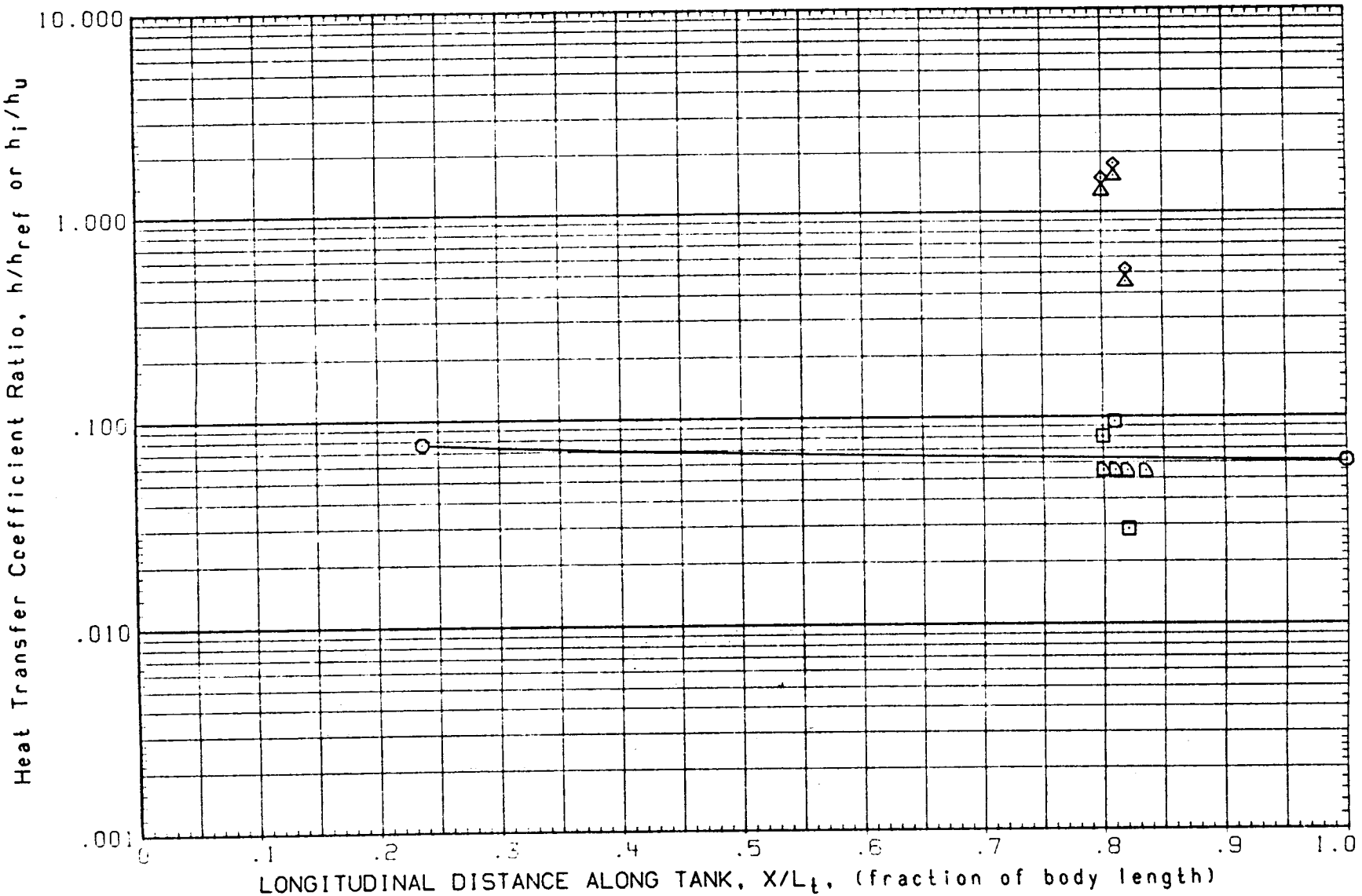

FIG. 4-12 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 309.300

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT23)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	3.000
(C9NT23)	⊔	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	3.000
(V4LT44)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	3.000
(X4LT44)	◇	IH85 (W.L. TEST) OTS/ET = V4LT44/C9NT23=	HI/HU	4.020	-5.000	3.000
(Y4LT44)	△	IH85 (W.L. THEORY) OTS/ET = V4LT44/A9NT23=	HI/HU	4.020	-5.000	3.000

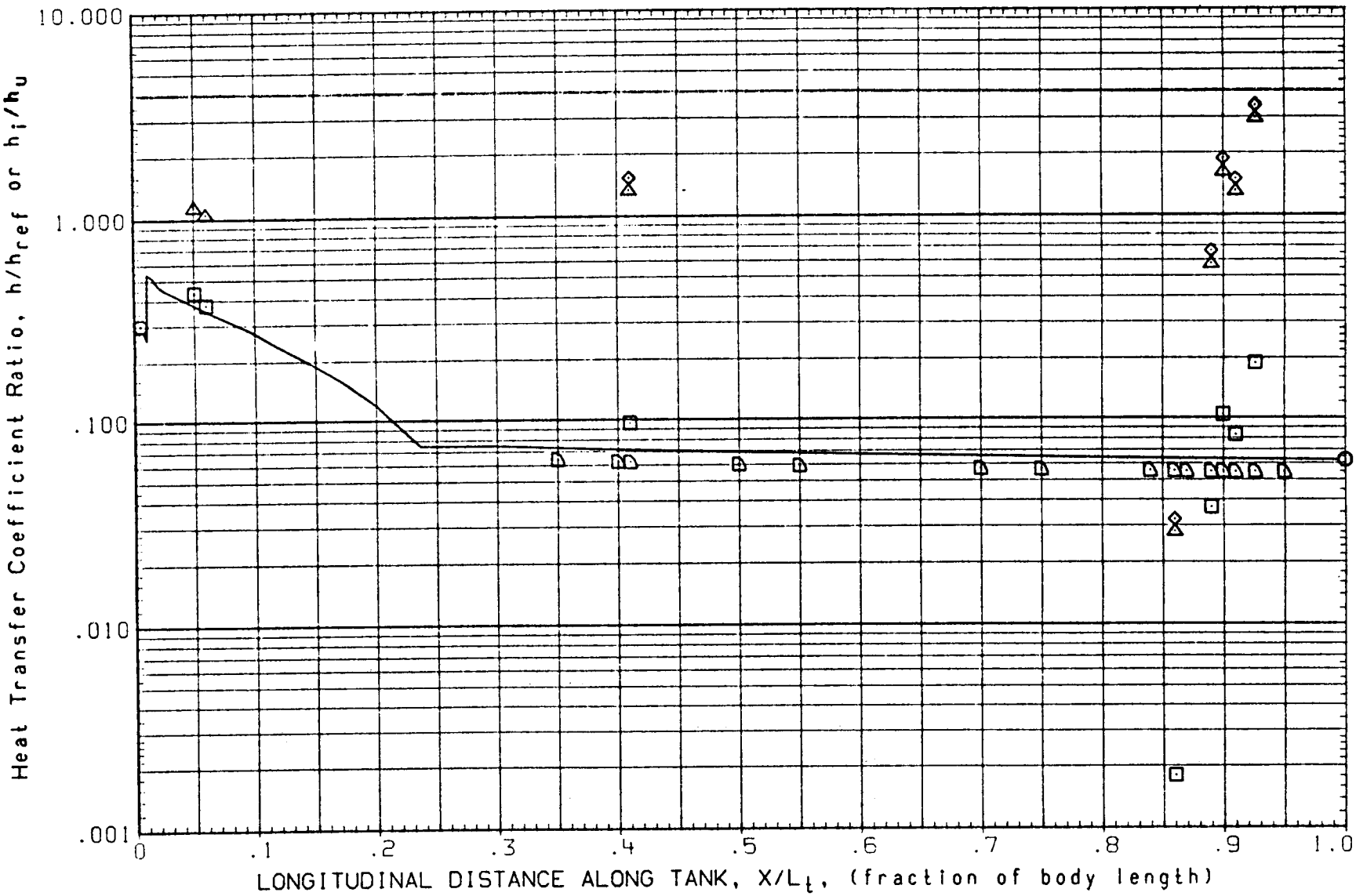

FIG. 4-12 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 315.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT23)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	3.000
(C9NT23)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	3.000
(V4LT44)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	3.000
(X4LT44)	◇	IH85 (W.L. TEST) OTS/ET = V4LT44/C9NT23=	HI/HU	4.020	-5.000	3.000
(Y4LT44)	△	IH85 (W.L. THEORY) OTS/ET = V4LT44/A9NT23=	HI/HU	4.020	-5.000	3.000

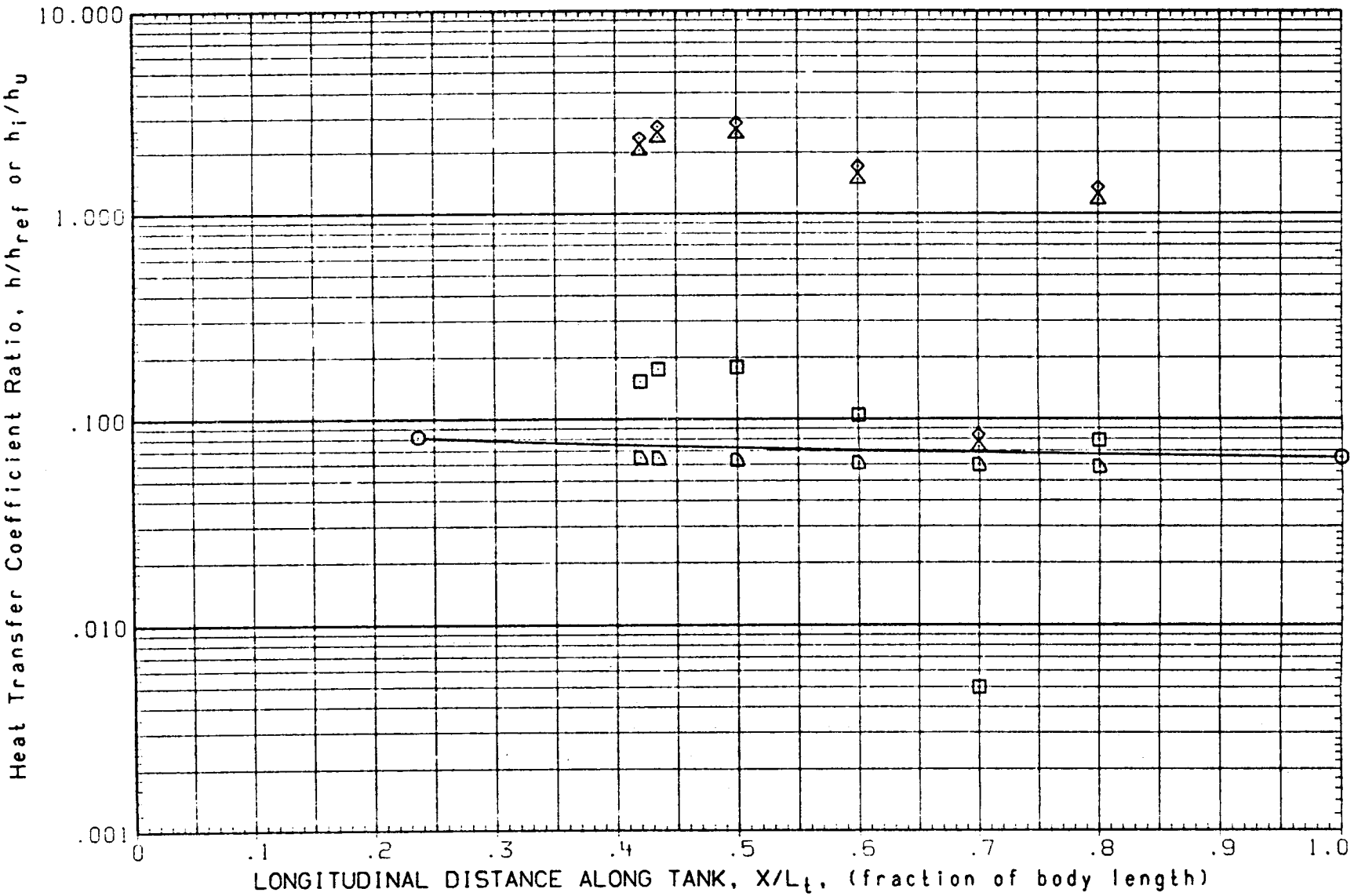

FIG. 4-12 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 322.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT23)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	3.000
(C9NT23)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	3.000
(V4LT44)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	3.000
(X4LT44)	◇	IH85 (W.L. TEST) OTS/ET = V4LT44/C9NT23= HI/HU		4.020	-5.000	3.000
(Y4LT44)	△	IH85 (W.L. THEORY) OTS/ET = V4LT44/A9NT23= HI/HU		4.020	-5.000	3.000

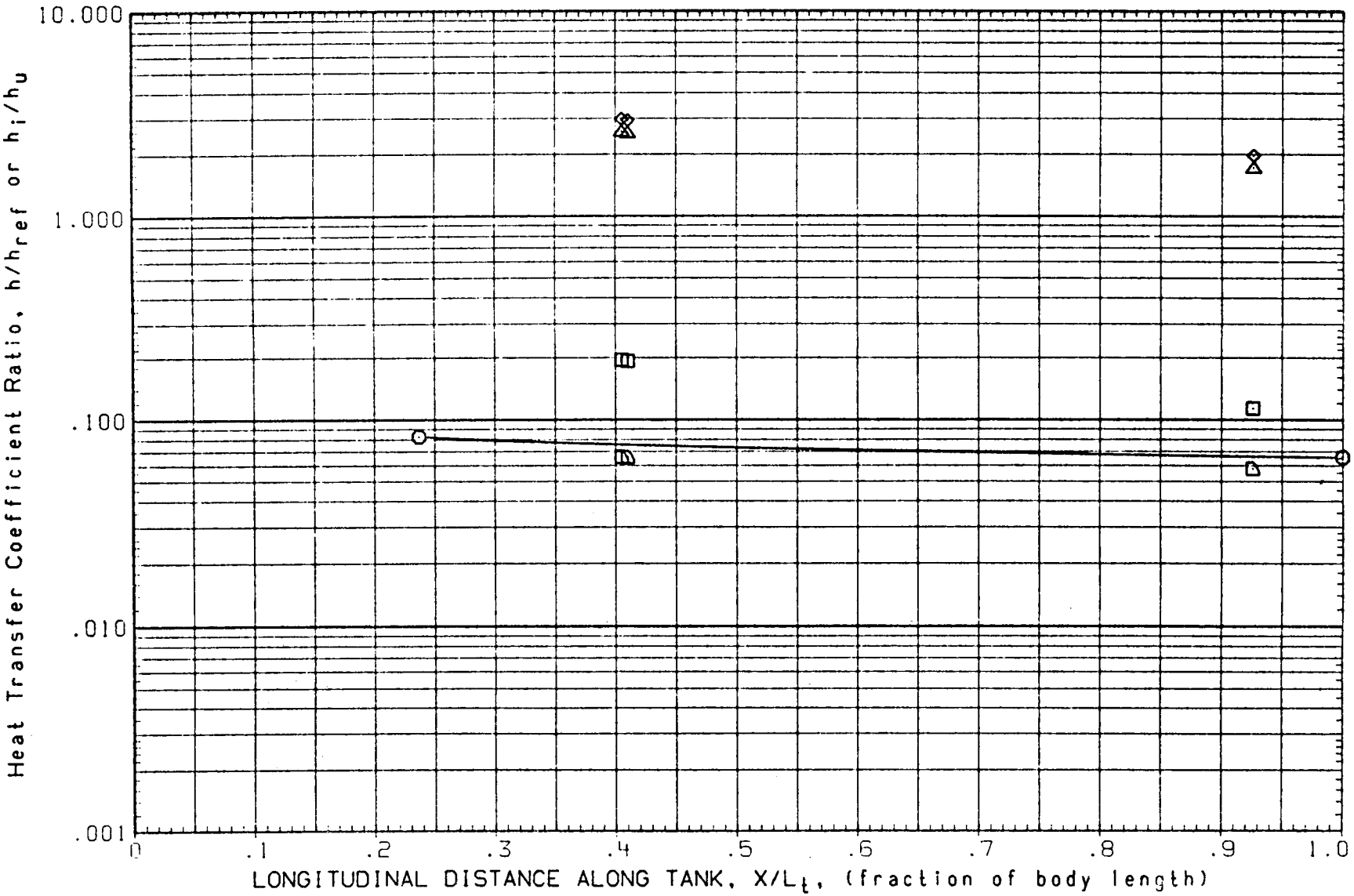

FIG. 4-12 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 324.450

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT23)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	3.000
(C9NT23)	⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	3.000
(V4LT44)	□	IH85, AEDC V41A-NS, CONFIGURATION 0 (T) S		4.020	-5.000	3.000
(X4LT44)	◇	IH85 (W.L. TEST) OTS/ET = V4LT44/C9NT23=	HI/HU	4.020	-5.000	3.000
(Y4LT44)	△	IH85 (W.L. THEORY) OTS/ET = V4LT44/A9NT23=	HI/HU	4.020	-5.000	3.000

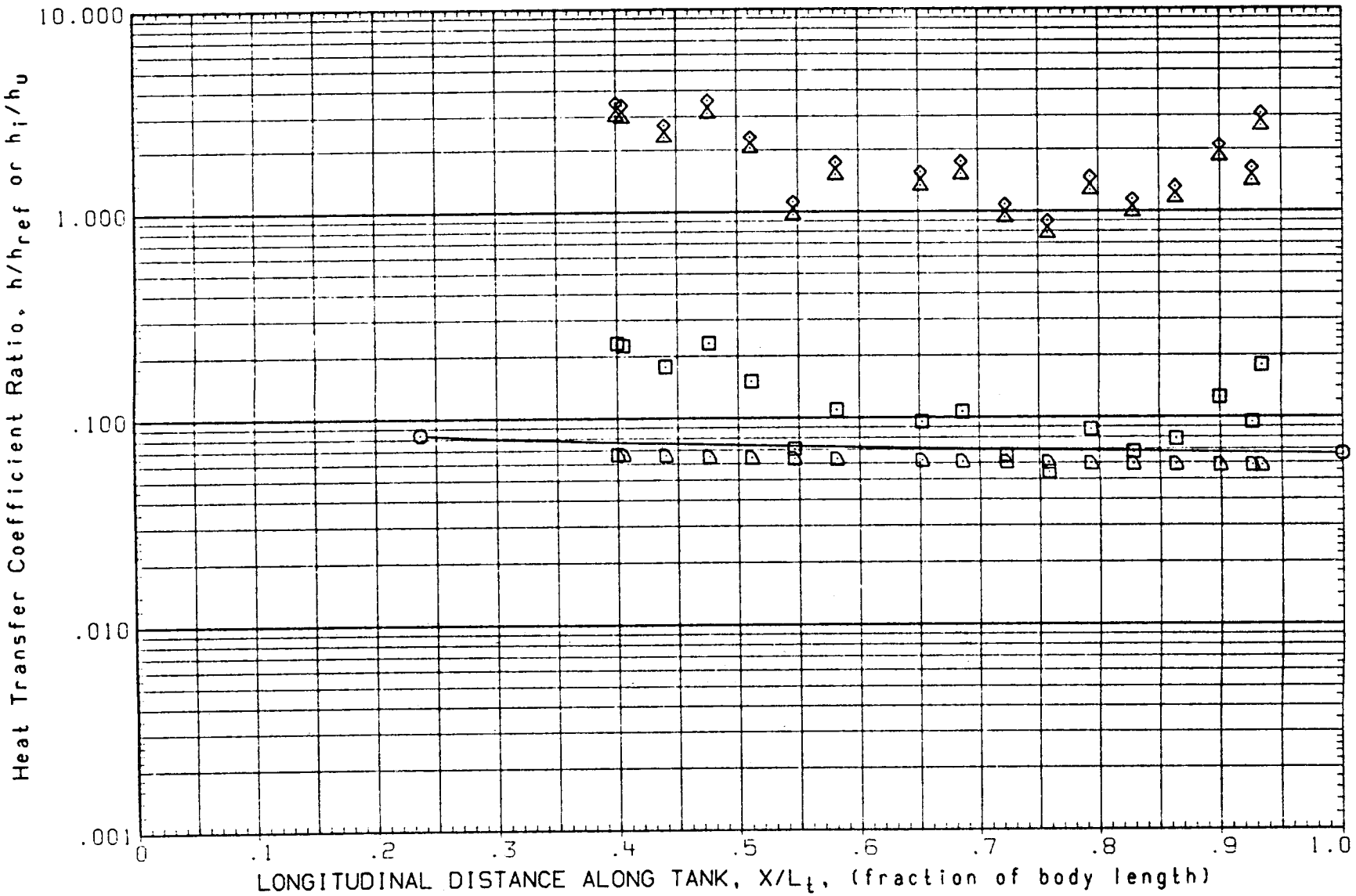

FIG. 4-12 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 326.850

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT23)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	3.000
(C9NT23)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	3.000
(V4LT44)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	3.000
(X4LT44)	◇	IH85 (W.L. TEST) OTS/ET = V4LT44/C9NT23=	HI/HU	4.020	-5.000	3.000
(Y4LT44)	△	IH85 (W.L. THEORY) OTS/ET = V4LT44/A9NT23=	HI/HU	4.020	-5.000	3.000

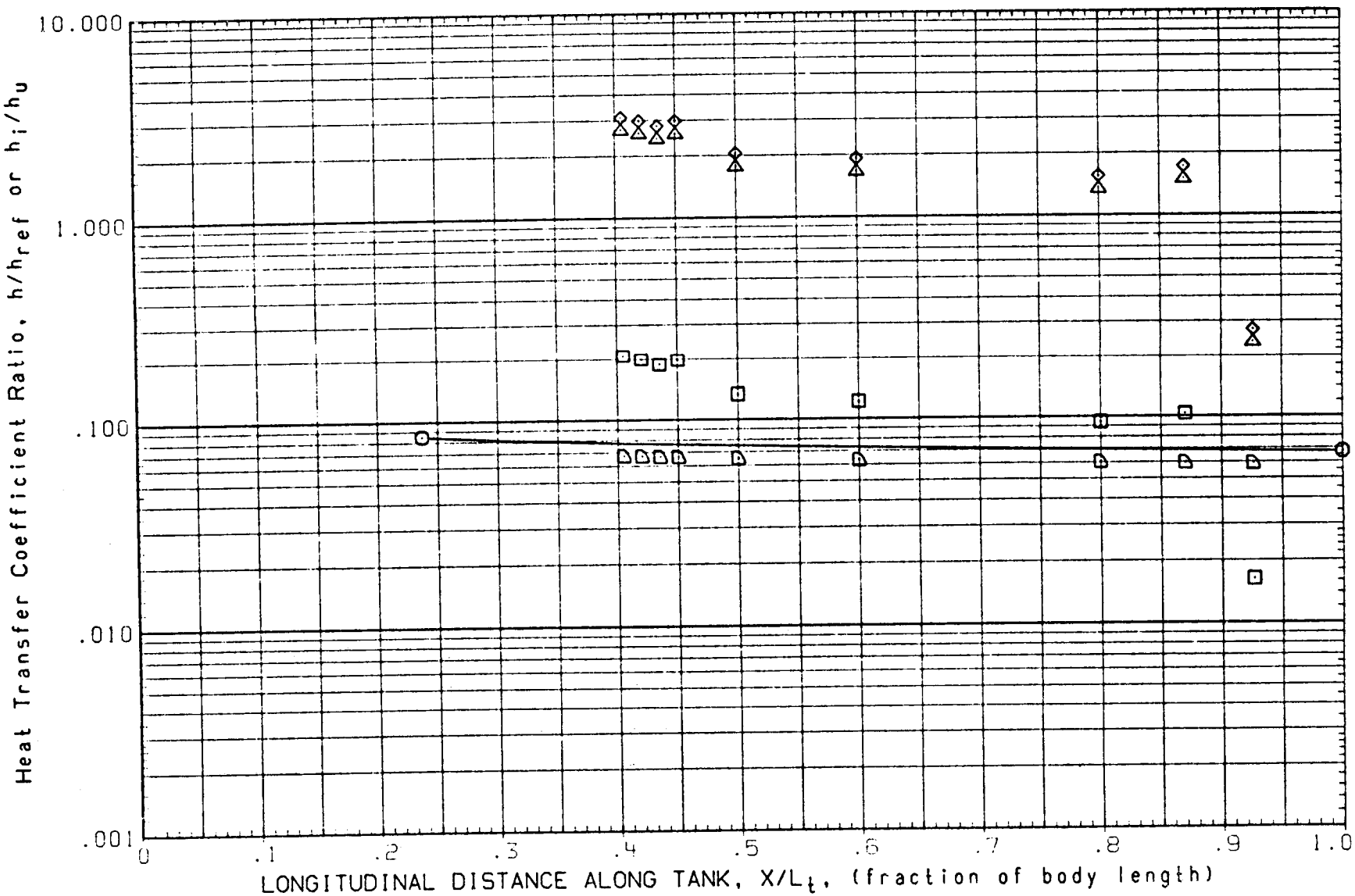

FIG. 4-12 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 330.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT23)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	3.000
(C9NT23)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	3.000
(V4LT44)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	3.000
(X4LT44)	◇	IH85 (W.L. TEST) OTS/ET = V4LT44/C9NT23= HI/HU		4.020	-5.000	3.000
(Y4LT44)	△	IH85 (W.L. THEORY) OTS/ET = V4LT44/A9NT23= HI/HU		4.020	-5.000	3.000

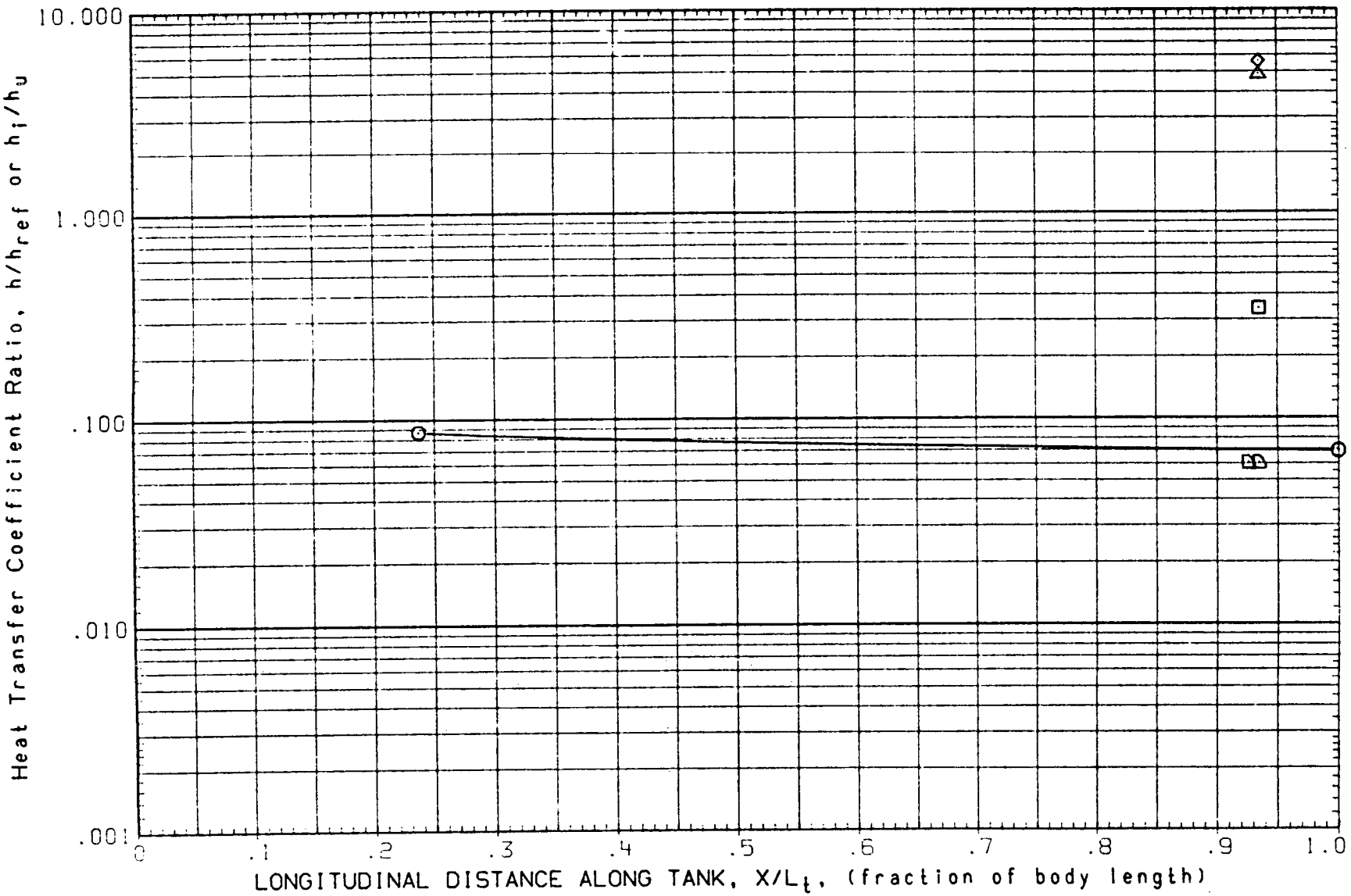

FIG. 4-12 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 334.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT23)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	3.000
(C9NT23)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	3.000
(V4LT44)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	3.000
(X4LT44)	◇	IH85 (W.L. TEST) OTS/ET = V4LT44/C9NT23= HI/HU		4.020	-5.000	3.000
(Y4LT44)	△	IH85 (W.L. THEORY) OTS/ET = V4LT44/A3NT23= HI/HU		4.020	-5.000	3.000

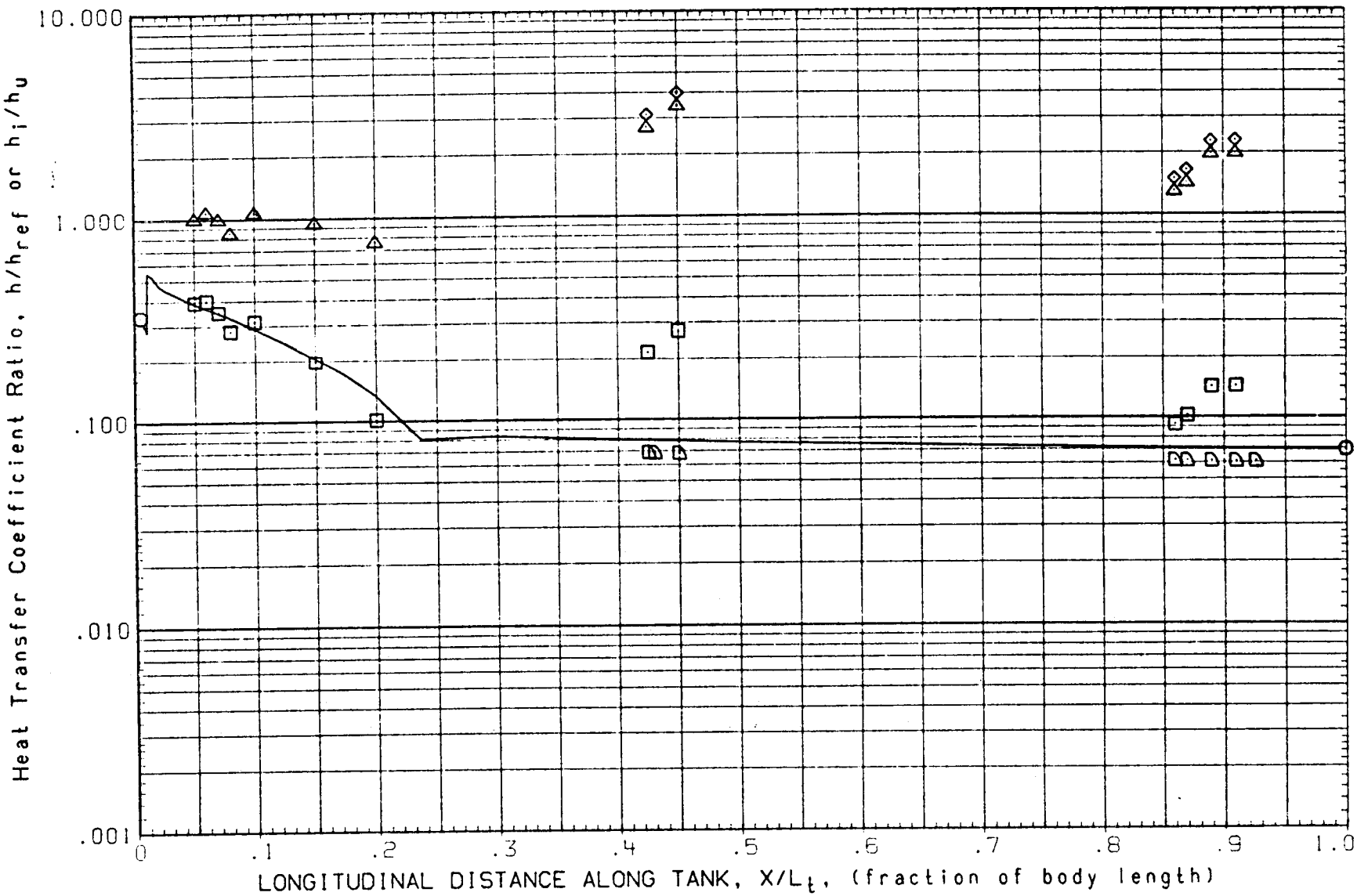

FIG. 4-12 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 337.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT23)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	3.000
(C9NT23)	◻	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	3.000
(V4LT44)	□	DATA NOT AVAILABLE		4.020	-5.000	3.000
(X4LT44)	◇	DATA NOT AVAILABLE		4.020	-5.000	3.000
(Y4LT44)	△	DATA NOT AVAILABLE		4.020	-5.000	3.000

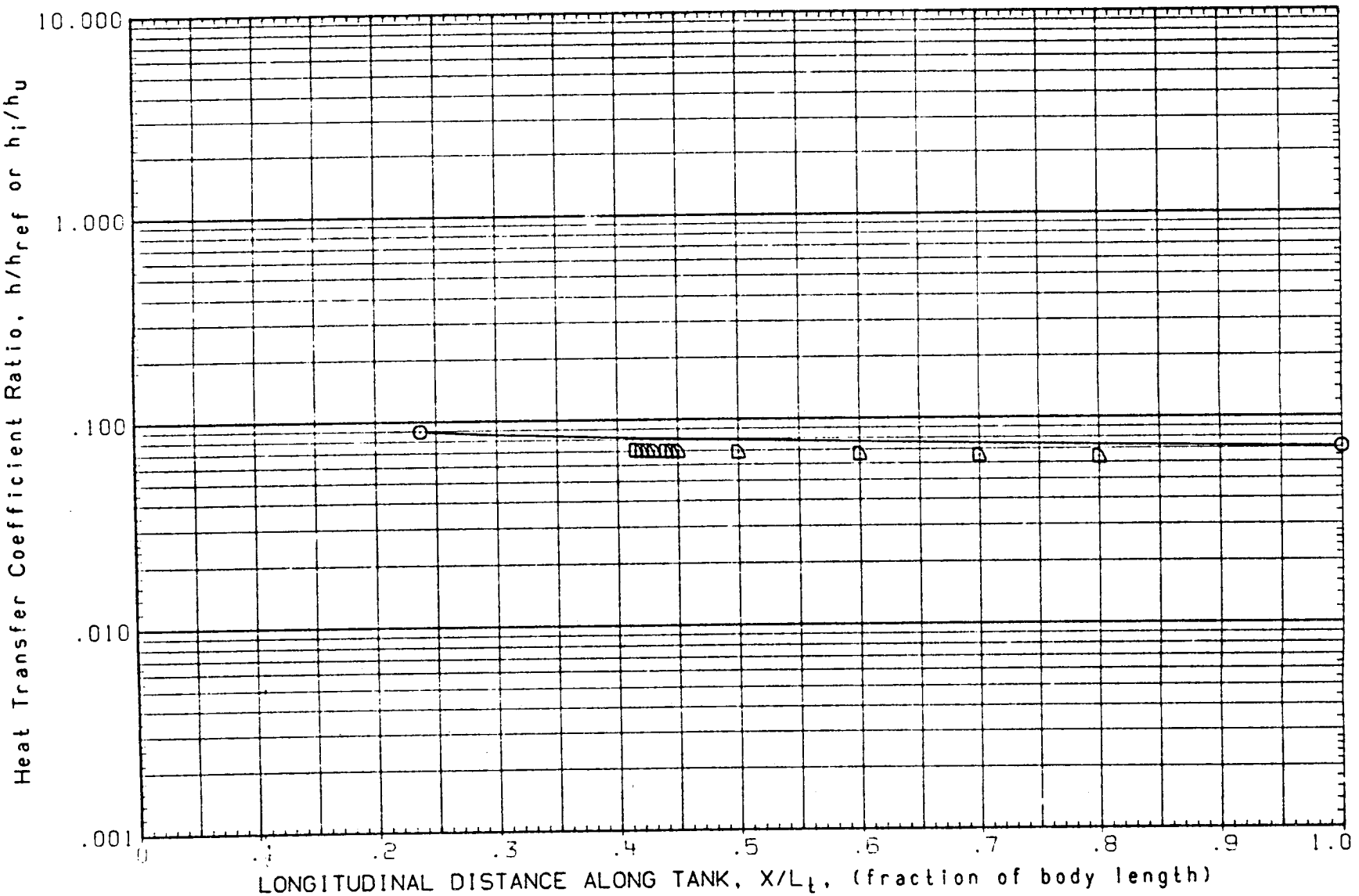

FIG. 4-12 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 343.120

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT23)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	3.000
(C9NT23)	⊏	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	3.000
(Y4LT44)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	3.000
(X4LT44)	◇	IH85 (W.L. TEST) OTS/ET = V4LT44/C9NT23=	HI/HU	4.020	-5.000	3.000
(Y4LT44)	△	IH85 (W.L. THEORY) OTS/ET = V4LT44/A9NT23=	HI/HU	4.020	-5.000	3.000

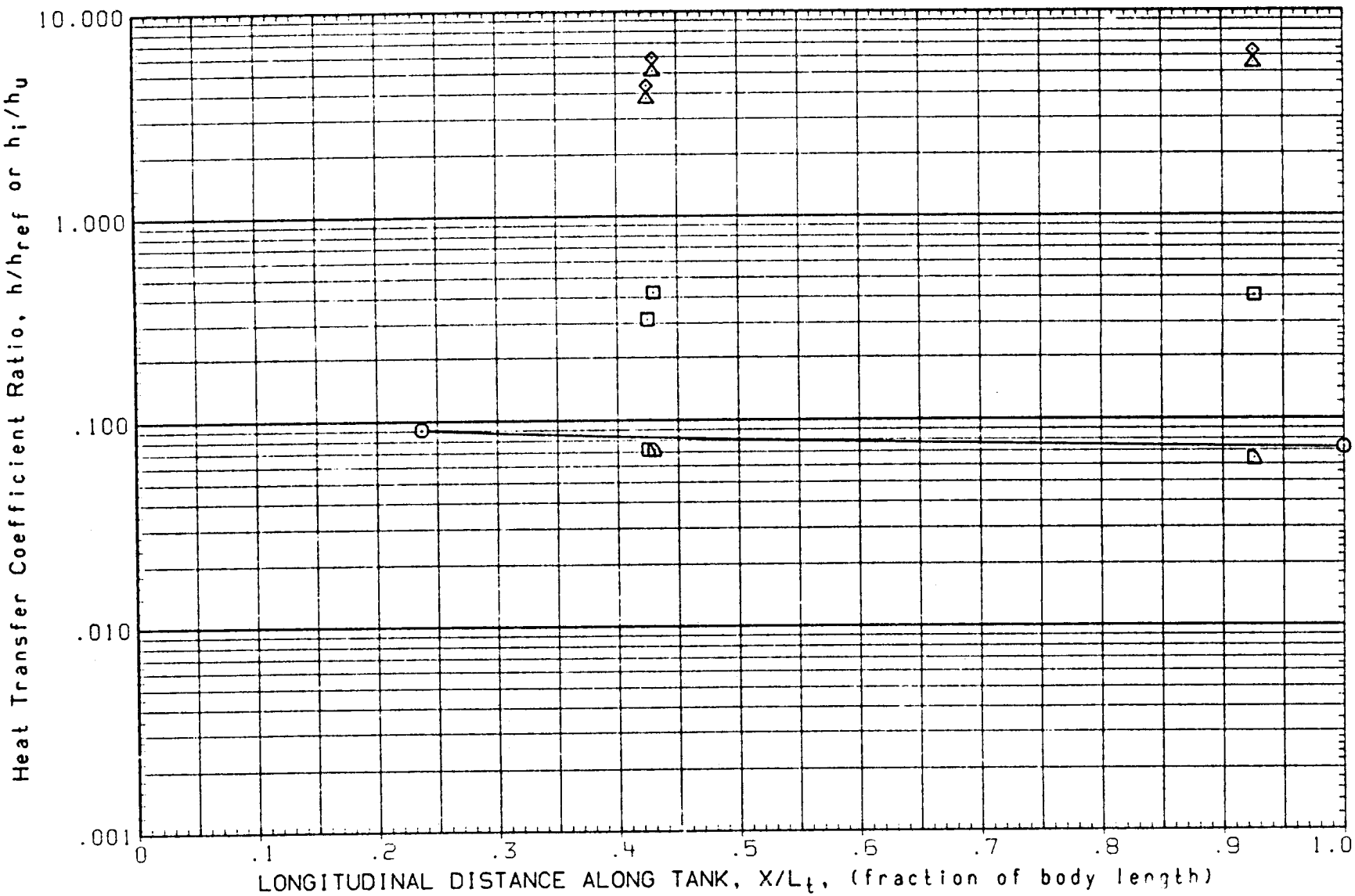

FIG. 4-12 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 345.560

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT23)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	3.000
(C9NT23)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	3.000
(V4LT44)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	3.000
(X4LT44)	◇	IH85 (W.L. TEST) OTS/ET = V4LT44/C9NT23=	HI/HU	4.020	-5.000	3.000
(Y4LT44)	△	IH85 (W.L. THEORY) OTS/ET = V4LT44/A9NT23=	HI/HU	4.020	-5.000	3.000

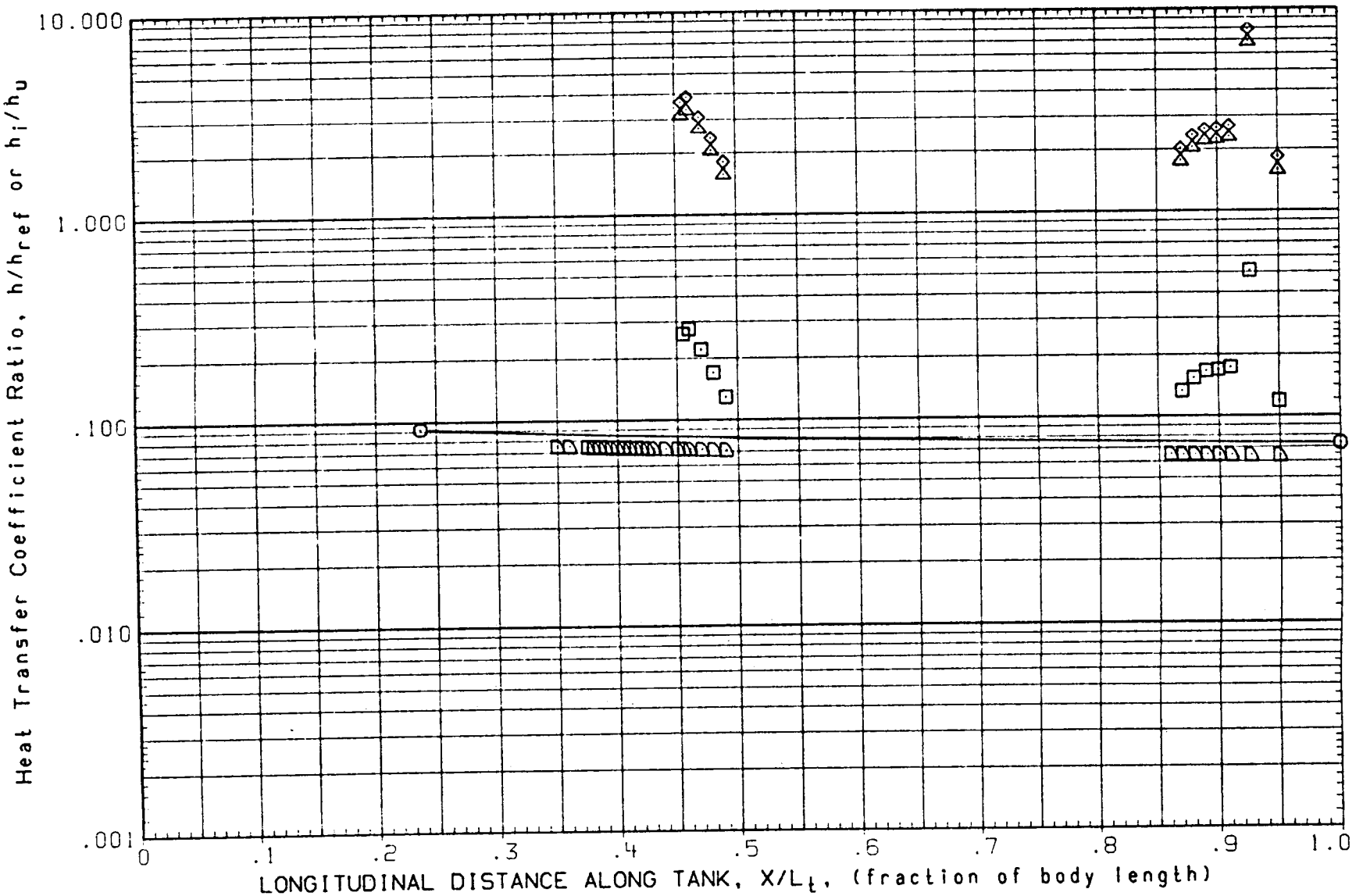

FIG. 4-12 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 348.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT23)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	3.000
(C9NT23)	△	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	3.000
(V4LT44)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	3.000
(X4LT44)	◇	IH85 (W.L. TEST) OTS/ET = V4LT44/C9NT23=	HI/HU	4.020	-5.000	3.000
(Y4LT44)	△	IH85 (W.L. THEORY) OTS/ET = V4LT44/A9NT23=	HI/HU	4.020	-5.000	3.000

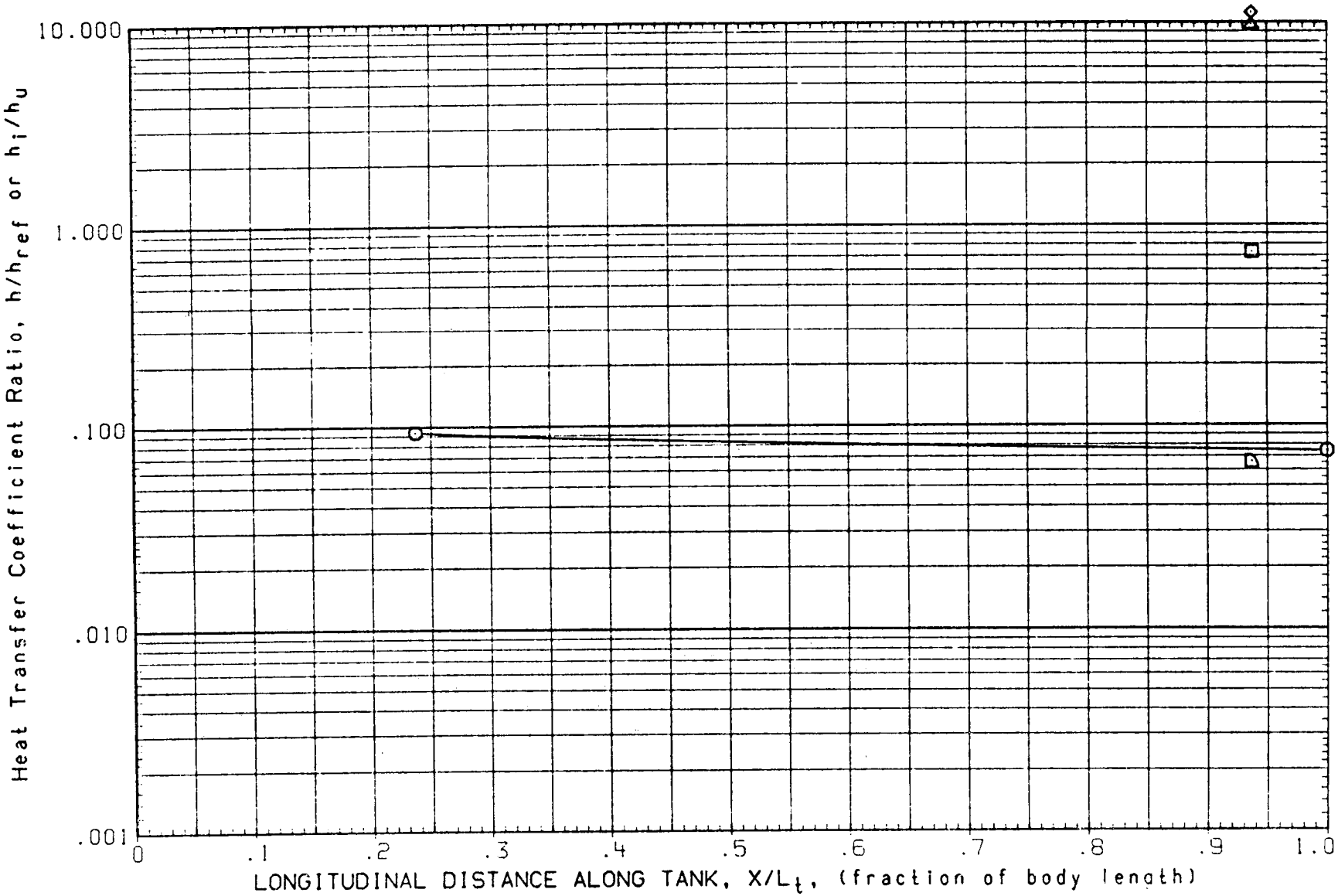

FIG. 4-12 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 352.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT23)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	3.000
(C9NT23)	□	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	3.000
(V4LT44)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	3.000
(X4LT44)	◇	IH85 (W.L. TEST) OTS/ET = V4LT44/C9NT23=	HI/HU	4.020	-5.000	3.000
(Y4LT44)	△	IH85 (W.L. THEORY) OTS/ET = V4LT44/A9NT23=	HI/HU	4.020	-5.000	3.000

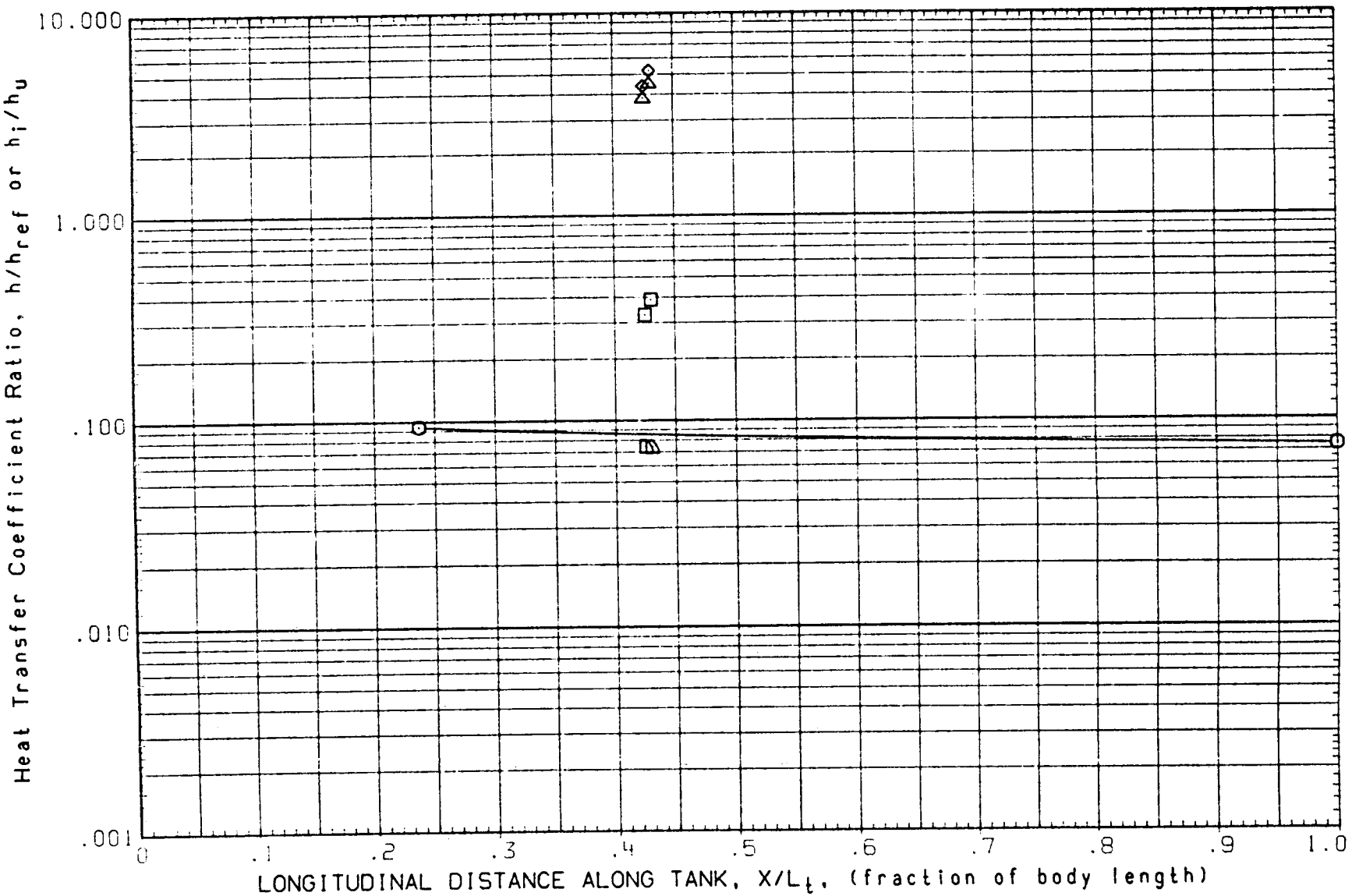

FIG. 4-12 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 354.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT23)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	3.000
(C9NT23)	⬠	DATA NOT AVAILABLE		4.020	-5.000	3.000
(V4LT44)	□	DATA NOT AVAILABLE		4.020	-5.000	3.000
(X4LT44)	◇	DATA NOT AVAILABLE		4.020	-5.000	3.000
(Y4LT44)	△	DATA NOT AVAILABLE		4.020	-5.000	3.000

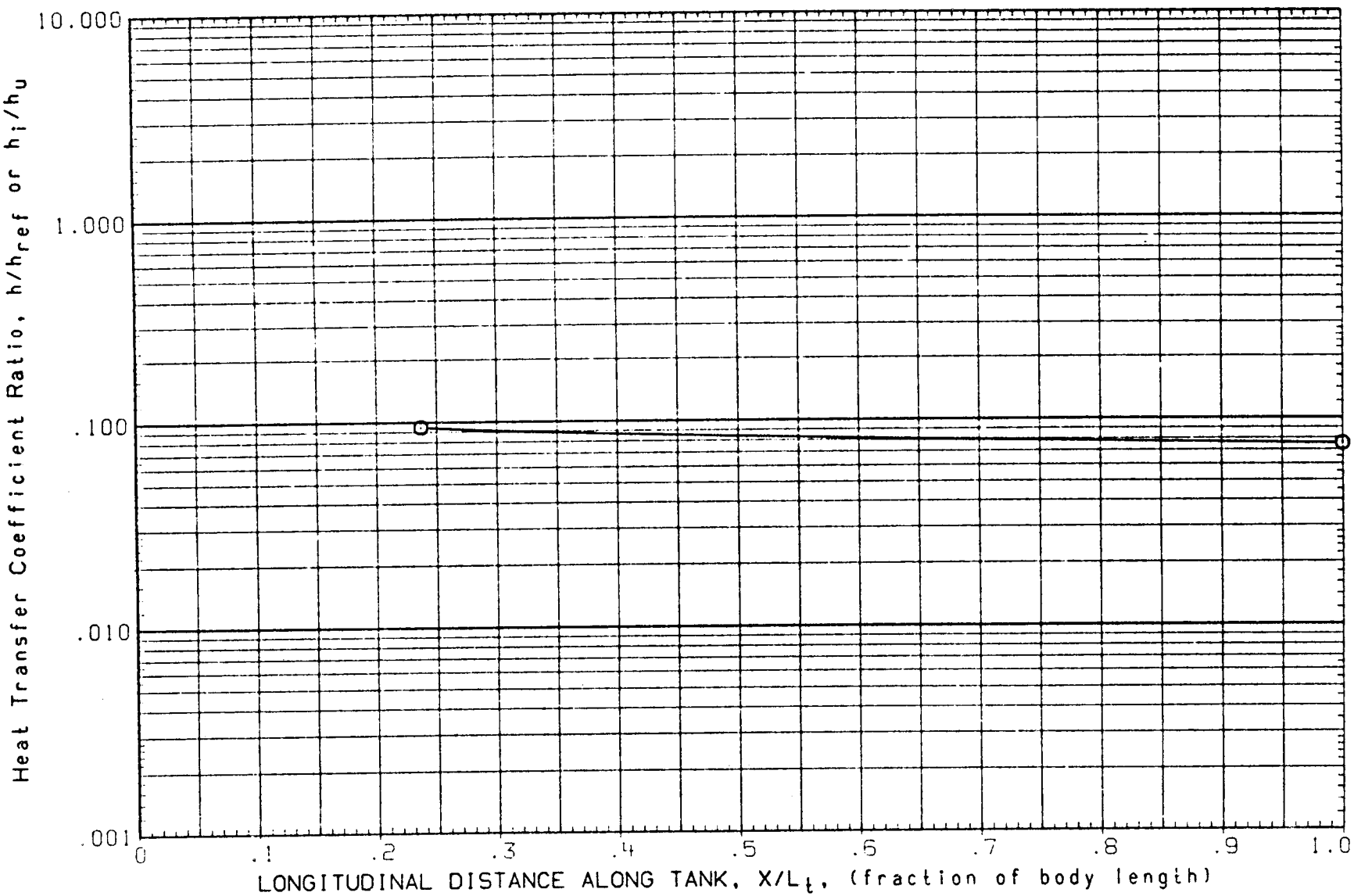

FIG. 4-12 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 355.160

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT23)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	3.000
(C9NT23)	□	DATA NOT AVAILABLE		4.020	-5.000	3.000
(V4LT44)	□	DATA NOT AVAILABLE		4.020	-5.000	3.000
(X4LT44)	◇	DATA NOT AVAILABLE		4.020	-5.000	3.000
(Y4LT44)	△	DATA NOT AVAILABLE		4.020	-5.000	3.000

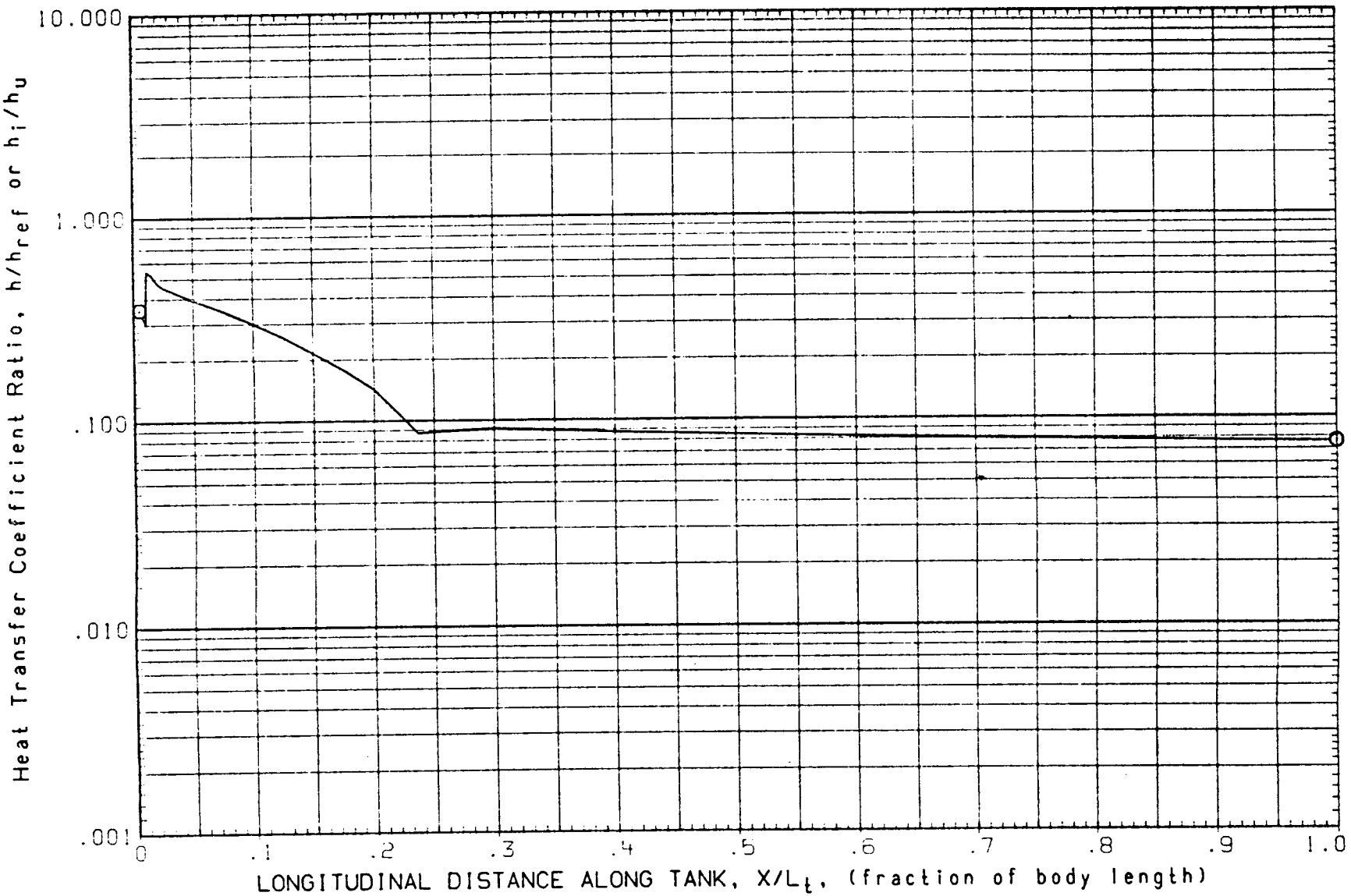

FIG. 4-12 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 360.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT24)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	4.500
(C9NT24)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	4.500
(V4LT45)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) 5		4.020	-5.000	4.500
(X4LT45)	◇	IH85 (W.L. TEST) OTS/ET = V4LT45/C9NT24= HI/HU		4.020	-5.000	4.500
(Y4LT45)	△	IH85 (W.L. THEORY) OTS/ET = V4LT45/A9NT24= HI/HU		4.020	-5.000	4.500

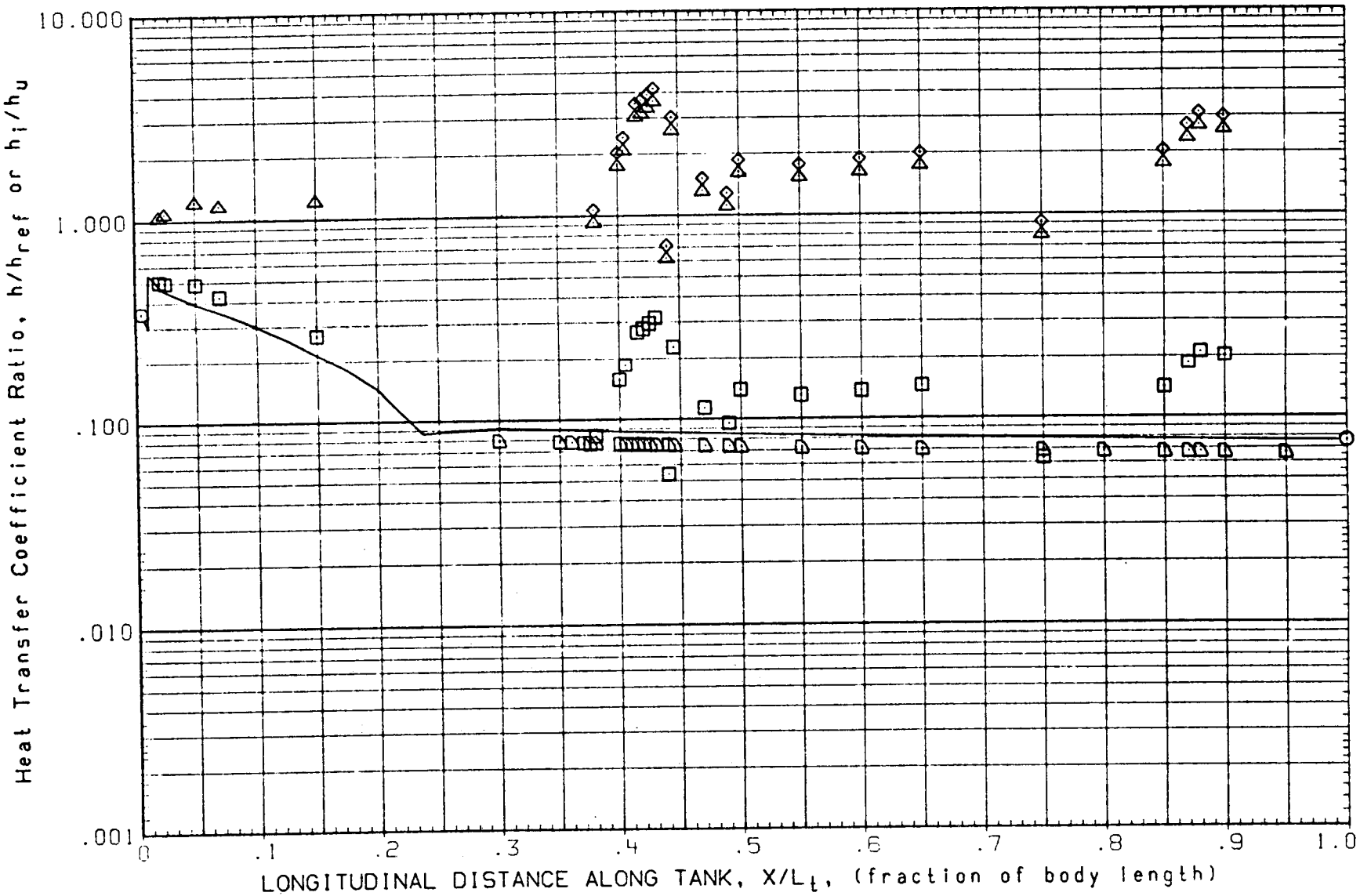

FIG. 4-13 LONG. DISTRIBUTION OF HEATING RATE ON THE ET -- ALPHA= -5, BETA= 4.5
0 < X/L < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = .000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT24)	○	DATA NOT AVAILABLE	4.020	-5.000	4.500
(C9NT24)	⬠	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	4.020	-5.000	4.500
(V4LT45)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	-5.000	4.500
(X4LT45)	◇	IH85 (W.L. TEST) OTS/ET = V4LT45/C9NT24= HI/HU	4.020	-5.000	4.500
(Y4LT45)	△	IH85 (W.L. THEORY) OTS/ET = V4LT45/A9NT24= HI/HU	4.020	-5.000	4.500

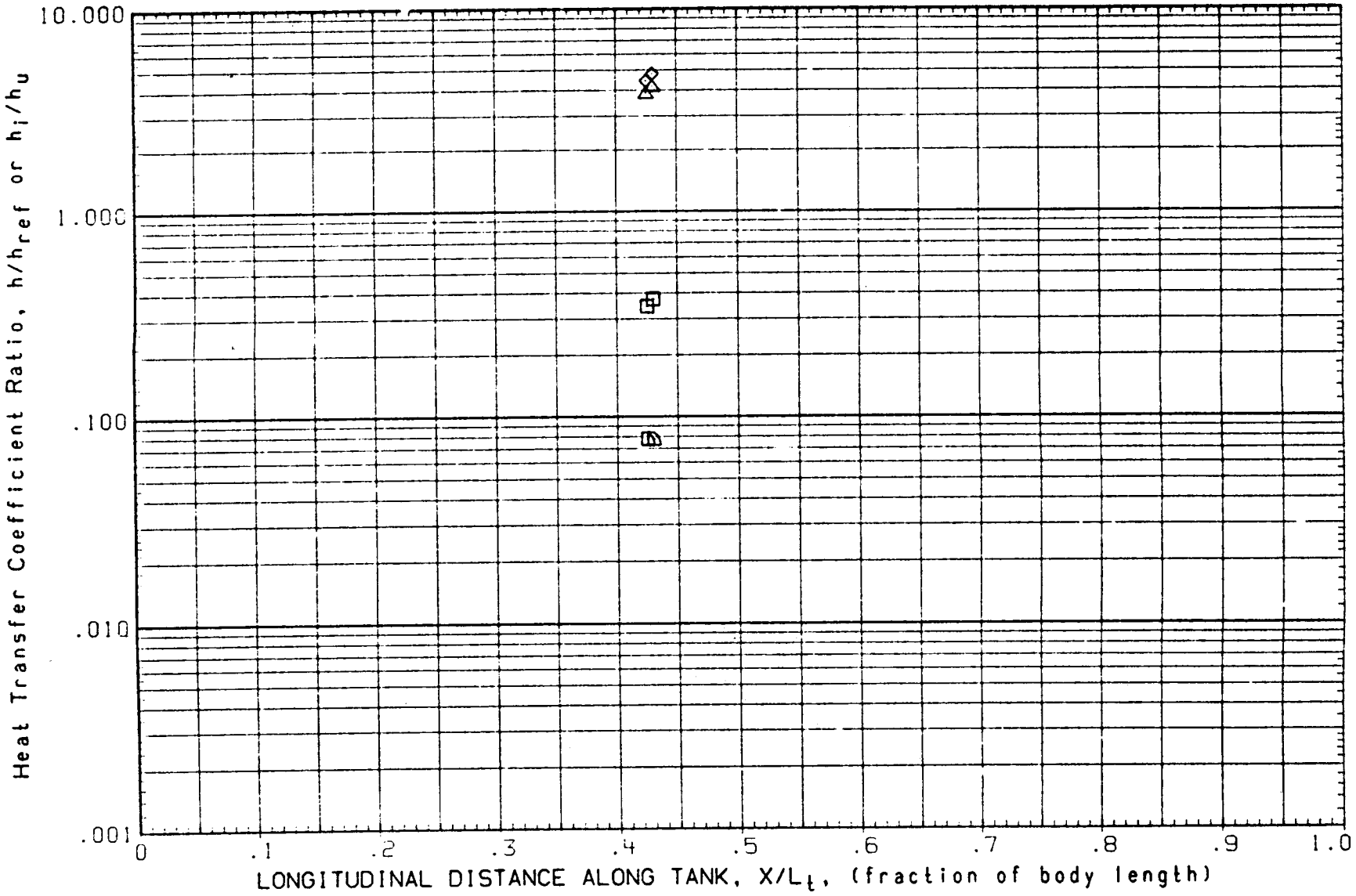

FIG. 4-13 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 5.625

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT24)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	4.500
(C9NT24)	◗	DATA NOT AVAILABLE		4.020	-5.000	4.500
(V4LT45)	□	DATA NOT AVAILABLE		4.020	-5.000	4.500
(X4LT45)	◇	DATA NOT AVAILABLE		4.020	-5.000	4.500
(Y4LT45)	△	DATA NOT AVAILABLE		4.020	-5.000	4.500

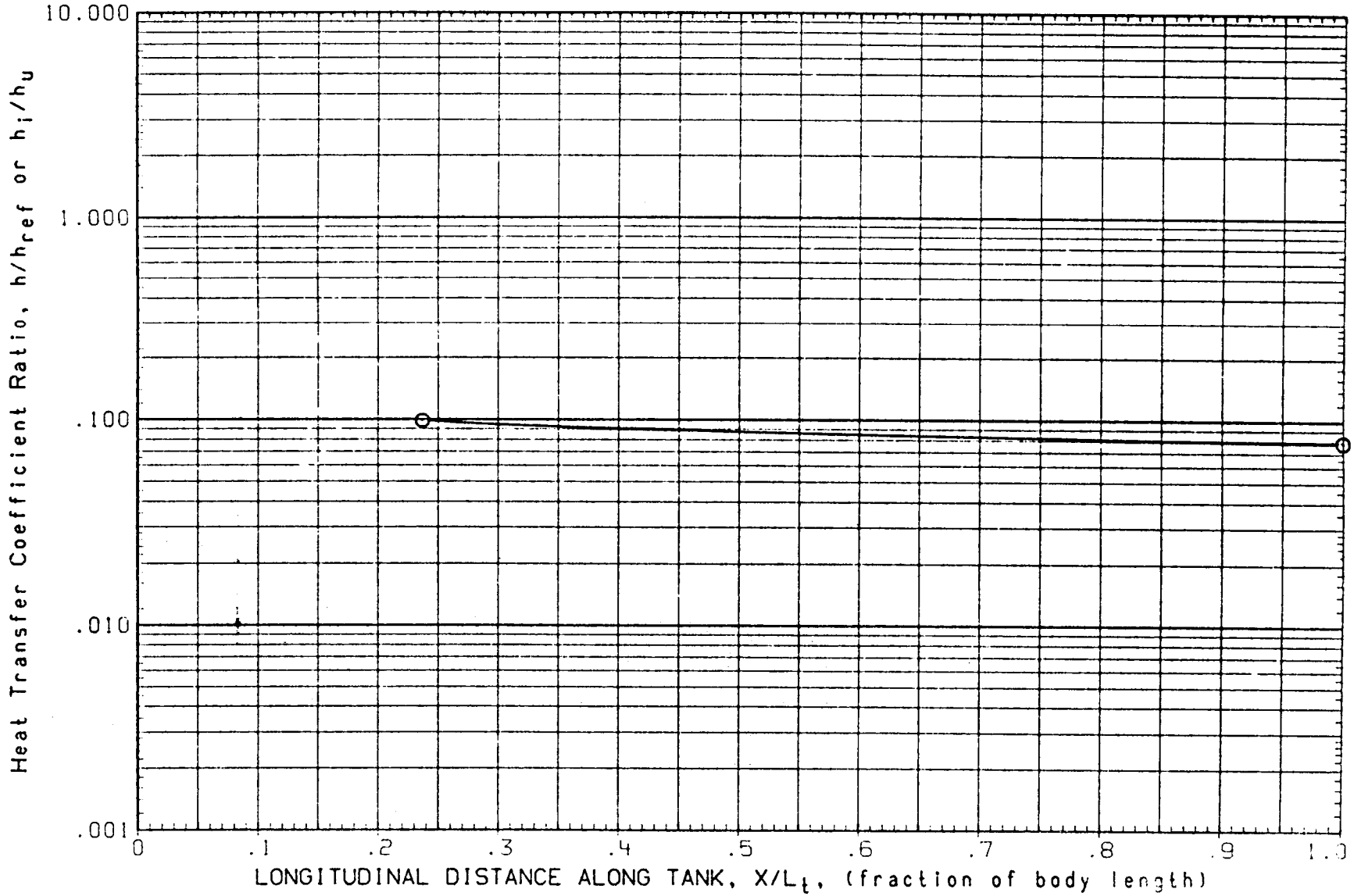

FIG. 4-13 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 5.630

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT24)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	4.500
(C9NT24)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	4.500
(V4LT45)	□	IH85, AEDC V4IA-W5, CONFIGURATION 0 (T) S		4.020	-5.000	4.500
(X4LT45)	◇	IH85 (W.L. TEST) OTS/ET = V4LT45/C9NT24=	HI/HU	4.020	-5.000	4.500
(Y4LT45)	△	IH85 (W.L. THEORY) OTS/ET = V4LT45/A9NT24=	HI/HU	4.020	-5.000	4.500

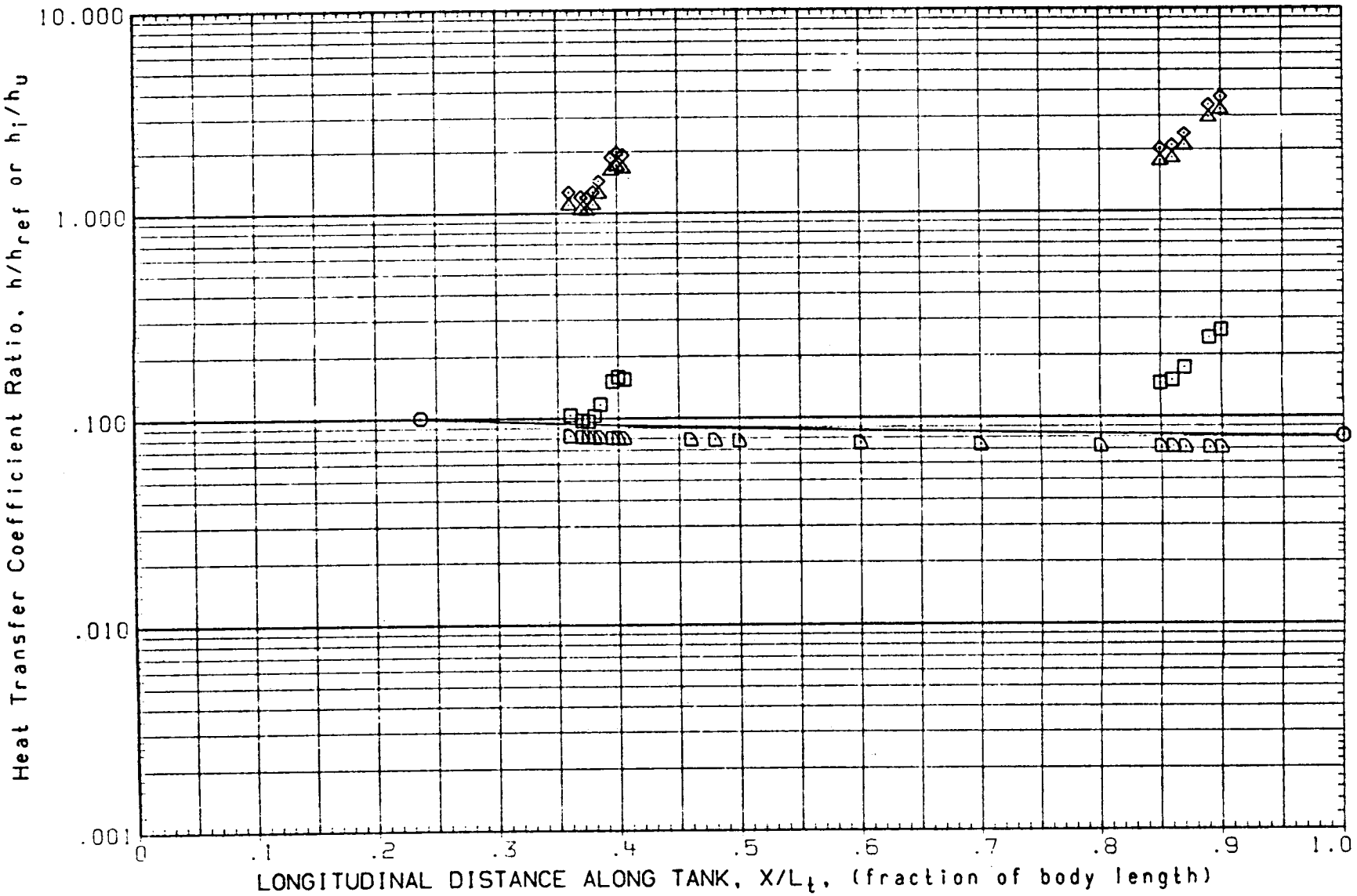

FIG. 4-13 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 11.250

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT24)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	4.500
(C9NT24)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	4.500
(V4LT45)	□	IH95, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	4.500
(X4LT45)	◇	IH95 (W.L. TEST) OTS/ET = V4LT45/C9NT24= HI/HU		4.020	-5.000	4.500
(Y4LT45)	△	IH65 (W.L. THEORY) OTS/ET = V4LT45/A9NT24= HI/HU		4.020	-5.000	4.500

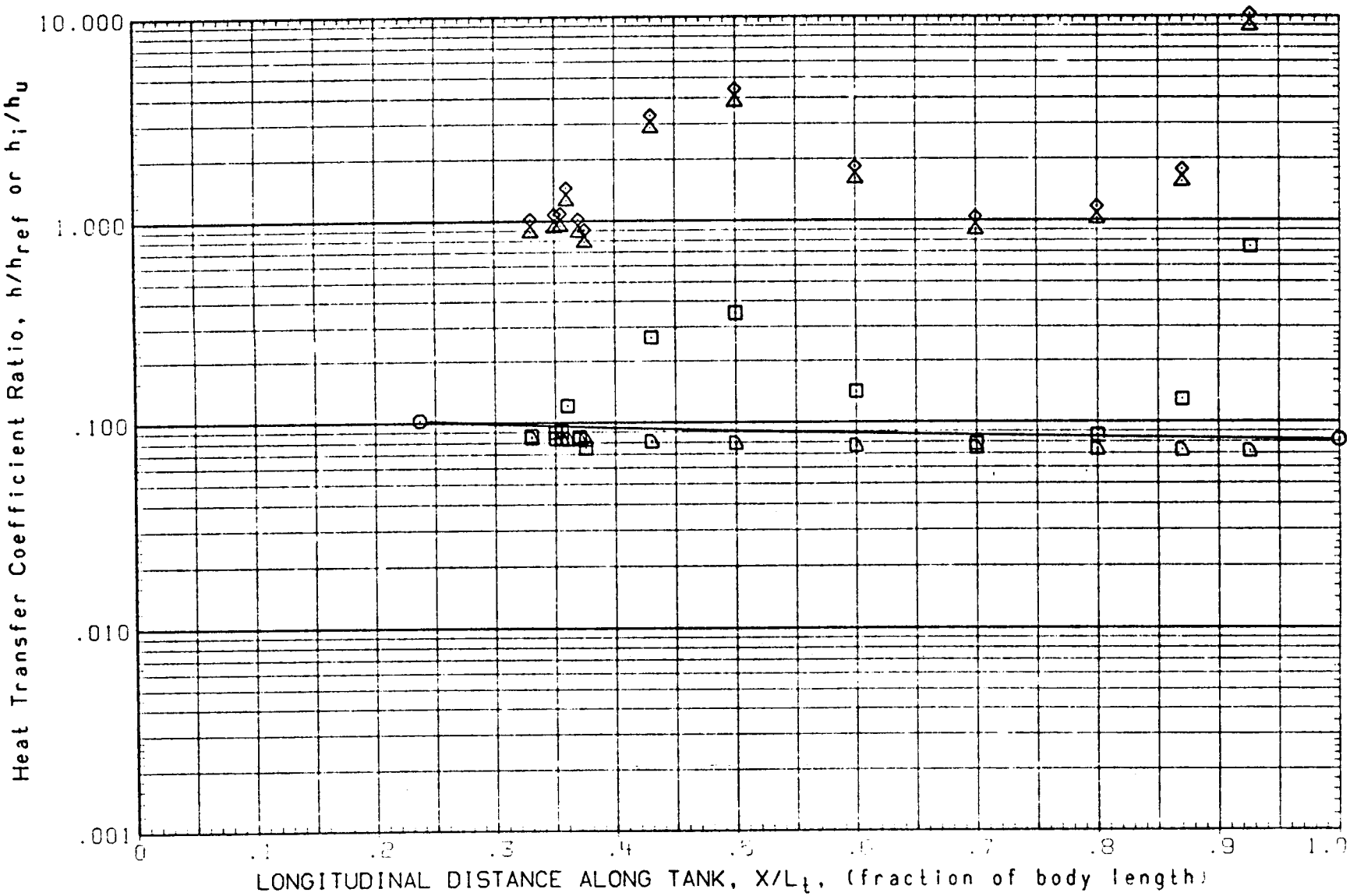

FIG. 4-13 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA -5.000 (RI) = 17.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(CONT24)	○	EXTERNAL TANK THEORY, N.S., TURBULENT	HU/HREF	4.020	-5.000	4.500
(CONT24)	◐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	4.500
(Y4LT45)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	4.500
(X-LT45)	◇	IH85 (N.S. TEST) OTS/ET - V4LT45/CONT24 HI HU		4.020	-5.000	4.500
(Y4LT45)	△	IH85 (W.L. THEORY) OTS/ET = V4LT45/AGNT24= HI/HU		4.020	-5.000	4.500

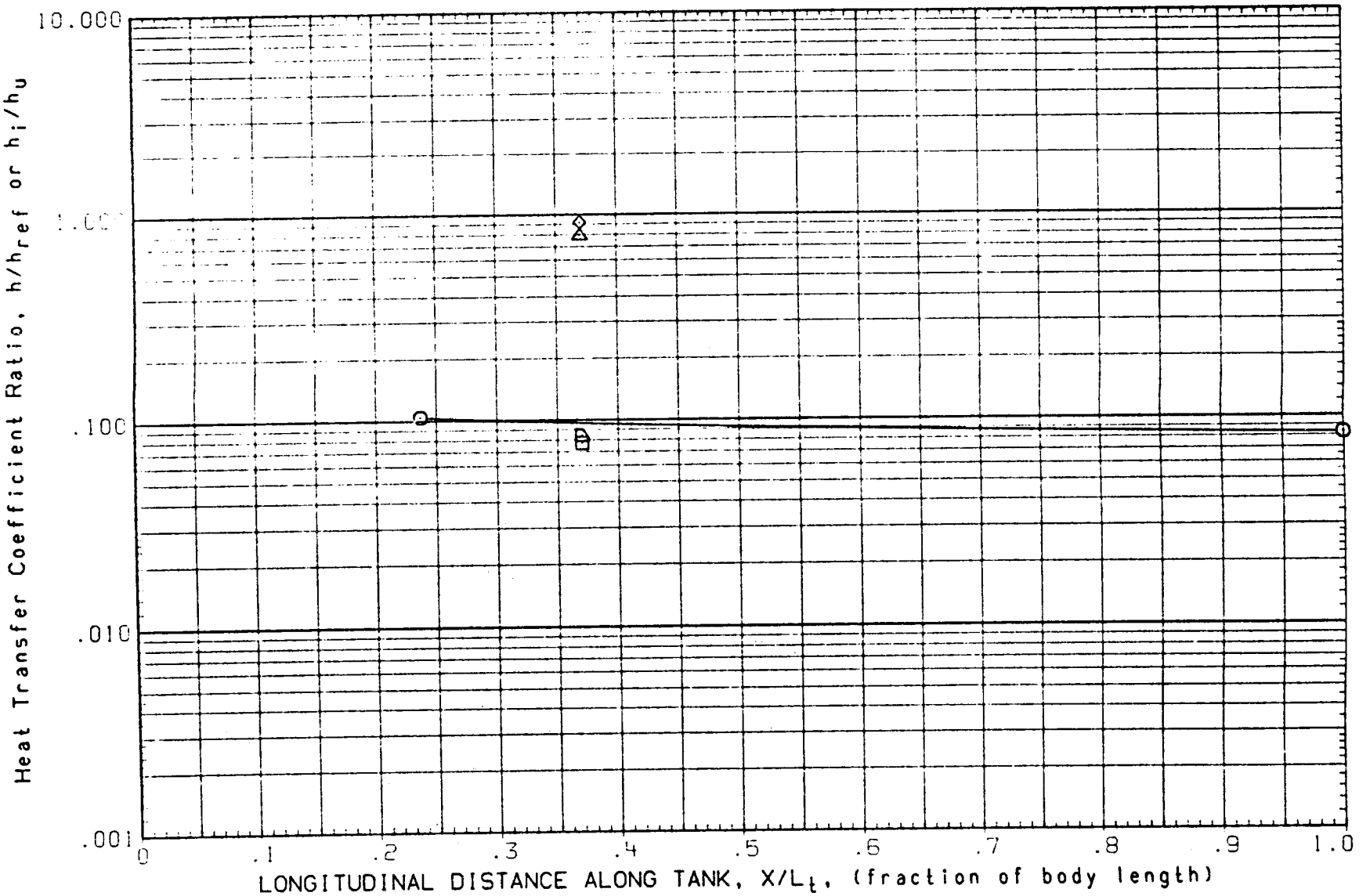

FIG. 4-13 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 20.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT24)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	4.500
(C9NT24)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	4.500
(V4LT45)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	4.500
(X4LT45)	◇	IH85 (W.L. TEST) OTS/ET = V4LT45/C9NT24=	HI/HU	4.020	-5.000	4.500
(Y4LT45)	△	IH85 (W.L. THEORY) OTS/ET = V4LT45/A9NT24=	HI/HU	4.020	-5.000	4.500

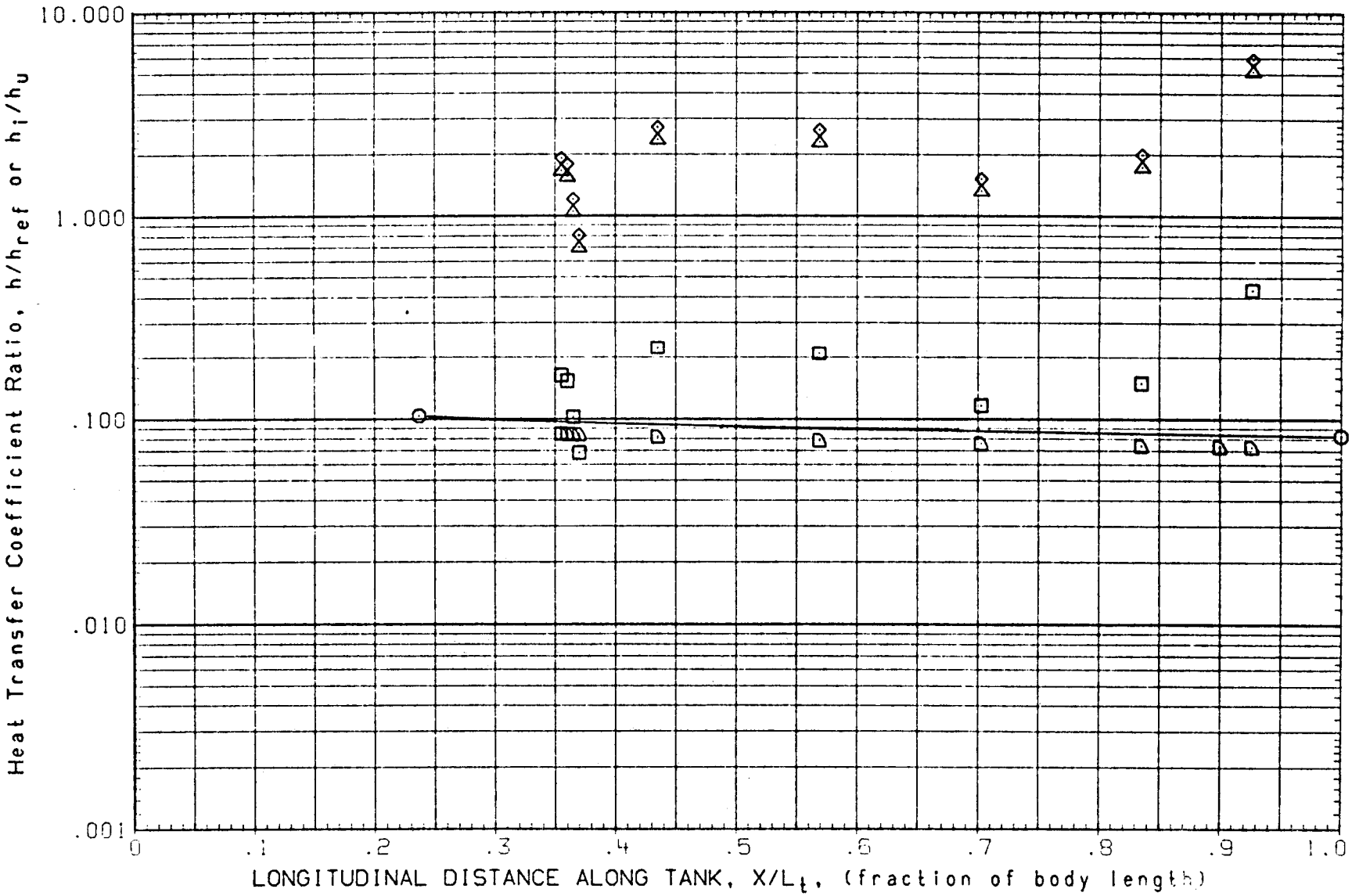

FIG. 4-13 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 23.070

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT24)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	4.500
(C9NT24)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	4.500
(V4LT45)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	4.500
(X4LT45)	◇	IH85 (W.L. TEST) OTS/ET = V4LT45/C9NT24=	HI/HU	4.020	-5.000	4.500
(Y4LT45)	△	IH85 (W.L. THEORY) OTS/ET = V4LT45/A9NT24=	HI/HU	4.020	-5.000	4.500

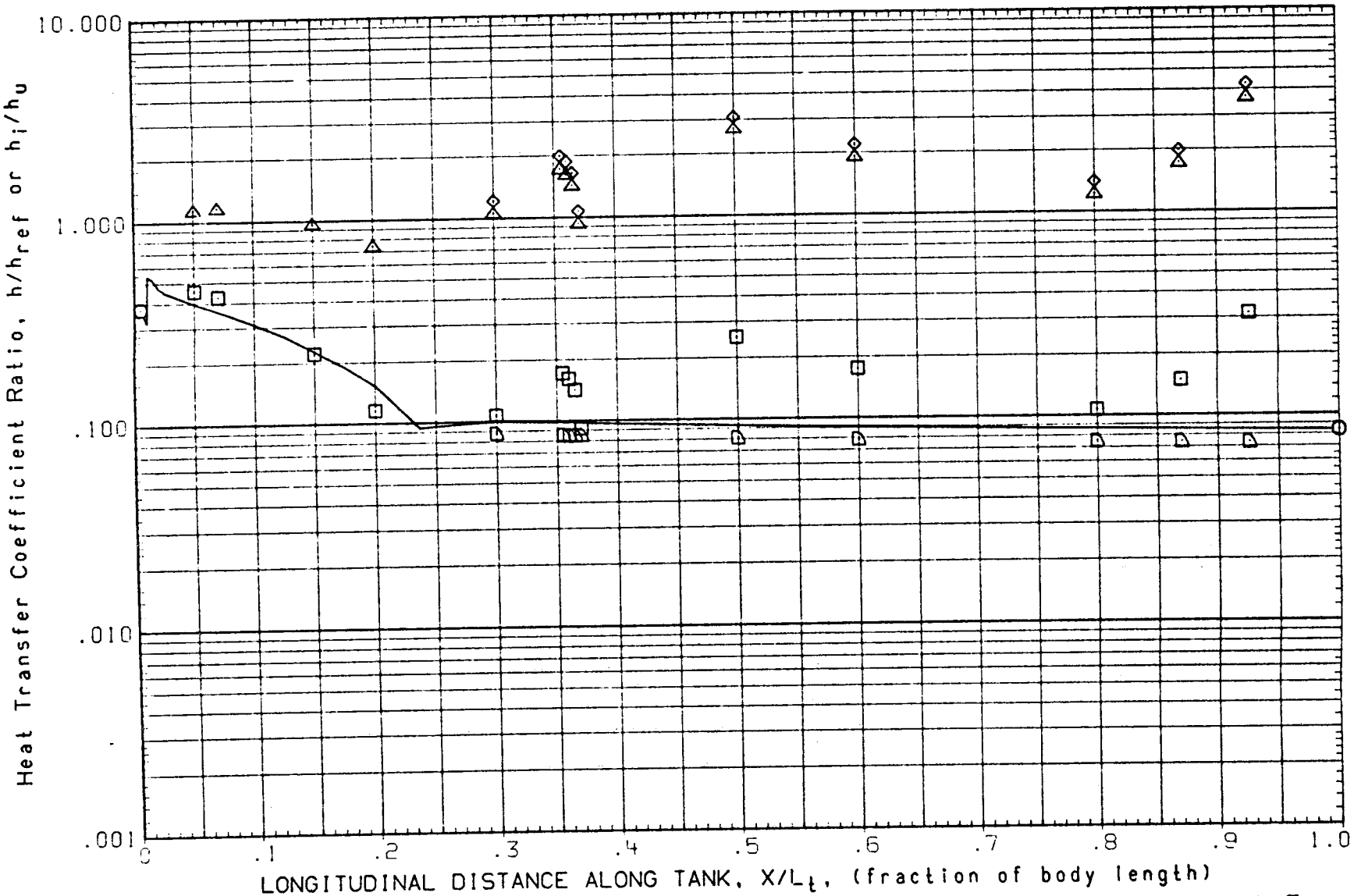

FIG. 4-13 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 29.800

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT24)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	4.500
(C9NT24)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	4.500
(V4LT45)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) 5		4.020	-5.000	4.500
(X4LT45)	◇	IH85 (W.L. TEST) OTS/ET = V4LT45/C9NT24= HI/HU		4.020	-5.000	4.500
(Y4LT45)	△	IH85 (W.L. THEORY) OTS/ET = V4LT45/A9NT24= HI/HU		4.020	-5.000	4.500

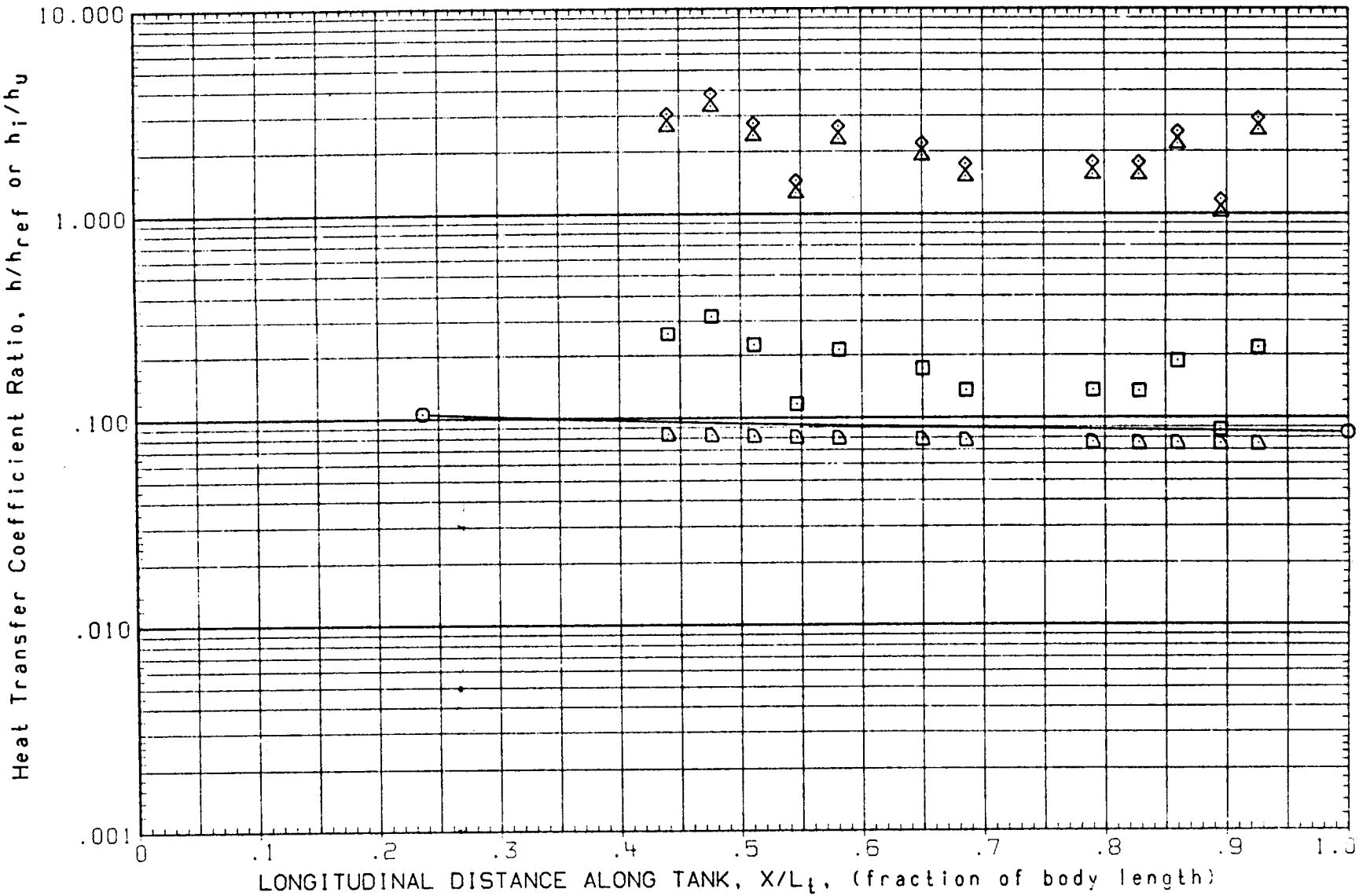

FIG. 4-13 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 31.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT24)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	4.500
(C9NT24)	⊿	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	4.500
(V4LT45)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	4.500
(X4LT45)	◇	IH85 (W.L. TEST) OTS/ET = V4LT45/C9NT24=	HI/HU	4.020	-5.000	4.500
(Y4LT45)	△	IH85 (W.L. THEORY) OTS/ET = V4LT45/A9NT24=	HI/HU	4.020	-5.000	4.500

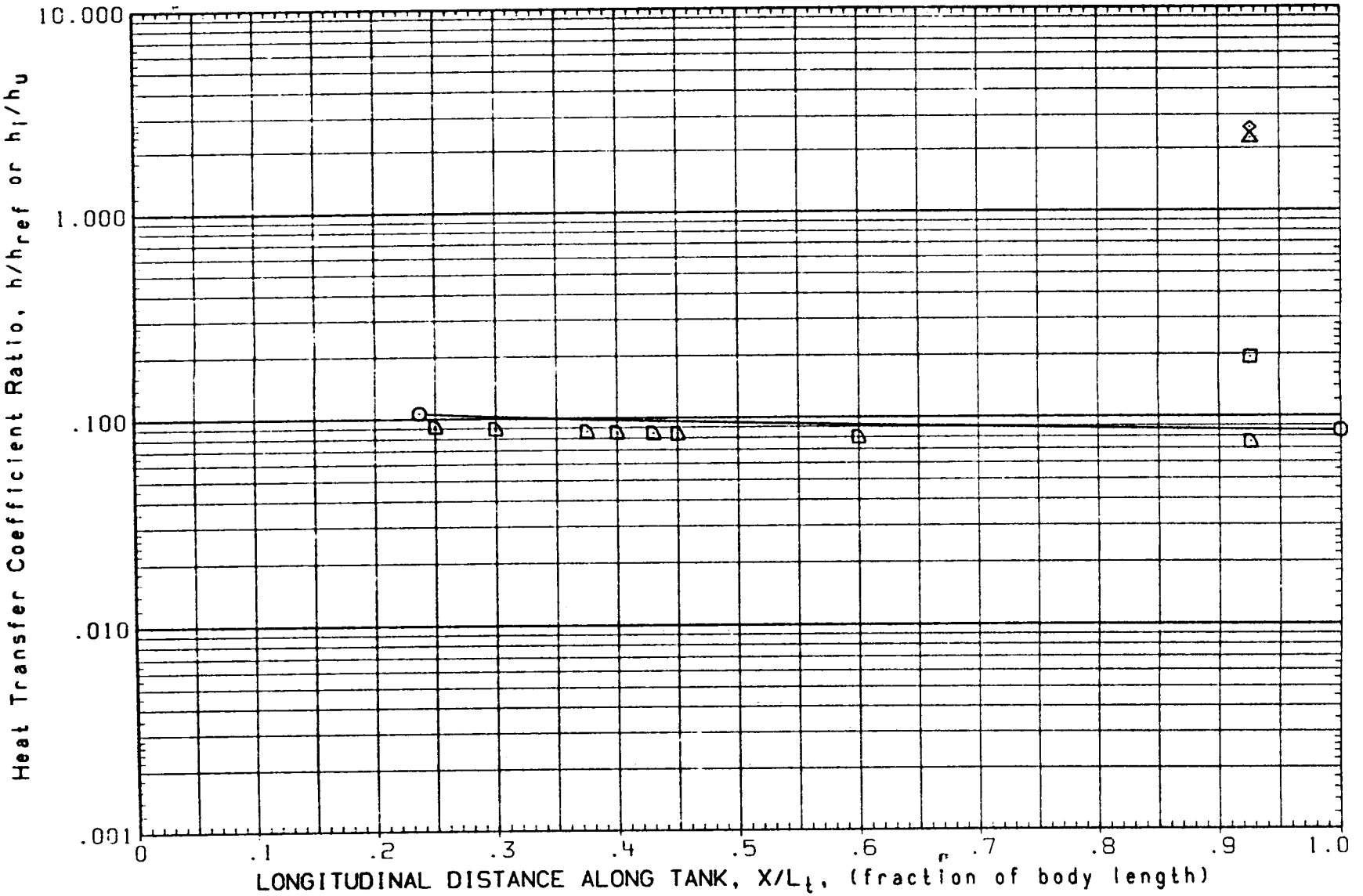

FIG. 4-13 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 33.750

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT24)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	4.020	-5.000	4.500
(C9NT24)	⌂	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	4.020	-5.000	4.500
(V4LT45)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	-5.000	4.500
(X4LT45)	◇	IH85 (W.L. TEST) OTS/ET = V4LT45/C9NT24= HI/HU	4.020	-5.000	4.500
(Y4LT45)	△	IH85 (W.L. THEORY) OTS/ET = V4LT45/A9NT24= HI/HU	4.020	-5.000	4.500

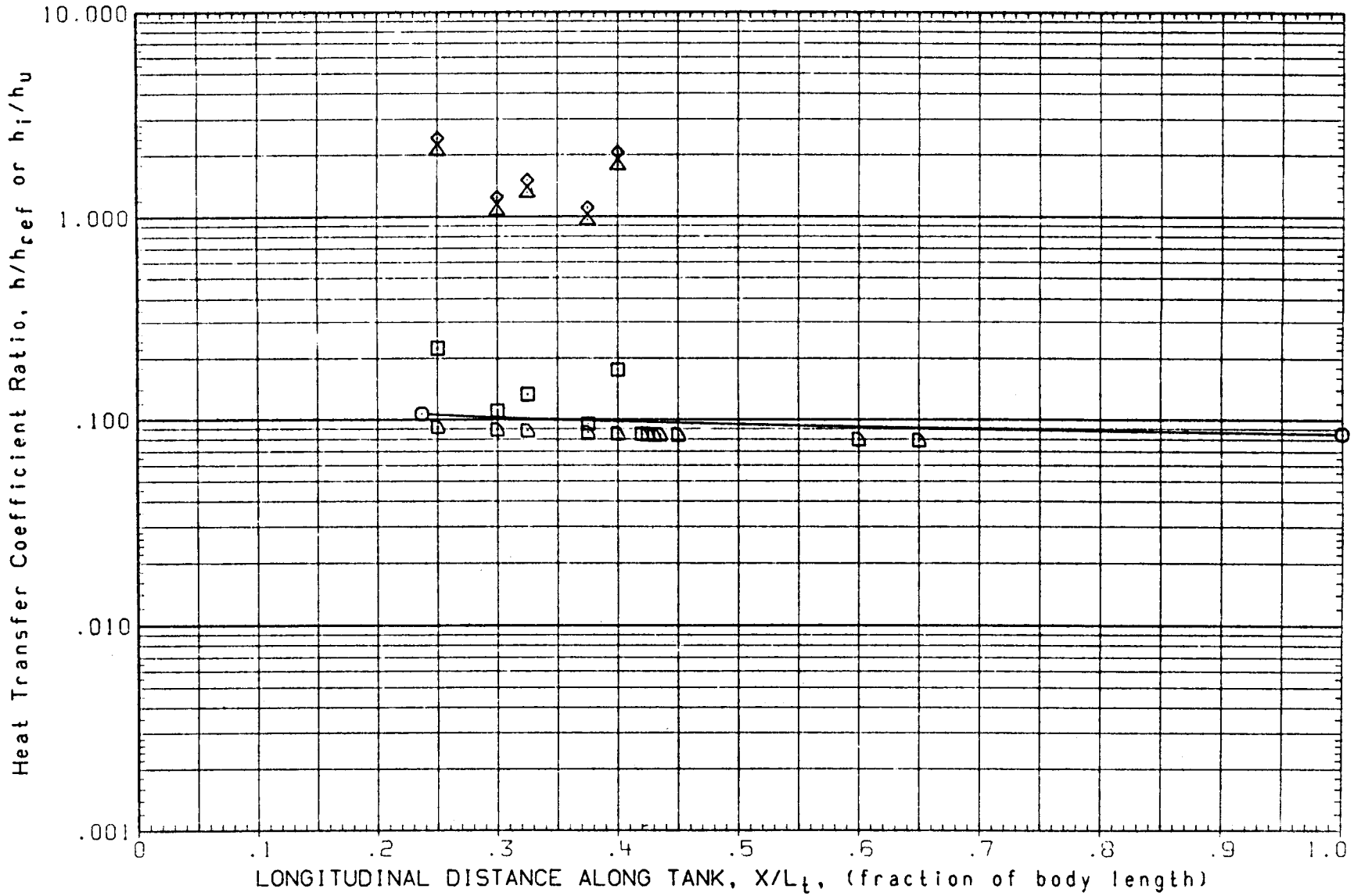

FIG. 4-13 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 36.320

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT24)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	4.500
(C9NT24)	▷	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	4.500
(V4LT45)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	4.500
(X4LT45)	◇	IH85 (W.L. TEST) OTS/ET = V4LT45/C9NT24= HI/HU		4.020	-5.000	4.500
(Y4LT45)	△	IH85 (W.L. THEORY) OTS/ET = V4LT45/A9NT24= HI/HU		4.020	-5.000	4.500

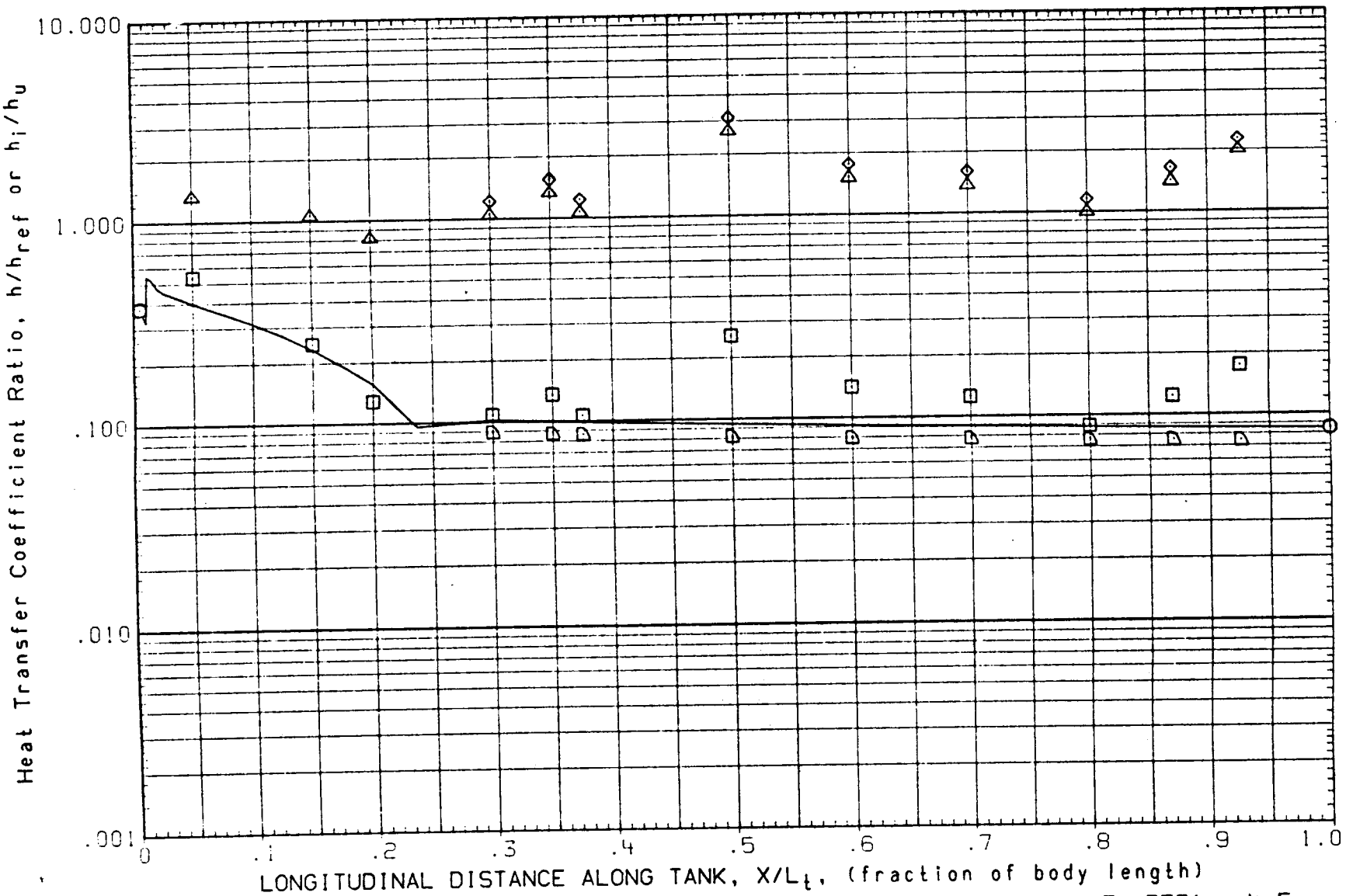

FIG. 4-13 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 37.700

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT24)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	4.500
(C9NT24)	□	DATA NOT AVAILABLE		4.020	-5.000	4.500
(Y4LT45)	⊟	DATA NOT AVAILABLE		4.020	-5.000	4.500
(X4LT45)	◇	DATA NOT AVAILABLE		4.020	-5.000	4.500
(Y4LT45)	△	DATA NOT AVAILABLE		4.020	-5.000	4.500

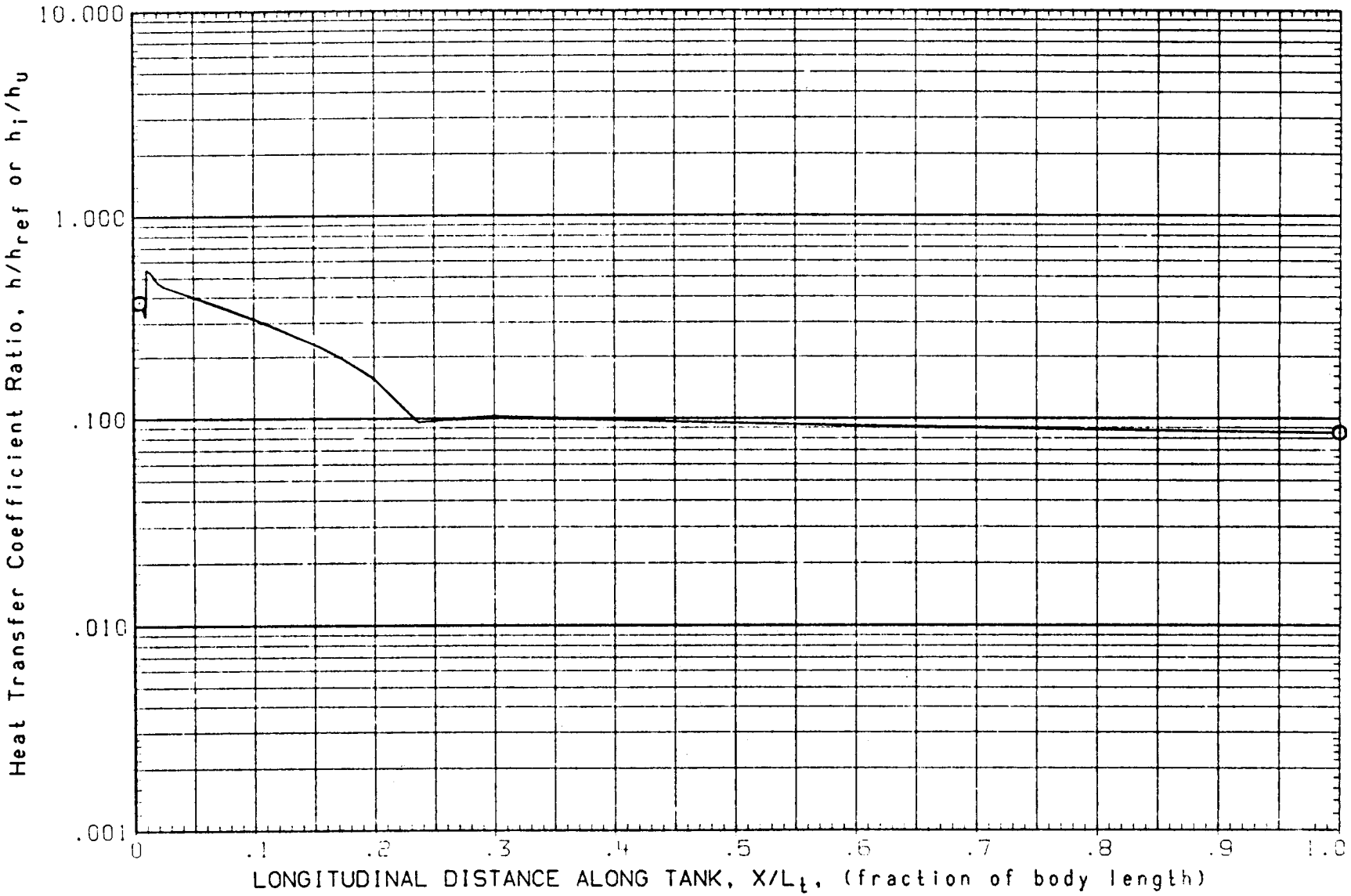

FIG. 4-13 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 39.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(C9NT24)	○	EXTERNAL TANK THEORY, N.S., TURBULENT	HU/HREF	4.020	-5.000	4.500
(C9NT24)	□	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	4.500
(V4LT45)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	4.500
(X4LT45)	◇	IH85 (W.L. TEST) OTS/ET = V4LT45/C9NT24= HI/HU		4.020	-5.000	4.500
(Y4LT45)	△	IH85 (W.L. THEORY) OTS/ET = V4LT45/A9NT24= HI/HU		4.020	-5.000	4.500

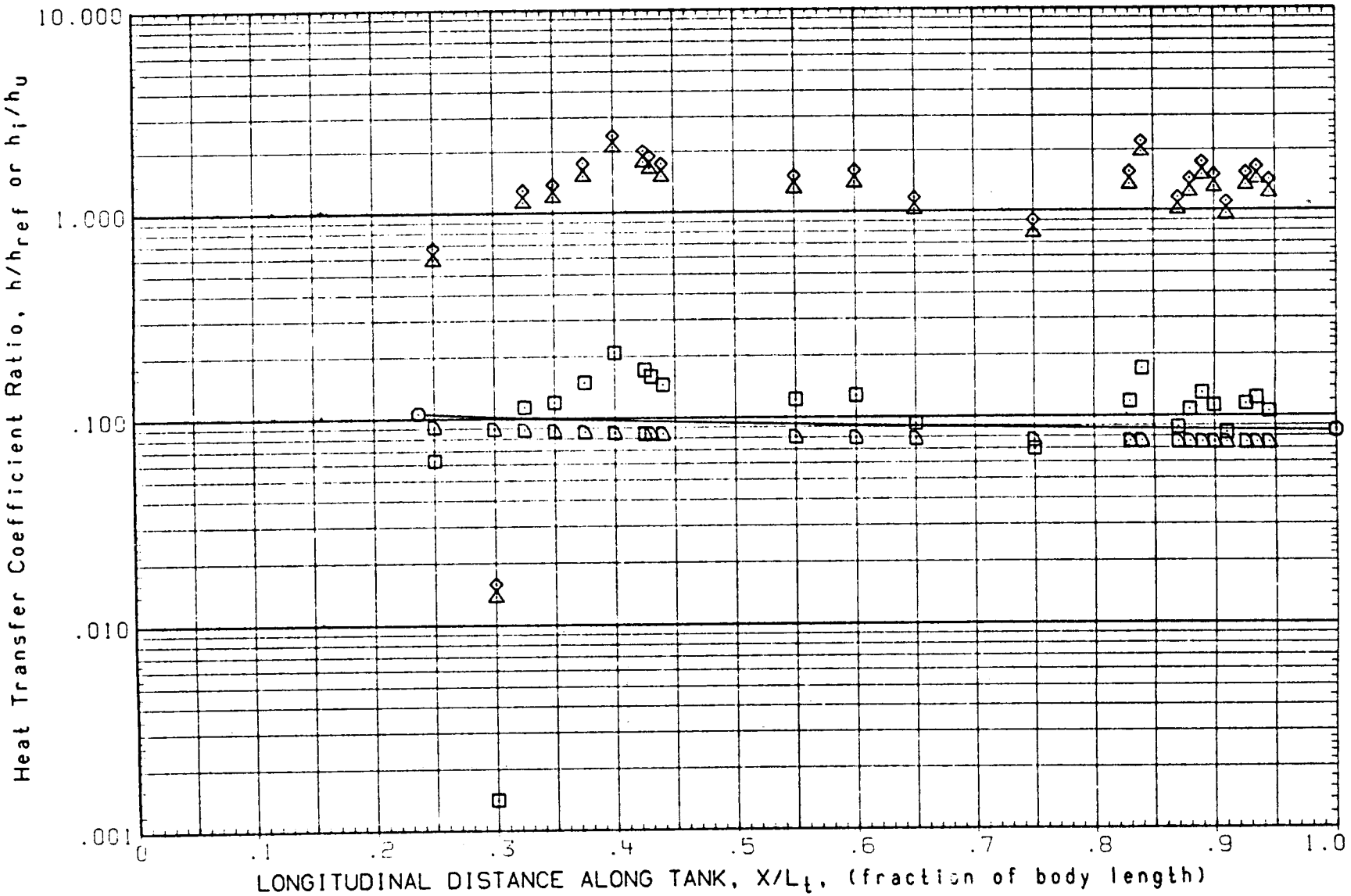

FIG. 4-13 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 45.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(DQNT24)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	4.020	-5.000	4.500
(QNT24)	□	DATA NOT AVAILABLE	4.020	-5.000	4.500
(V4LT45)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	-5.000	4.500
(X4LT45)	◇	DATA NOT AVAILABLE	4.020	-5.000	4.500
(Y4LT45)	△	IH85 (W.' , THEORY) OTS/ET = V4LT45/AQNT24= HI/HU	4.020	-5.000	4.500

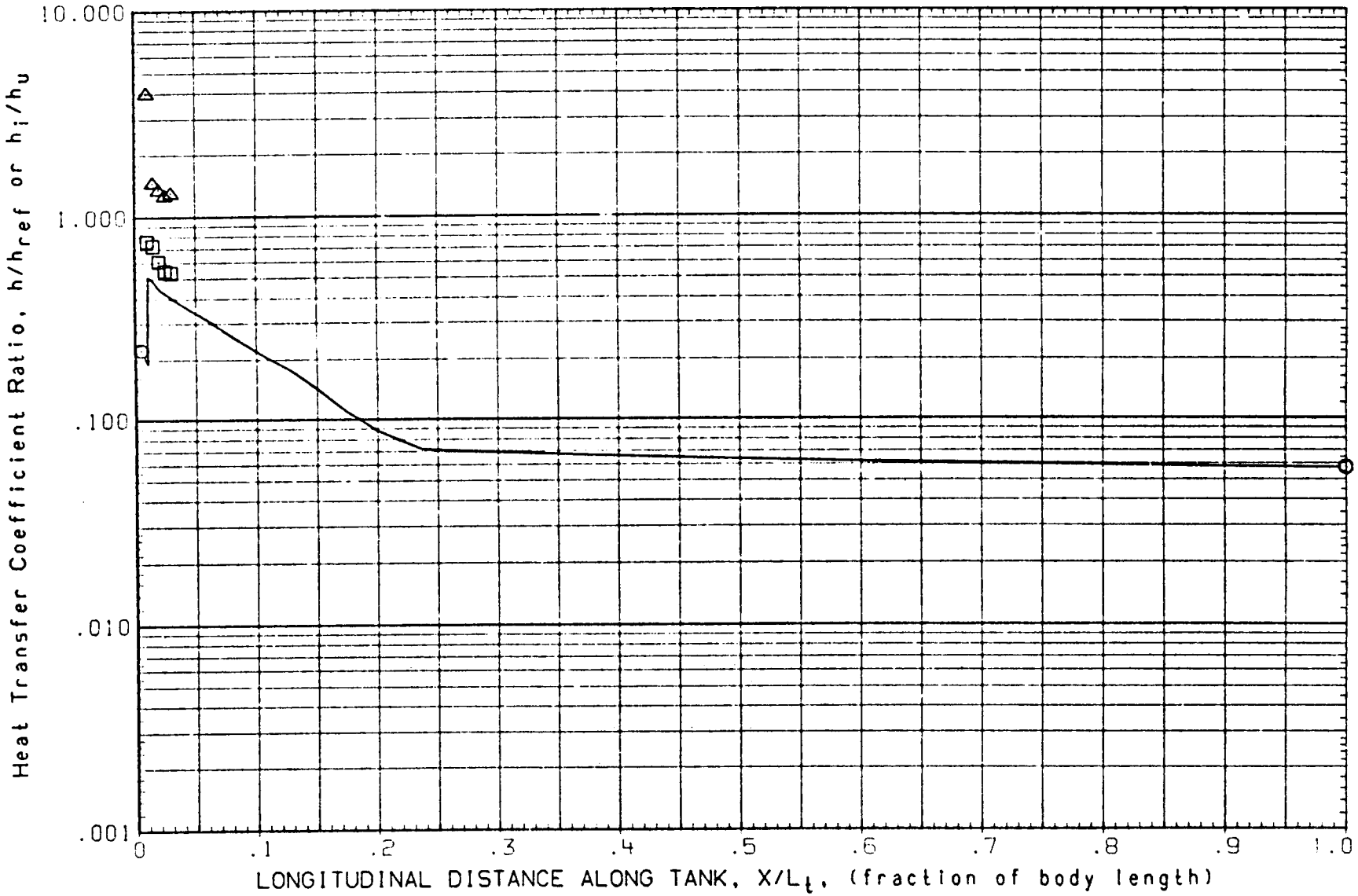

FIG. 4-13 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 180.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT24)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	4.500
(C9NT24)	⬠	DATA NOT AVAILABLE		4.020	-5.000	4.500
(V4LT45)	□	DATA NOT AVAILABLE		4.020	-5.000	4.500
(X4LT45)	◇	DATA NOT AVAILABLE		4.020	-5.000	4.500
(Y4LT45)	△	DATA NOT AVAILABLE		4.020	-5.000	4.500

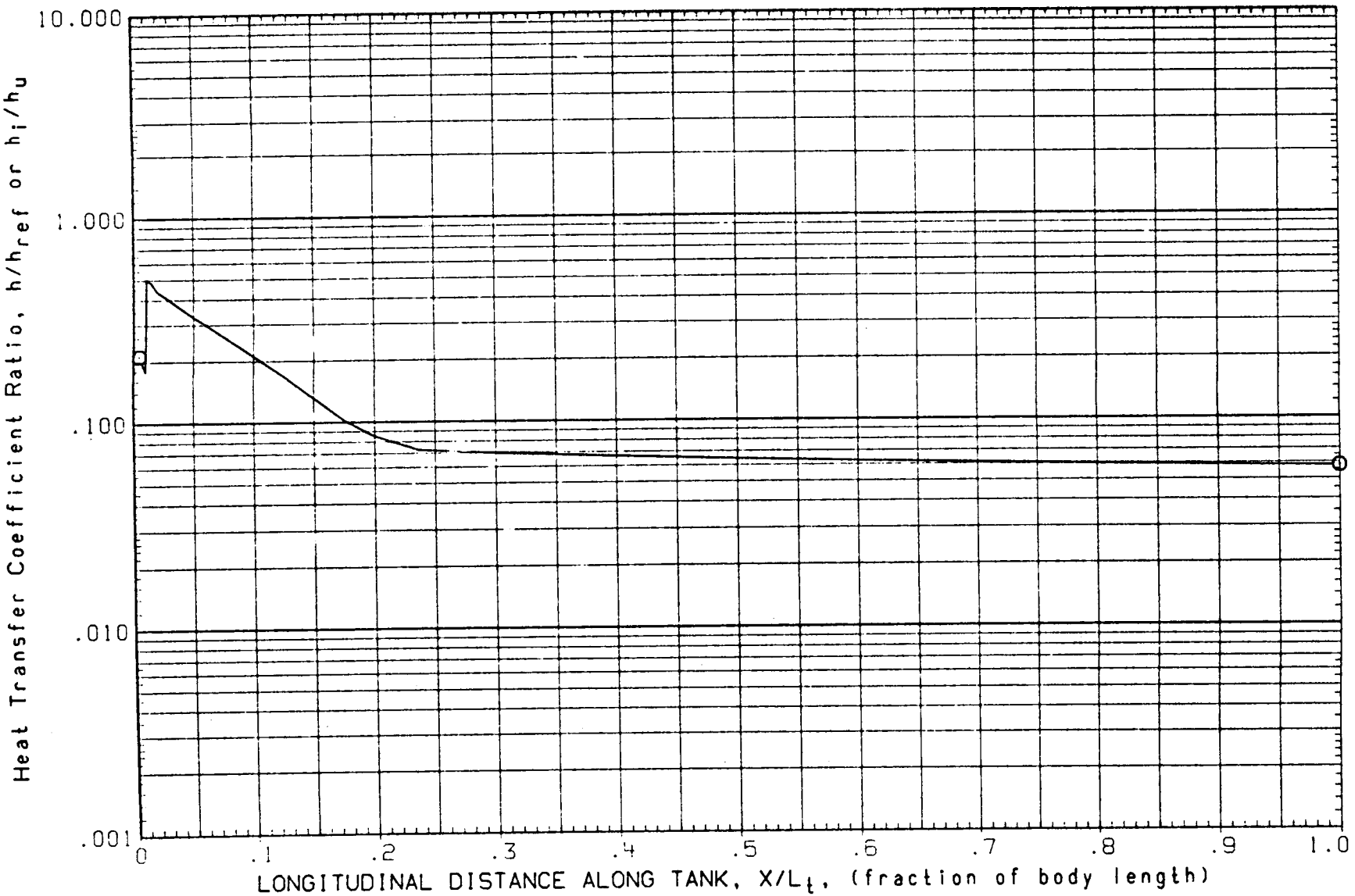

FIG. 4-13 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 235.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT24)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	4.500
(C9NT24)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	4.500
(V4LT45)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	4.500
(X4LT45)	◇	IH85 (W.L. TEST) OTS/ET = V4LT45/C9NT24=	HI/HU	4.020	-5.000	4.500
(Y4LT45)	△	IH85 (W.L. THEORY) OTS/ET = V4LT45/A9NT24=	HI/HU	4.020	-5.000	4.500

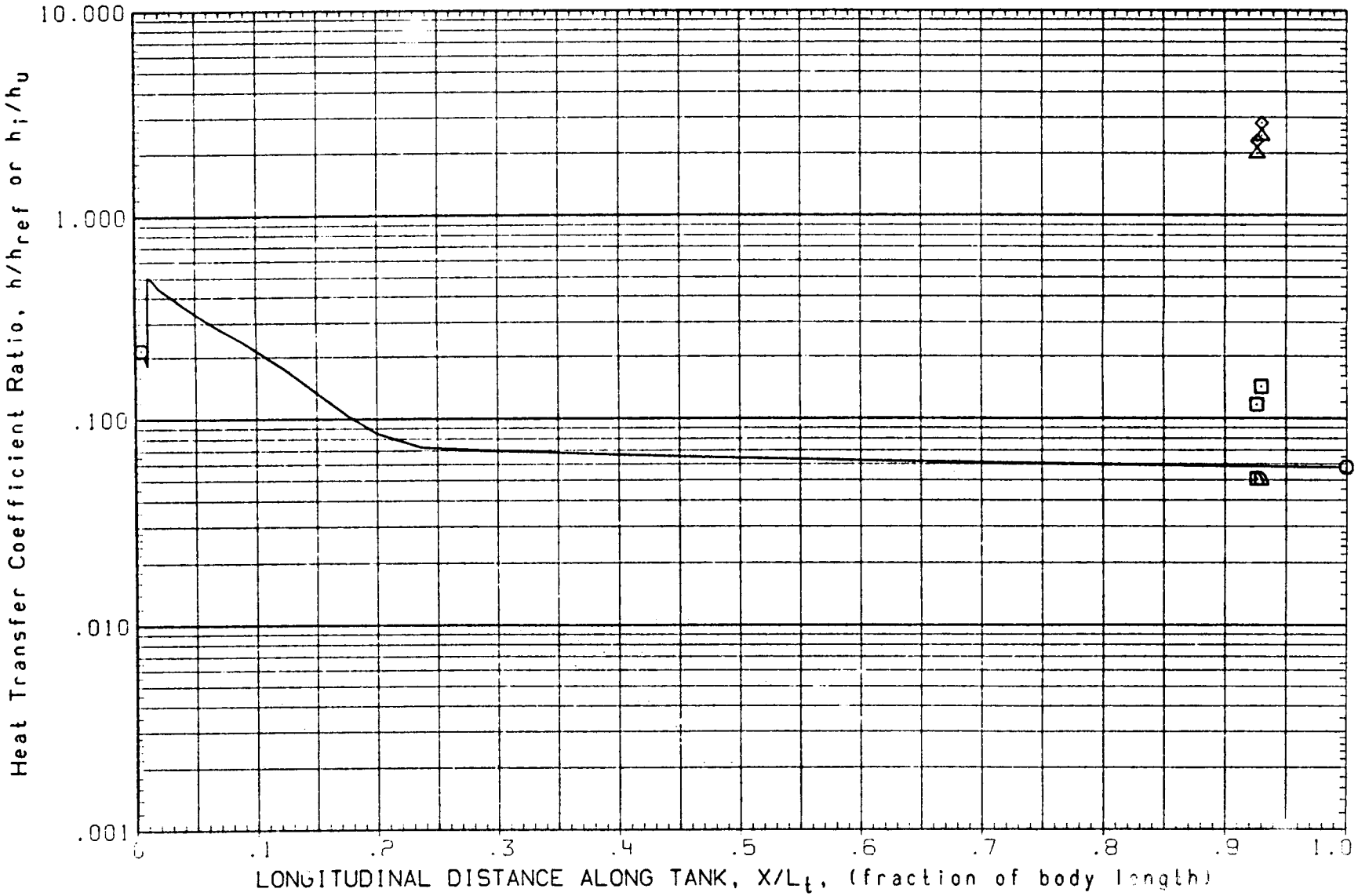

FIG. 4-13 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 247.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT24)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	4.500
(C9NT24)	⬠	DATA NOT AVAILABLE		4.020	-5.000	4.500
(V4LT45)	□	DATA NOT AVAILABLE		4.020	-5.000	4.500
(X4LT45)	◇	DATA NOT AVAILABLE		4.020	-5.000	4.500
(Y4LT45)	△	DATA NOT AVAILABLE		4.020	-5.000	4.500

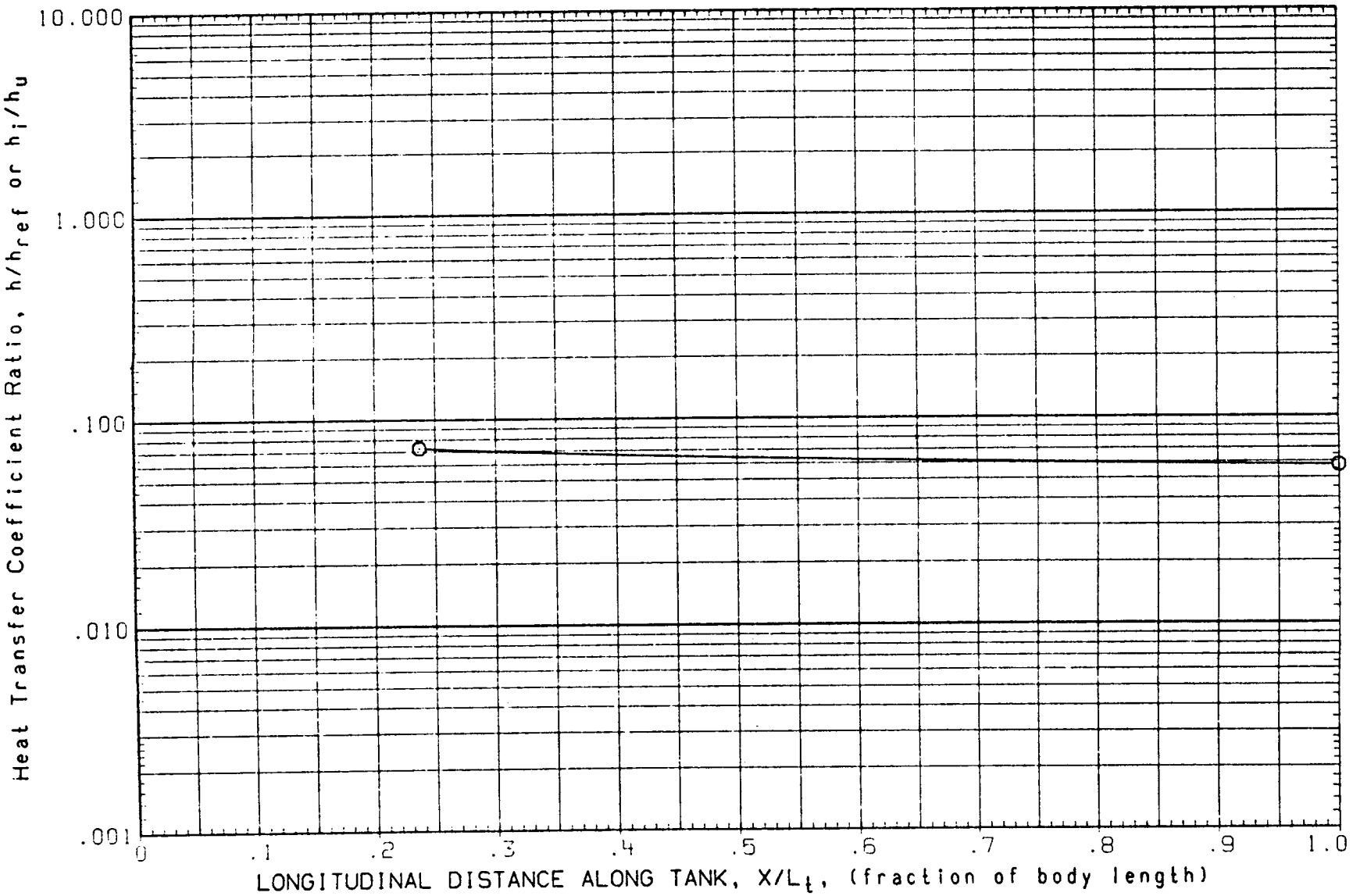

FIG. 4-13 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 247.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT24)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	4.500
(C9NT24)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	4.500
(V4LT45)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	4.500
(X4LT45)	◇	IH85 (W.L. TEST) OTS/ET = V4LT45/C9NT24=	HI/HU	4.020	-5.000	4.500
(Y4LT45)	△	IH85 (W.L. THEORY) OTS/ET = V4LT45/A9NT24=	HI/HU	4.020	-5.000	4.500

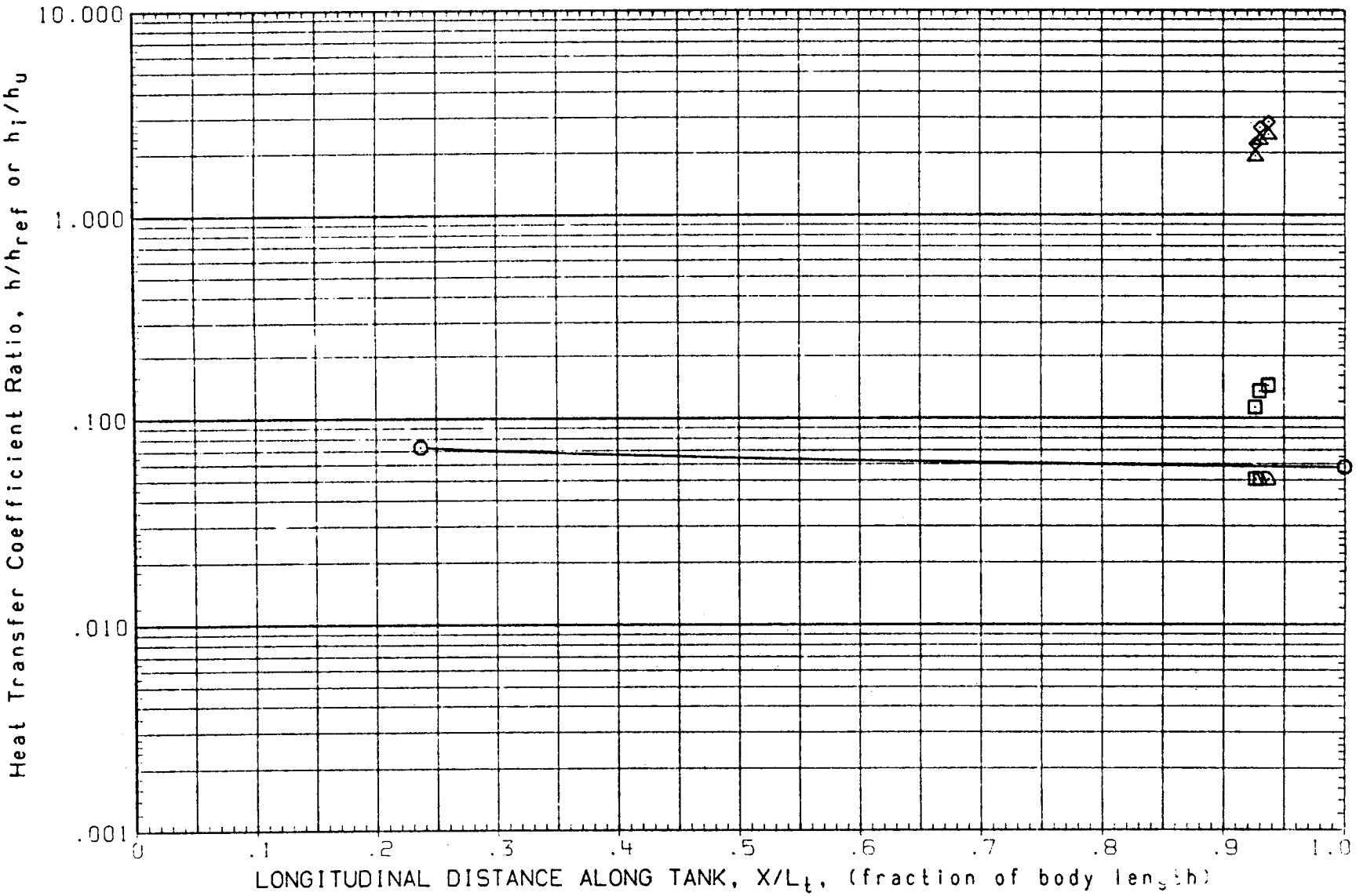

FIG. 4-13 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 250.570

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT24)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	4.500
(C9NT24)	□	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	4.500
(V4LT45)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	4.500
(X4LT45)	◇	IH85 (W.L. TEST) OTS/ET = V4LT45/C9NT24=	HI/HU	4.020	-5.000	4.500
(Y4LT45)	△	IH85 (W.L. THEORY) OTS/ET = V4LT45/A9NT24=	HI/HU	4.020	-5.000	4.500

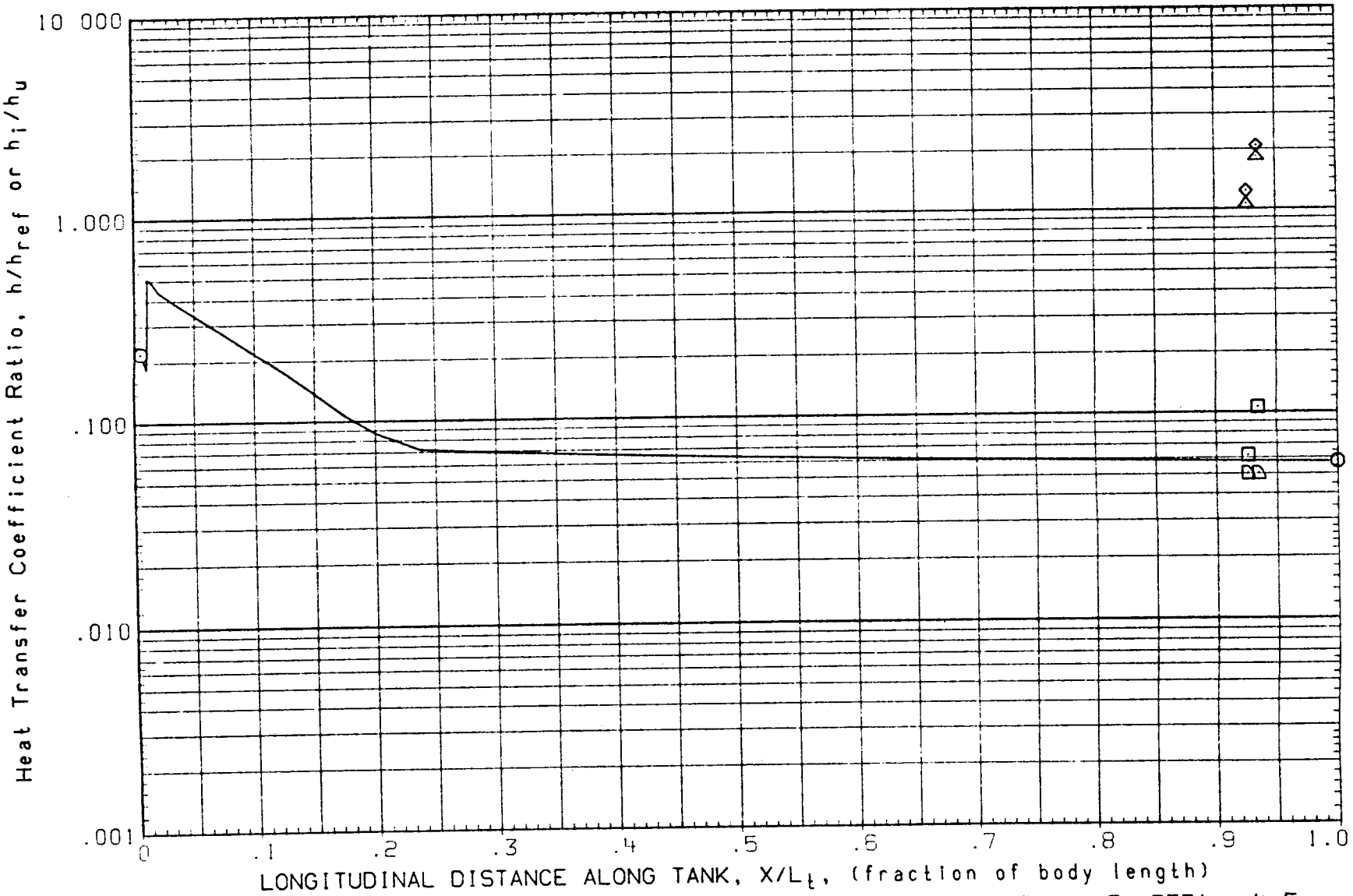

FIG. 4-13 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 258.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT24)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	4.500
(C9NT24)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	4.500
(V4LT45)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	4.500
(X4LT45)	◇	IH85 (W.L. TEST) OTS/ET = V4LT45/C9NT24=	HI/HU	4.020	-5.000	4.500
(Y4LT45)	△	IH85 (W.L. THEORY) OTS/ET = V4LT45/A9NT24=	HI/HU	4.020	-5.000	4.500

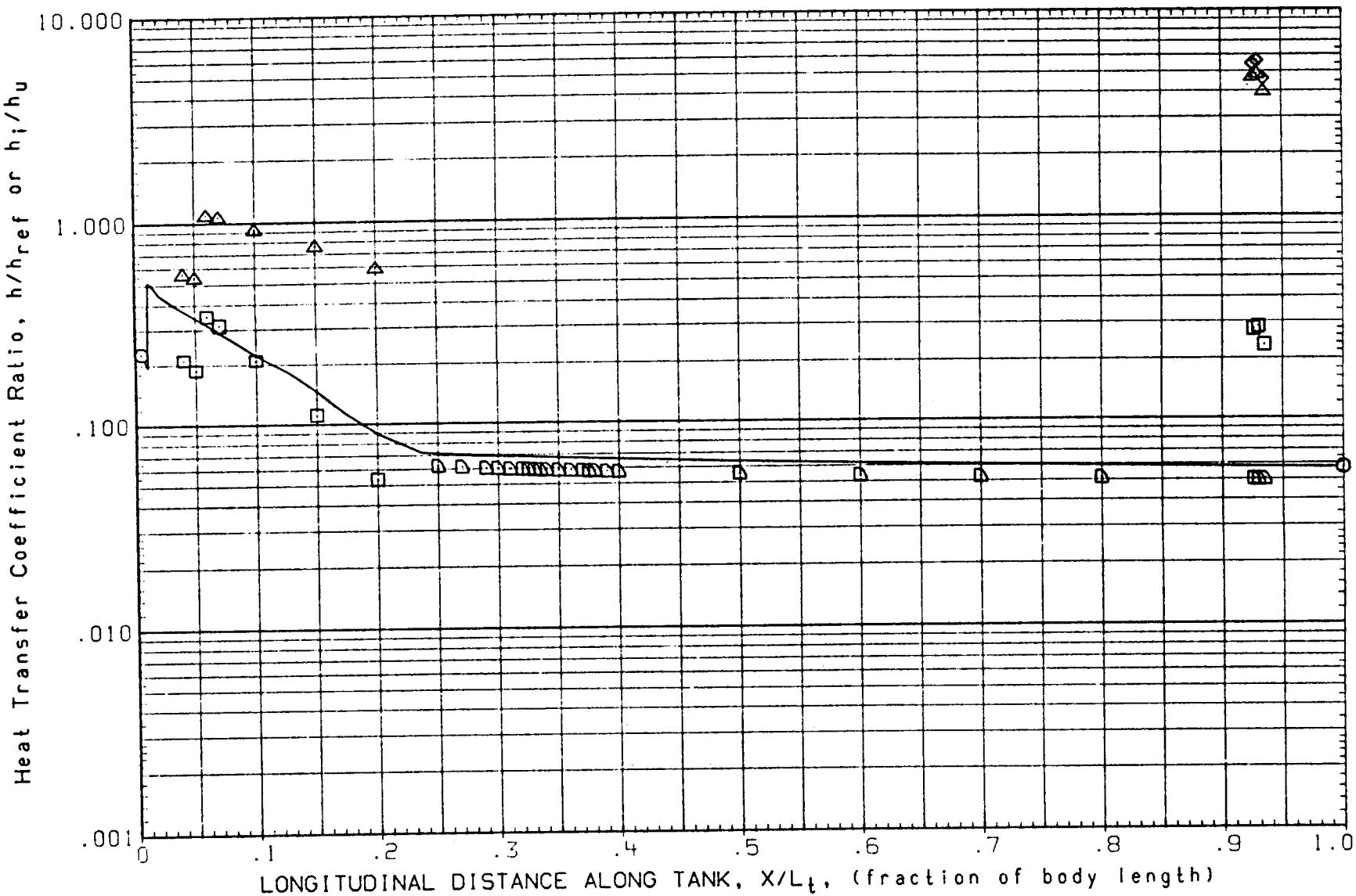

FIG. 4-13 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 270.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT24)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	4.500
(C9NT24)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	4.500
(V4LT45)	⊡	IH85, AEDC V41A-N5, CONFIGURATION 0 (T) S		4.020	-5.000	4.500
(X4LT45)	◇	IH85 (W.T. TEST) OTS/ET = V4LT45/C9NT24= HI/HU		4.020	-5.000	4.500
(Y4LT45)	△	IH85 (W.T. THEORY) OTS/ET = V4LT45/A9NT24= HI/HU		4.020	-5.000	4.500

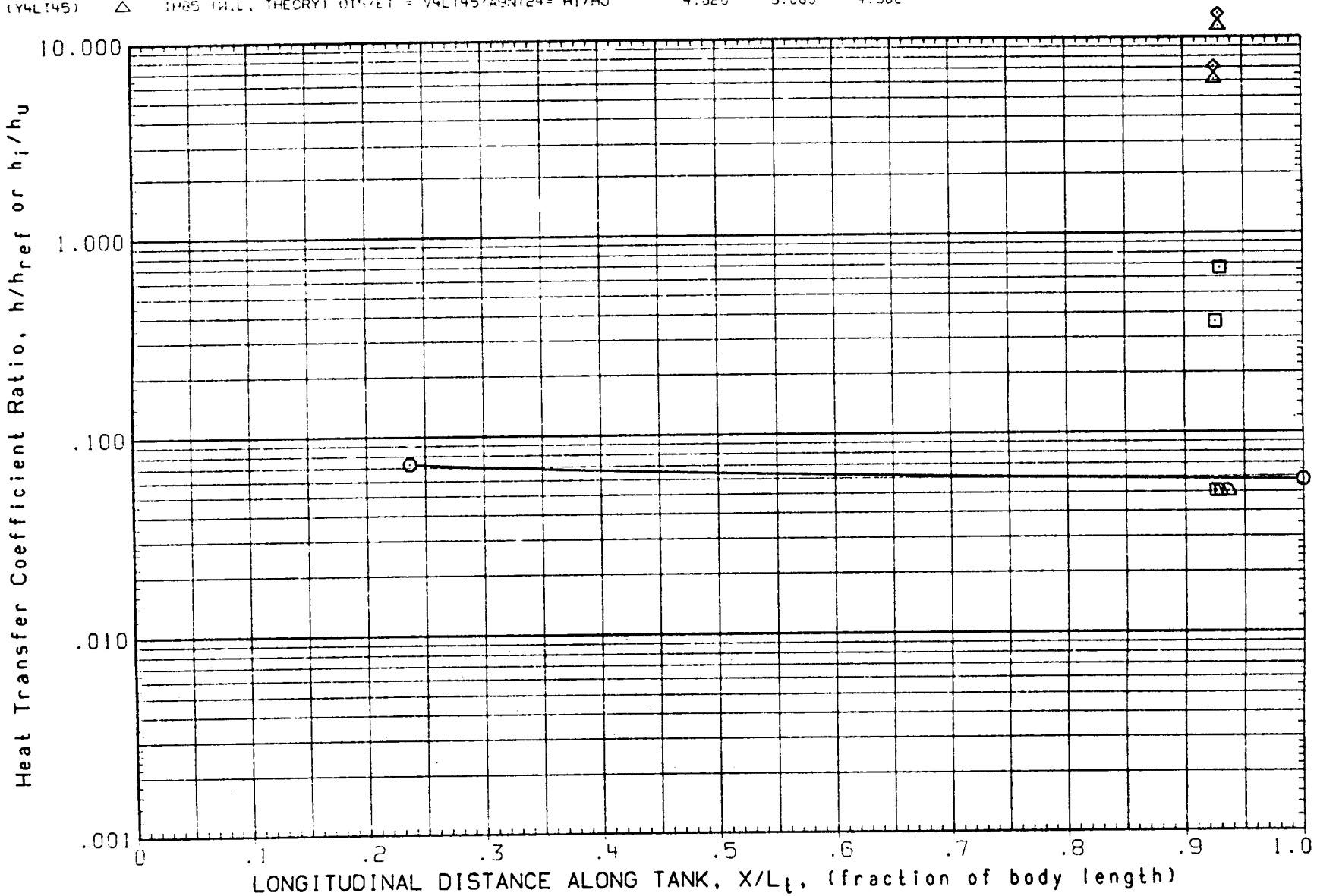

FIG. 4-13 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 289.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT24)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	4.500
(C9NT24)	□	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	4.500
(V4LT45)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	4.500
(X4LT45)	◇	IH85 (W.L. TEST) OTS/ET = V4LT45/C9NT24=	HI/HU	4.020	-5.000	4.500
(Y4LT45)	△	IH85 (W.L. THEORY) OTS/ET = V4LT45/A9NT24=	HI/HU	4.020	-5.000	4.500

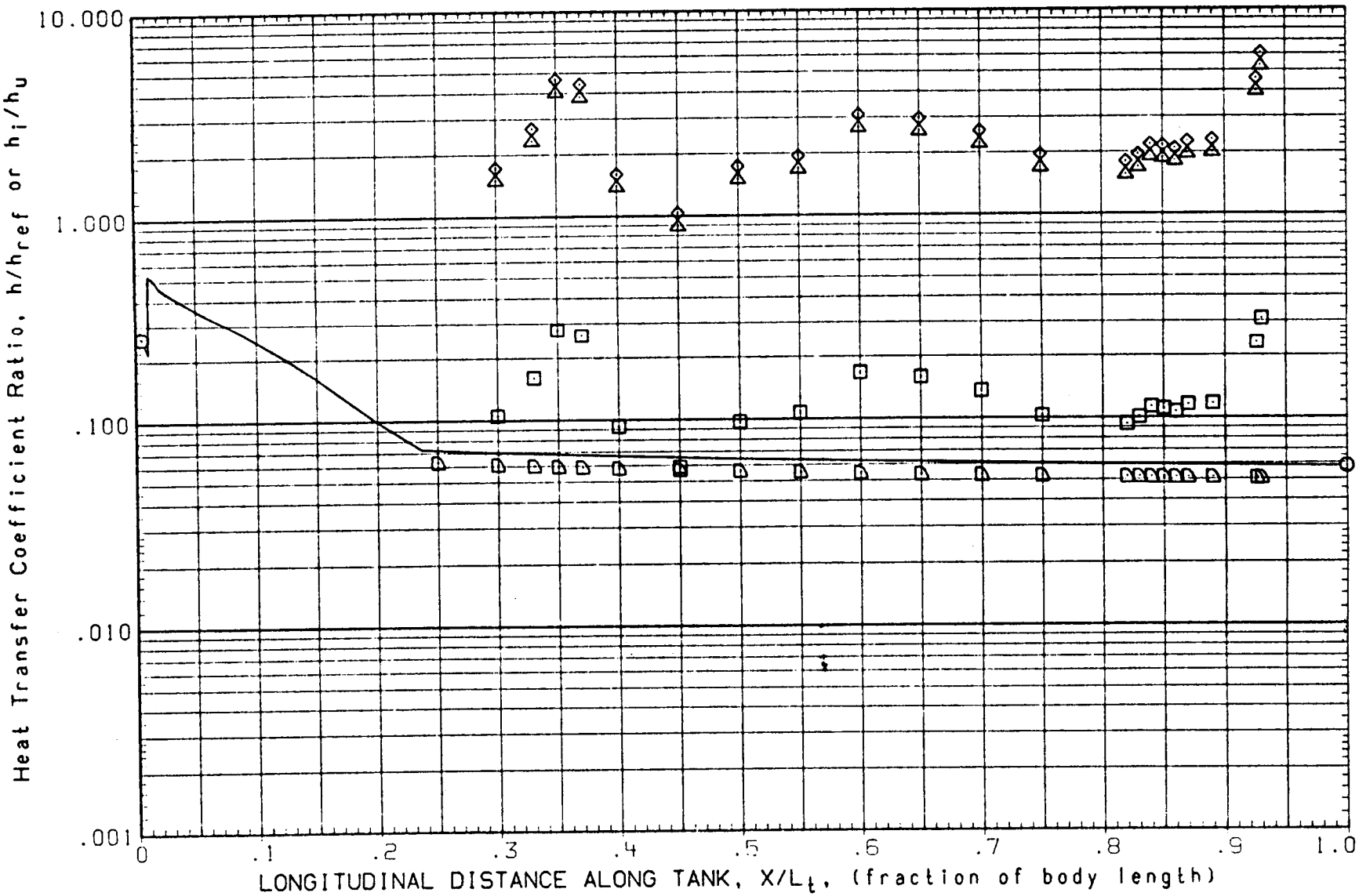

FIG. 4-13 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 292.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT24)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	4.500
(C9NT24)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	4.500
(V4LT45)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	4.500
(X4LT45)	◇	IH85 (W.L. TEST) OTS/ET = V4LT45/C9NT24=	HI/HU	4.020	-5.000	4.500
(Y4LT45)	△	IH85 (W.L. THEORY) OTS/ET = V4LT45/A9NT24=	HI/HU	4.020	-5.000	4.500

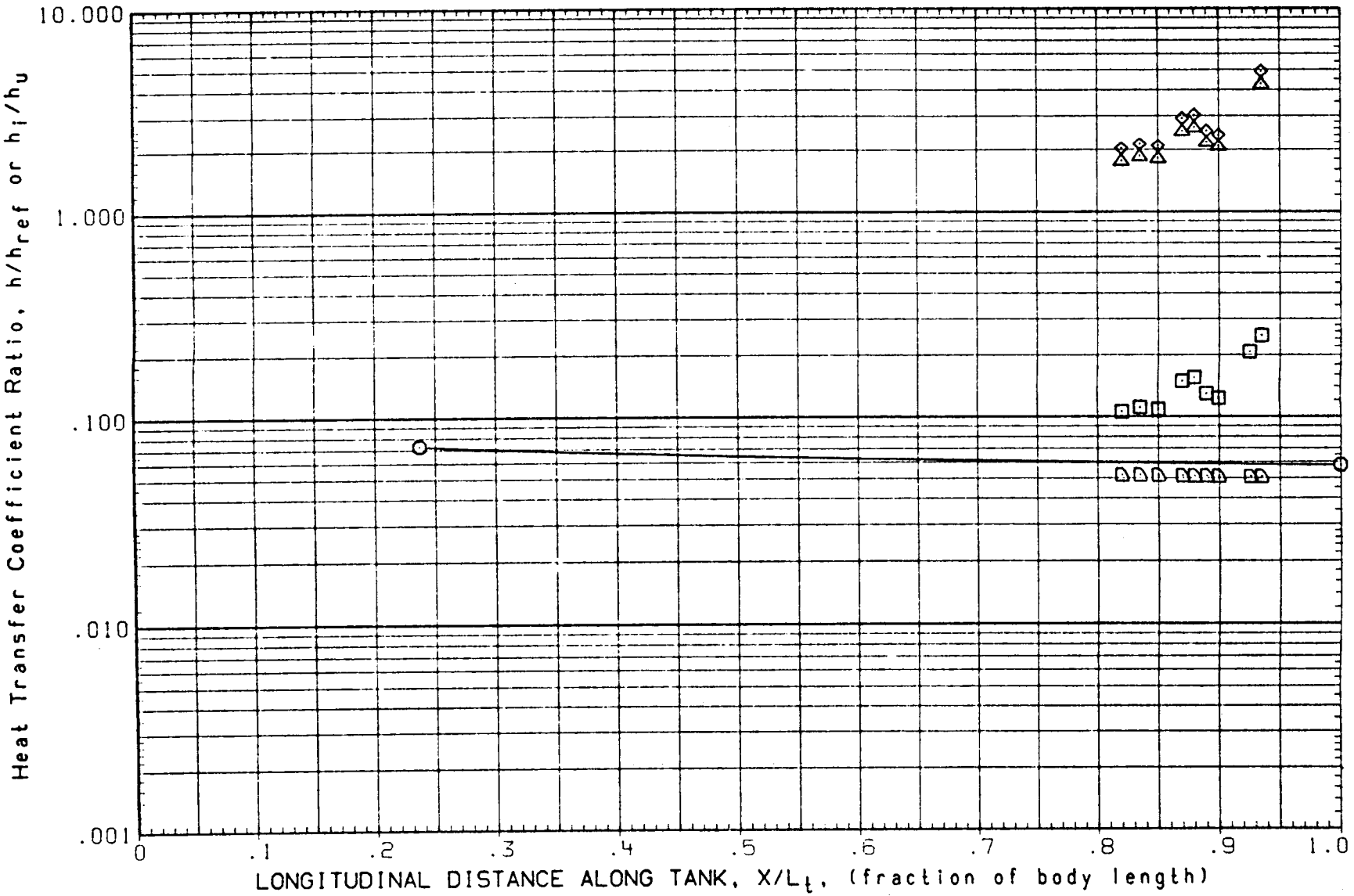

FIG. 4-13 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 301.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D3NT24)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	4.500
(C9NT24)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	4.500
(V4LT45)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	4.500
(X4LT45)	◇	IH85 (W.L. TEST) OTS/ET = V4LT45/C9NT24=	HI/HU	4.020	-5.000	4.500
(Y4LT45)	△	IH85 (W.L. THEORY) OTS/ET = V4LT45/A9NT24=	HI/HU	4.020	-5.000	4.500

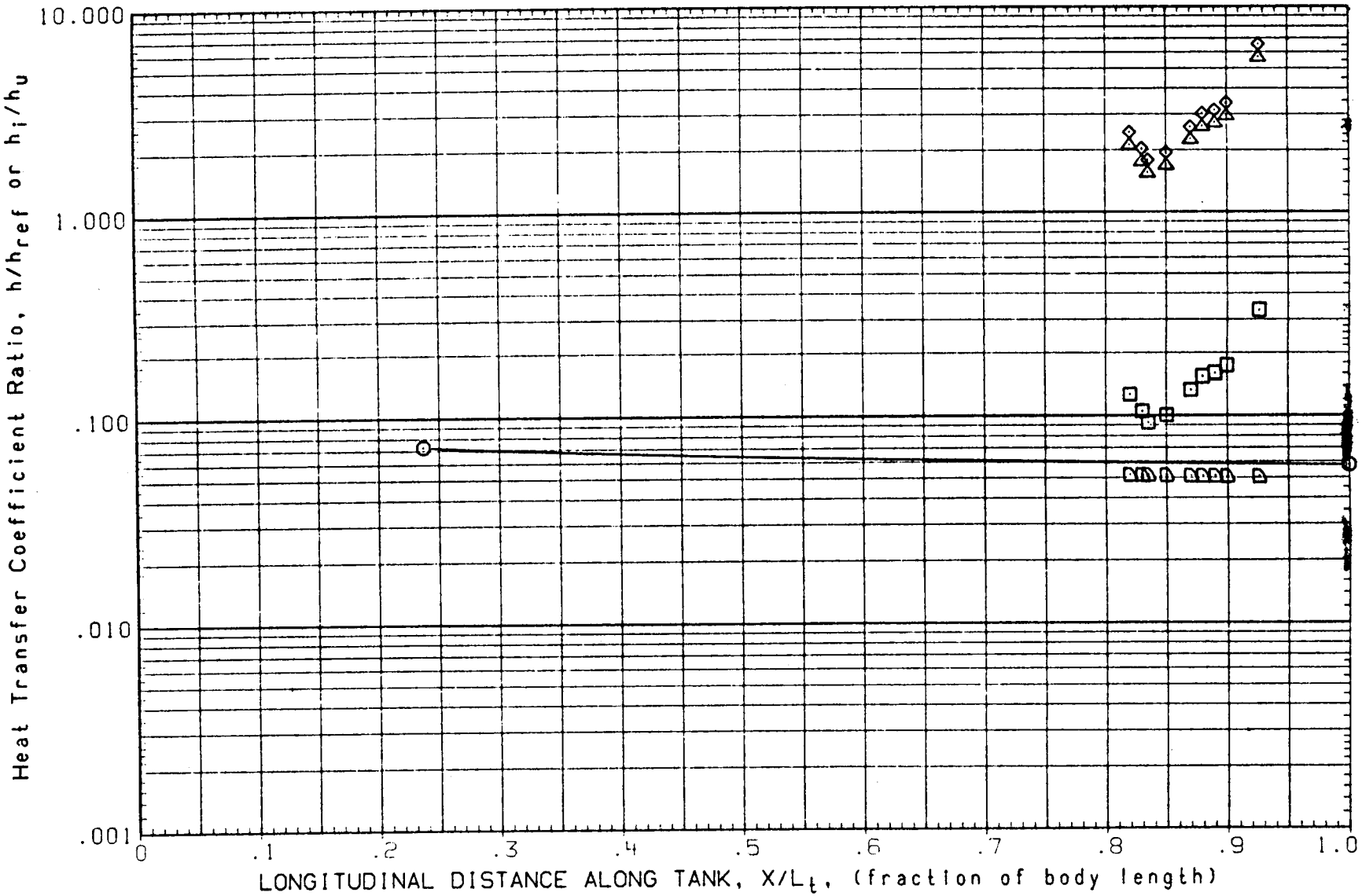

FIG. 4-13 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 305.400

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT24)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	4.500
(C9NT24)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	4.500
(V4LT45)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	4.500
(X4LT45)	◇	IH85 (W.L. TEST) OTS/ET = V4LT45/C9NT24=	HI/HU	4.020	-5.000	4.500
(Y4LT45)	△	IH85 (W.L. THEORY) OTS/ET = V4LT45/A9NT24=	HI/HU	4.020	-5.000	4.500

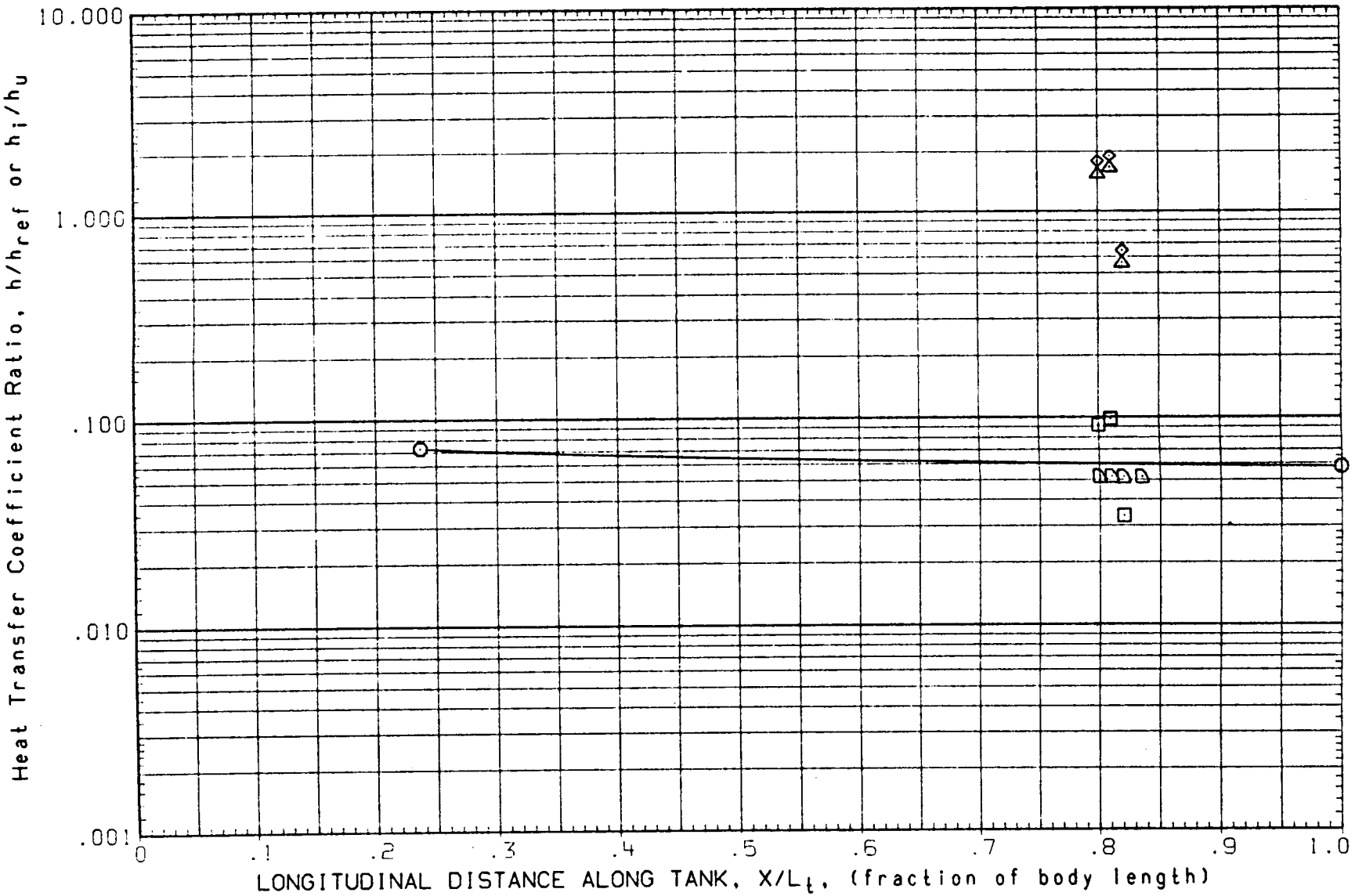

FIG. 4-13 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 309.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT24)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	4.500
(C9NT24)	▷	TANK ALONE CREATED DATA (.97 * THEORY)	HU/HREF	4.020	-5.000	4.500
(V4LT45)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	4.500
(X4LT45)	◇	IH85 (W.L. TEST) OTS/ET = V4LT45/C9NT24=	HI/HU	4.020	-5.000	4.500
(Y4LT45)	△	IH85 (W.L. THEORY) OTS/ET = V4LT45/A9NT24=	HI/HU	4.020	-5.000	4.500

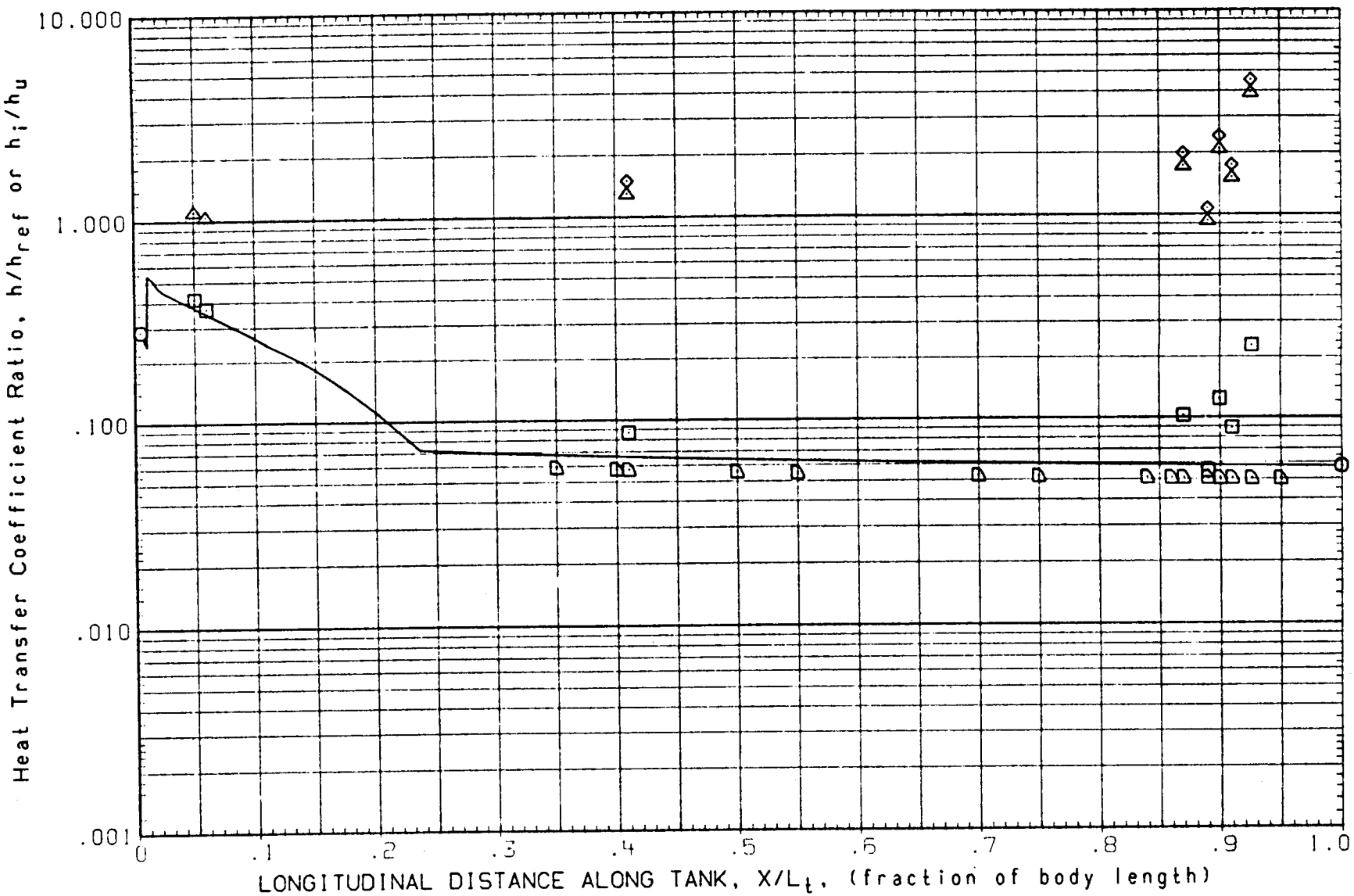

FIG. 4-13 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 315.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT24)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	4.500
(C9NT24)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	4.500
(V4LT45)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	4.500
(X4LT45)	◇	IH85 (W.L. TEST) OTS/ET = V4LT45/C9NT24=	HI/HU	4.020	-5.000	4.500
(Y4LT45)	△	IH85 (W.L. THEORY) OTS/ET = V4LT45/A9NT24=	HI/HU	4.020	-5.000	4.500

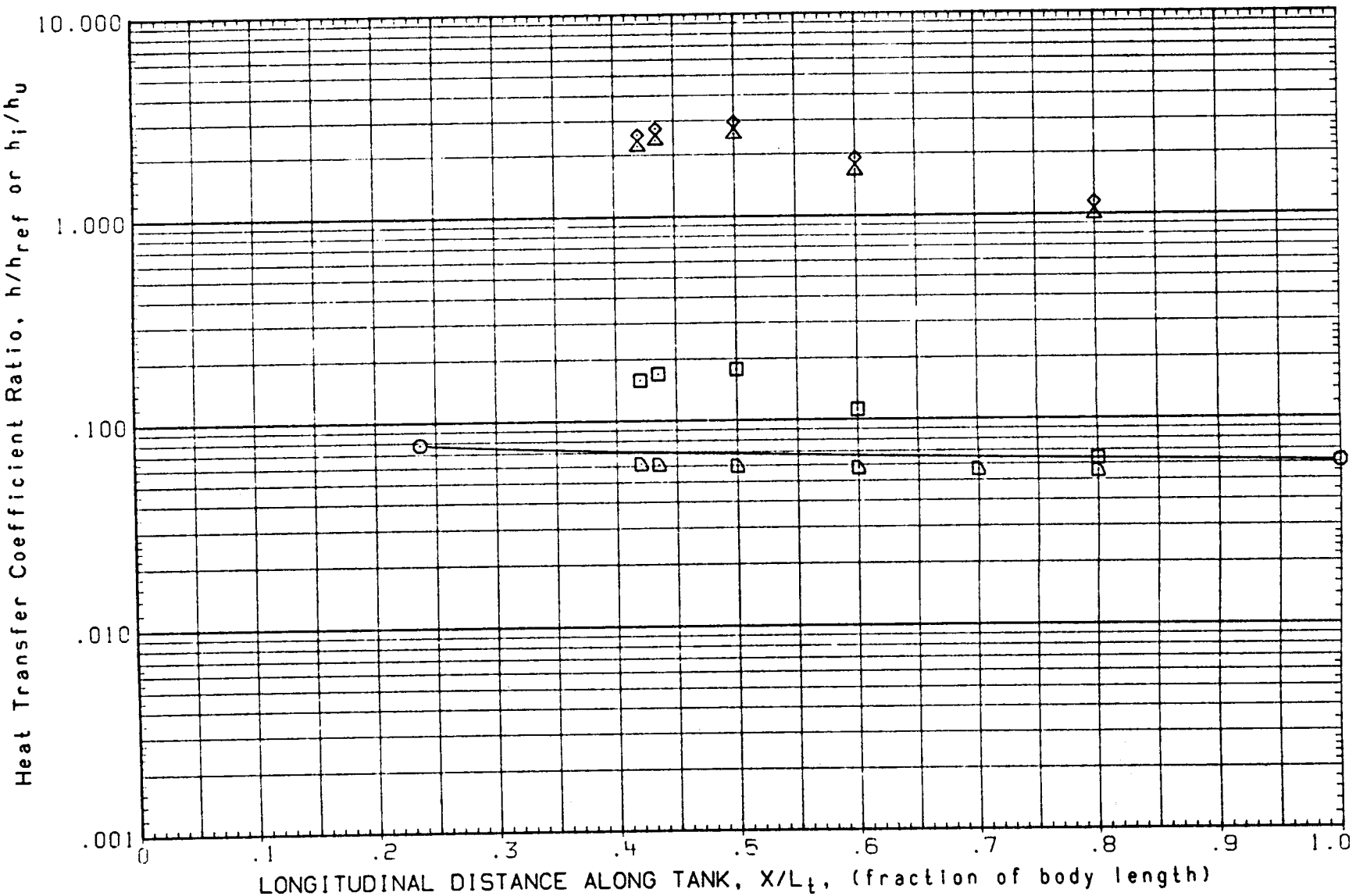

FIG. 4-13 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 322.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT24)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	4.500
(C9NT24)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	4.500
(V4LT45)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	4.500
(X4LT45)	◇	IH85 (W.L. TEST) OTS/ET = V4LT45/C9NT24=	HI/HU	4.020	-5.000	4.500
(Y4LT45)	△	IH85 (W.L. THEORY) OTS/ET = V4LT45/A9NT24=	HI/HU	4.020	-5.000	4.500

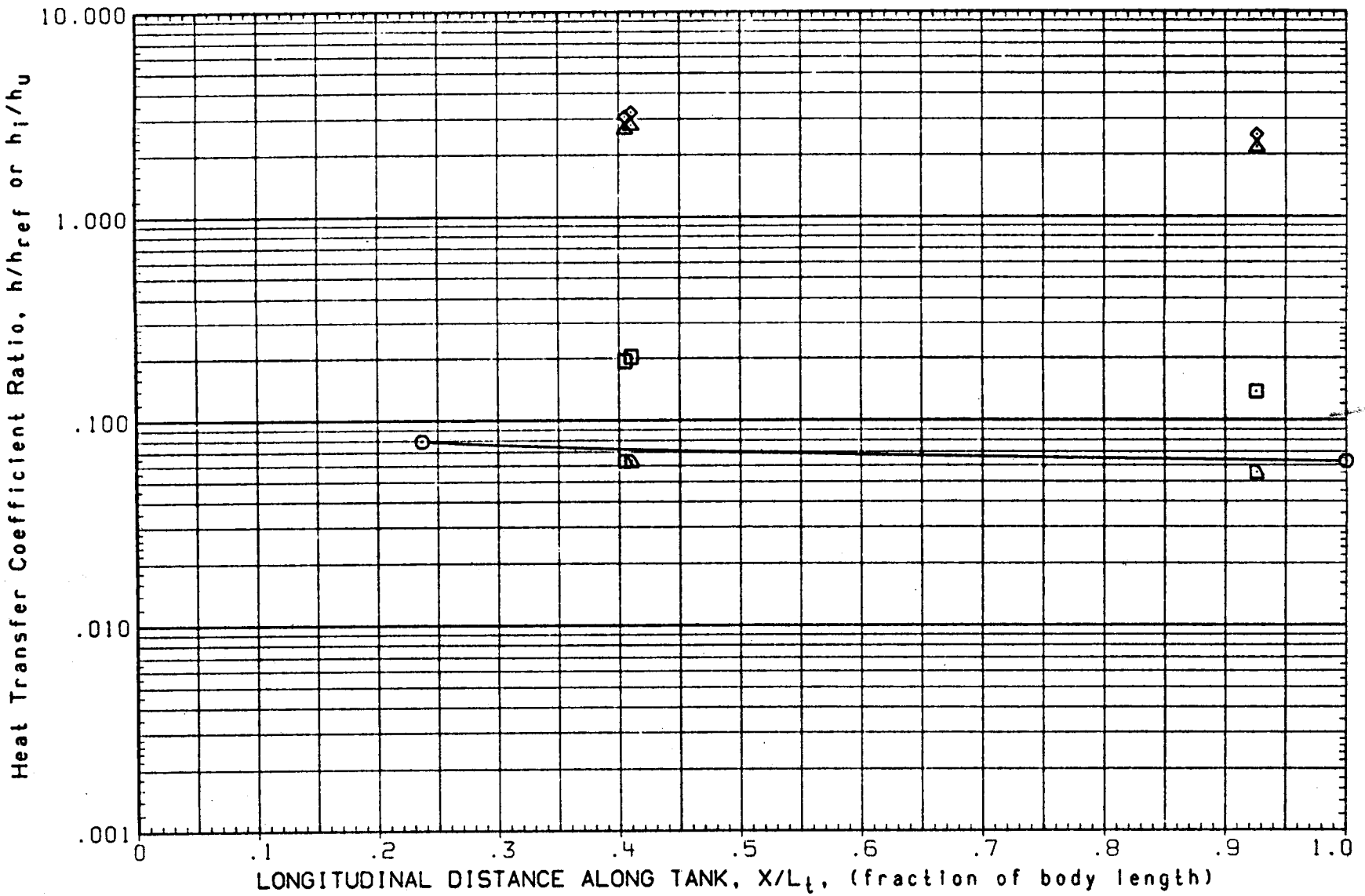

FIG. 4-13 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 324.450

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT24)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	4.500
(C9NT24)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	4.500
(V4LT45)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	4.500
(X4LT45)	◇	IH85 (W.L. TEST) OTS/ET = V4LT45/C9NT24=	HI/HU	4.020	-5.000	4.500
(Y4LT45)	△	IH85 (W.L. THEORY) OTS/ET = V4LT45/A9NT24=	HI/HU	4.020	-5.000	4.500

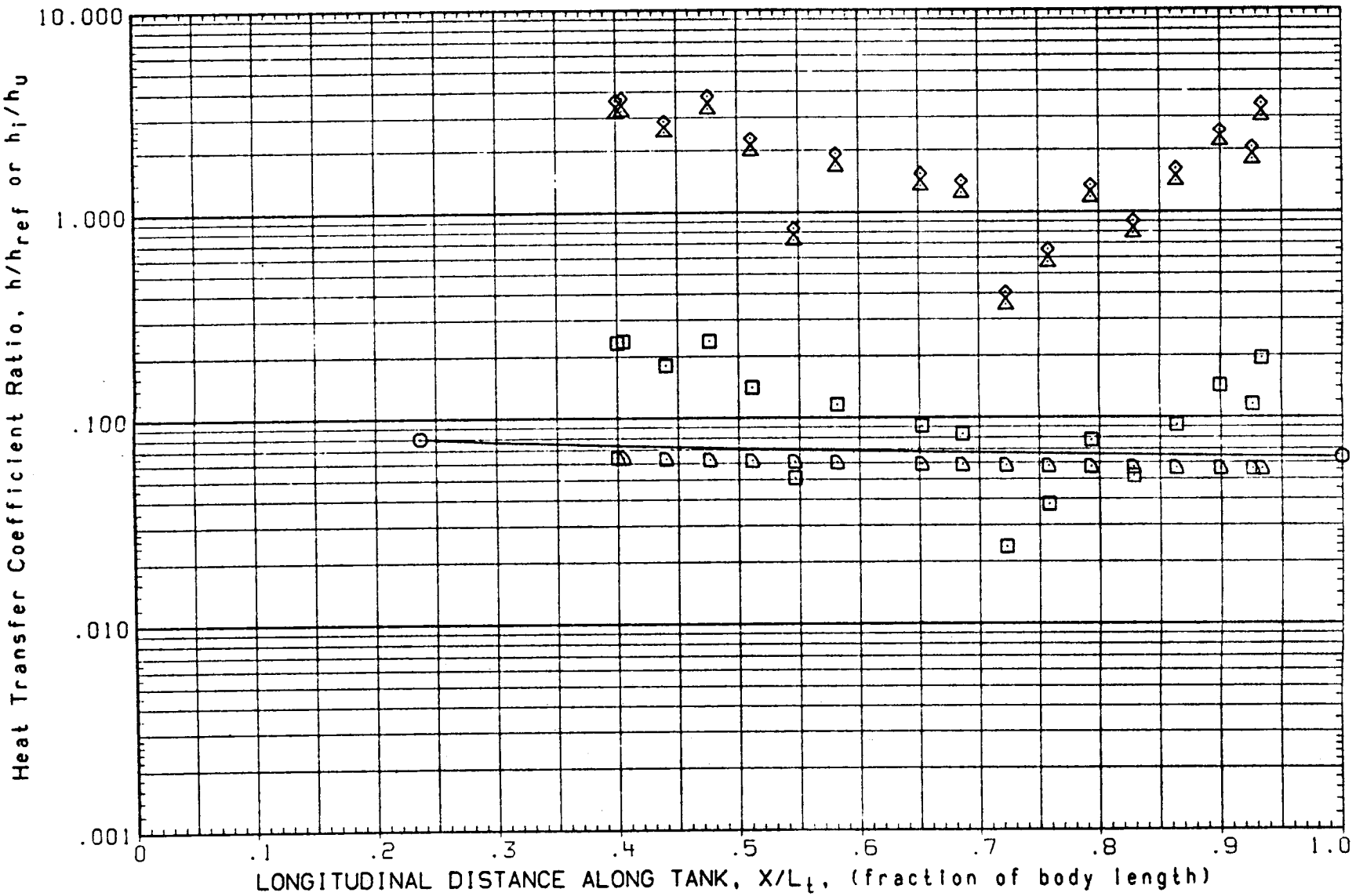

FIG. 4-13 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 326.850

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT24)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	4.500
(C9NT24)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	4.500
(V4LT45)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	4.500
(X4LT45)	◇	IH85 (W.L. TEST) OTS/ET = V4LT45/C9NT24=	HI/HU	4.020	-5.000	4.500
(Y4LT45)	△	IH85 (W.L. THEORY) OTS/ET = V4LT45/A9NT24=	HI/HU	4.020	-5.000	4.500

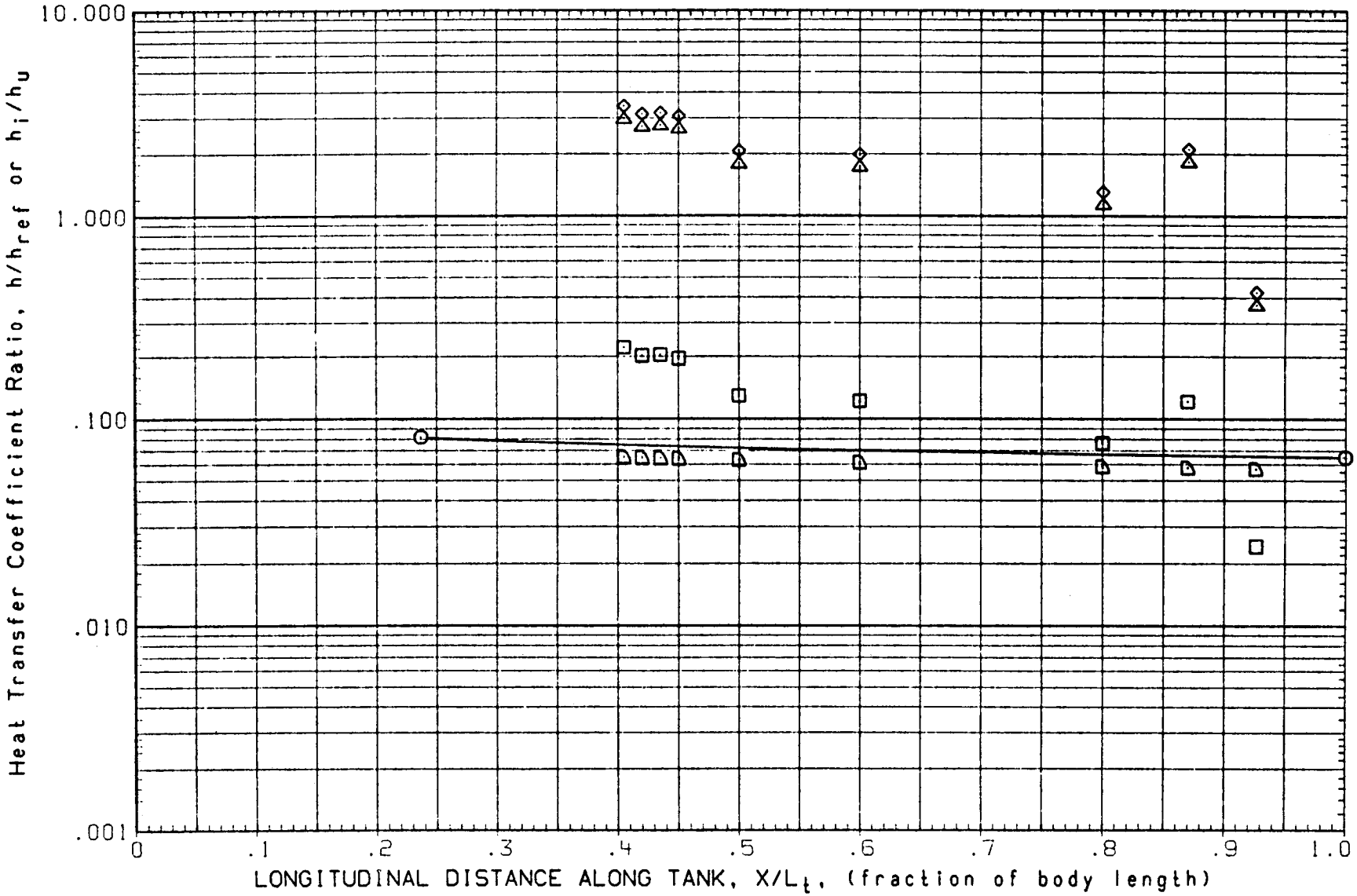

FIG. 4-13 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 330.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT24)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	4.500
(C9NT24)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	4.500
(V4LT45)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	4.500
(X4LT45)	◇	IH85 (W.L. TEST) OTS/ET = V4LT45/C9NT24=	HI/HU	4.020	-5.000	4.500
(Y4LT45)	△	IH85 (W.L. THEORY) OTS/ET = V4LT45/A9NT24=	HI/HU	4.020	-5.000	4.500

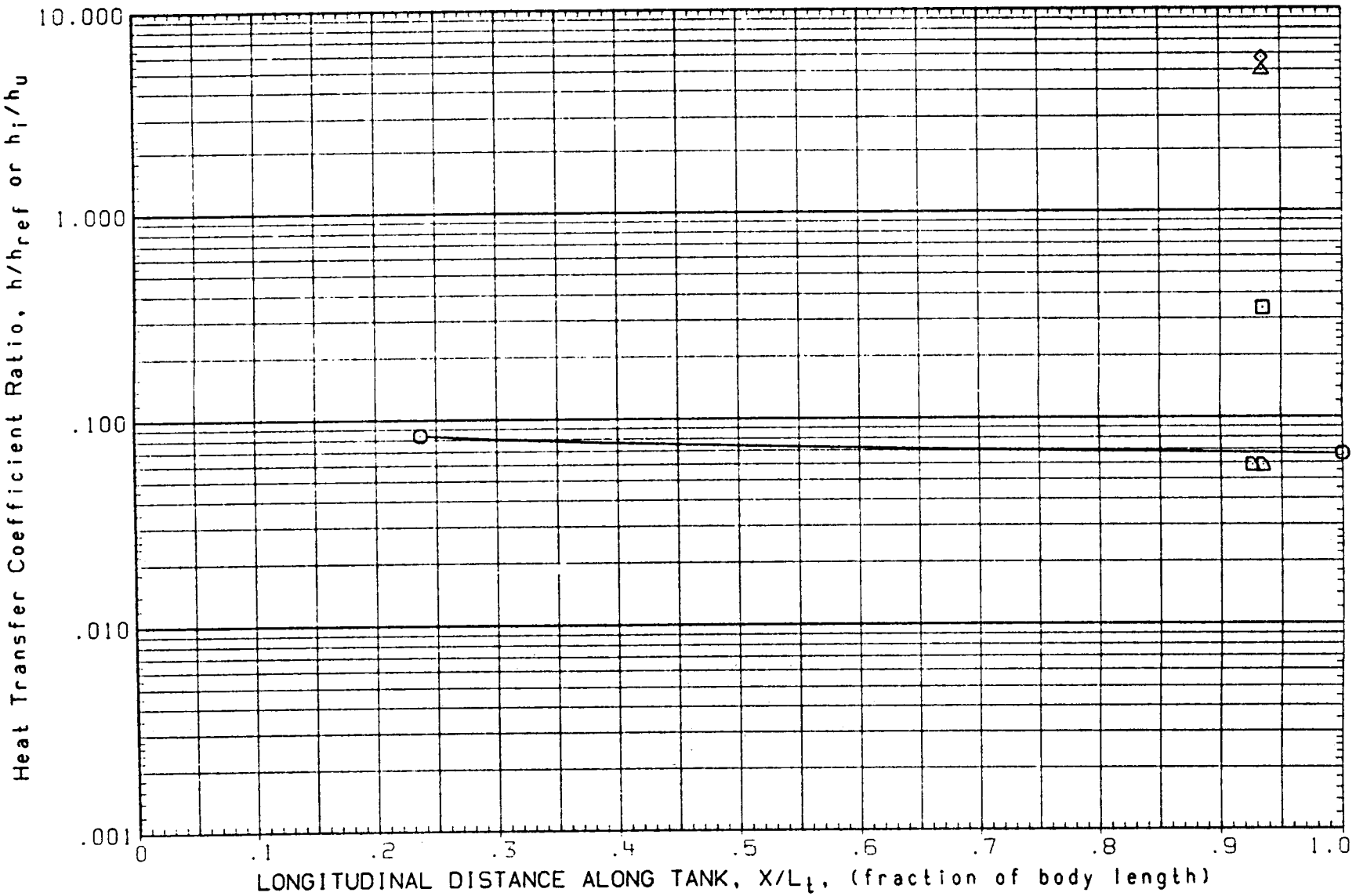

FIG. 4-13 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 334.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT24)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	4.500
(C9NT24)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	4.500
(V4LT45)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	4.500
(X4LT45)	◇	IH85 (W.L. TEST) OTS/ET = V4LT45/C9NT24= HI/HU		4.020	-5.000	4.500
(Y4LT45)	△	IH85 (W.L. THEORY) OTS/ET = V4LT45/A9NT24= HI/HU		4.020	-5.000	4.500

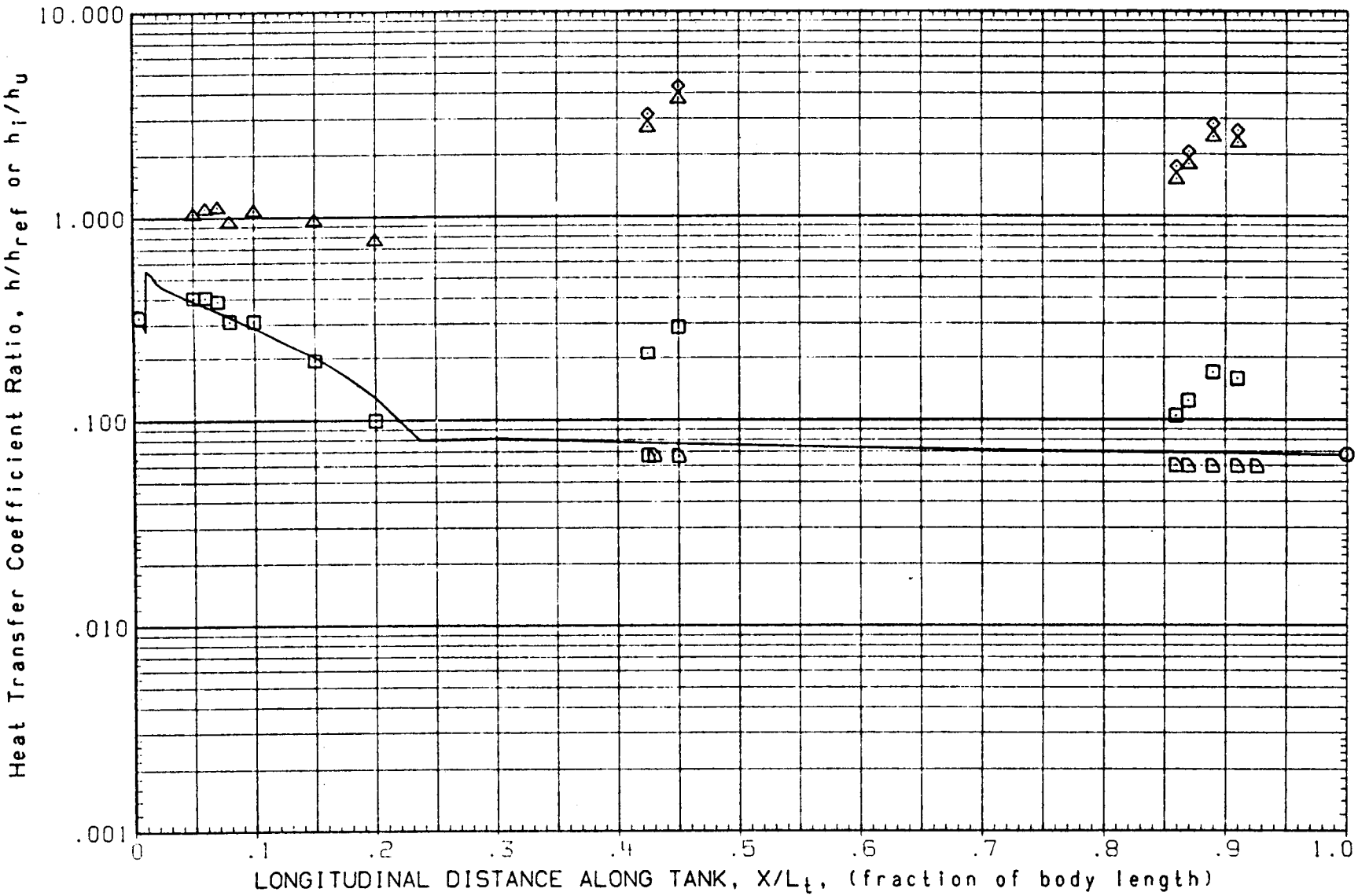

FIG. 4-13 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 337.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT24)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	4.500
(C9NT24)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	4.500
(Y4LT45)	□	DATA NOT AVAILABLE		4.020	-5.000	4.500
(X4LT45)	◇	DATA NOT AVAILABLE		4.020	-5.000	4.500
(Y4LT45)	△	DATA NOT AVAILABLE		4.020	-5.000	4.500

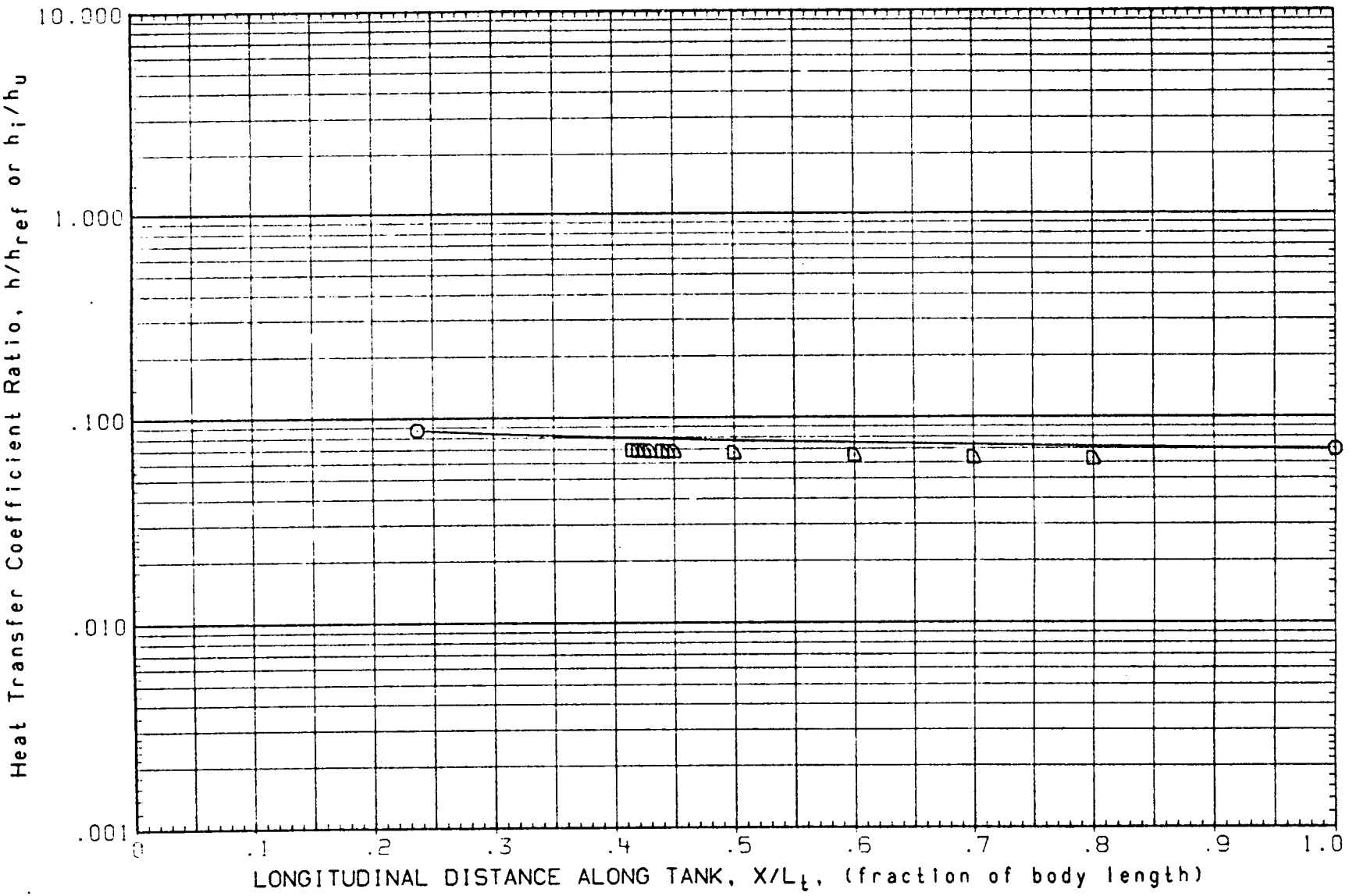

FIG. 4-13 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 343.120

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT24)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	4.500
(C9NT24)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	4.500
(V4LT45)	□	IH85, AEDC V4!A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	4.500
(X4LT45)	◇	IH85 (W.L. TEST) OTS/ET = V4LT45/C9NT24= HI/HU		4.020	-5.000	4.500
(Y4LT45)	△	IH85 (W.L. THEORY) OTS/ET = V4LT45/A9NT24= HI/HU		4.020	-5.000	4.500

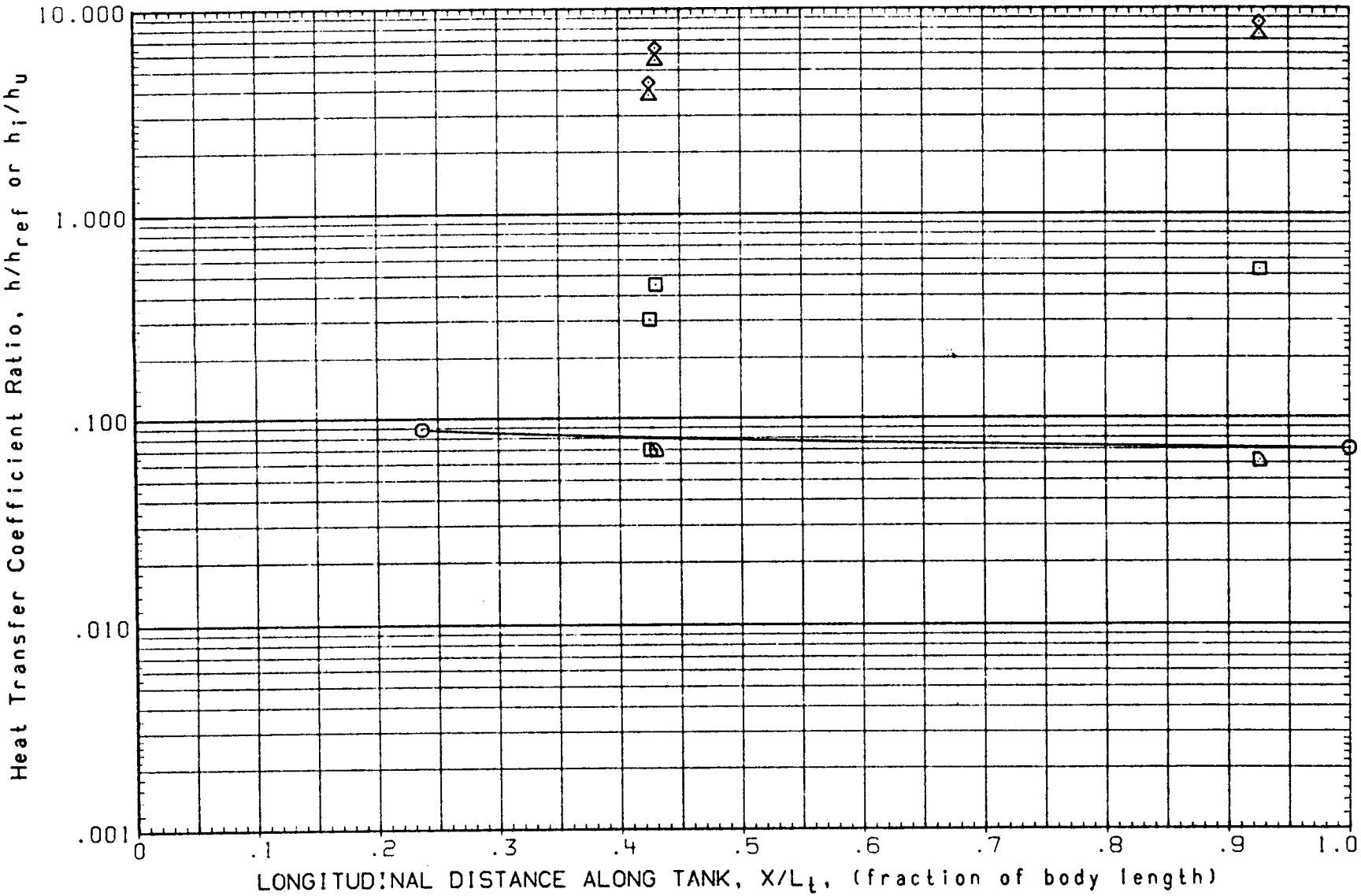

FIG. 4-13 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 345.560

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT24)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	4.500
(C9NT24)	□	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	4.500
(V4LT45)	□	IH85, AEDC V4IA-W5, CONFIGURATION 0 (T) S		4.020	-5.000	4.500
(X4LT45)	◇	IH85 (W.L. TEST) OTS/ET = V4LT45/C9NT24= HI/HU		4.020	-5.000	4.500
(Y4LT45)	△	IH85 (W.L. THEORY) OTS/ET = V4LT45/A9NT24= HI/HU		4.020	-5.000	4.500

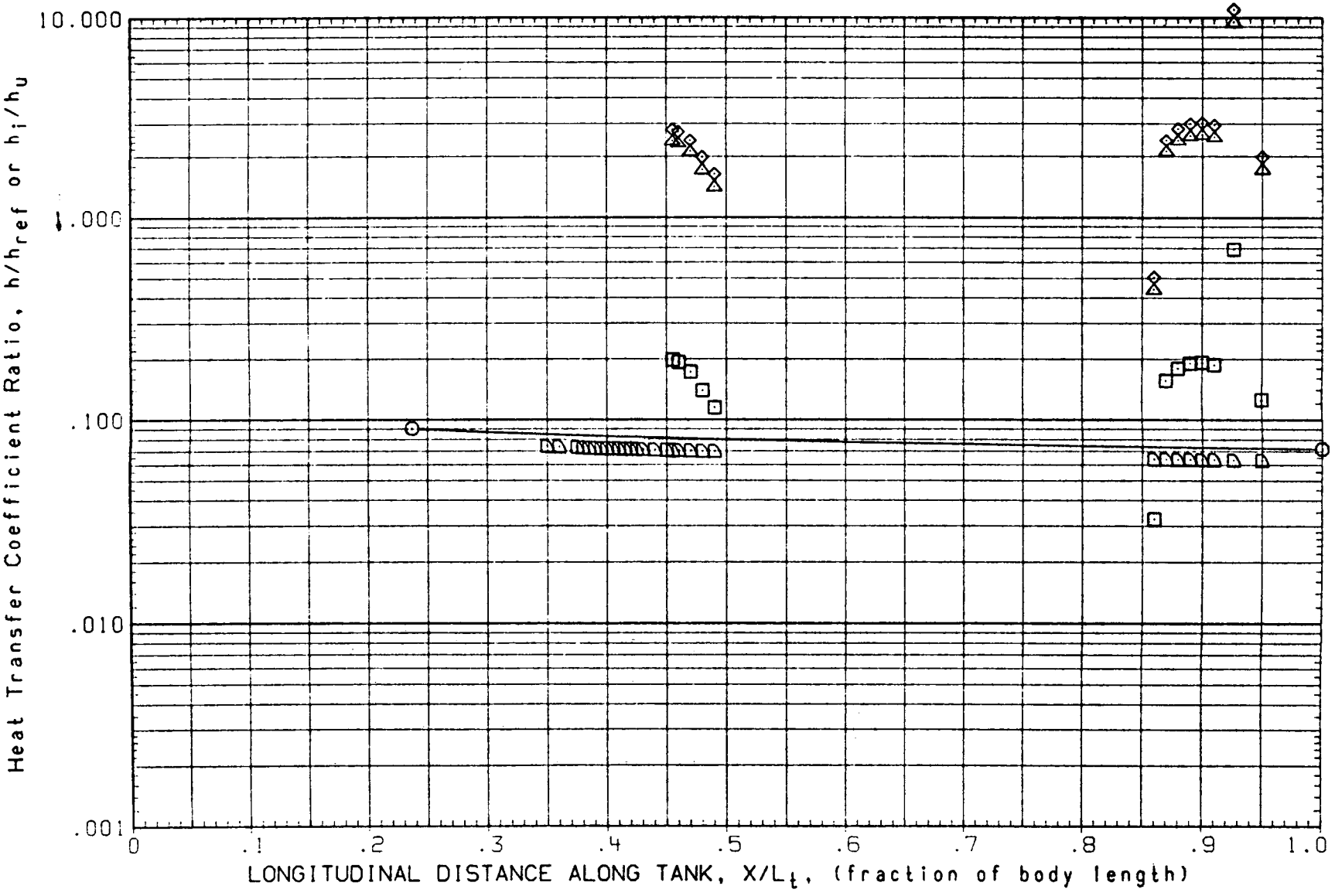

FIG. 4-13 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 348.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT24)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	4.500
(C9NT24)	⊿	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	4.500
(V4LT45)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	4.500
(X4LT45)	◇	IH85 (W.L. TEST) OTS/ET = V4LT45/C9NT24=	HI/HU	4.020	-5.000	4.500
(Y4LT45)	△	IH85 (W.L. THEORY) OTS/ET = V4LT45/A9NT24=	HI/HU	4.020	-5.000	4.500

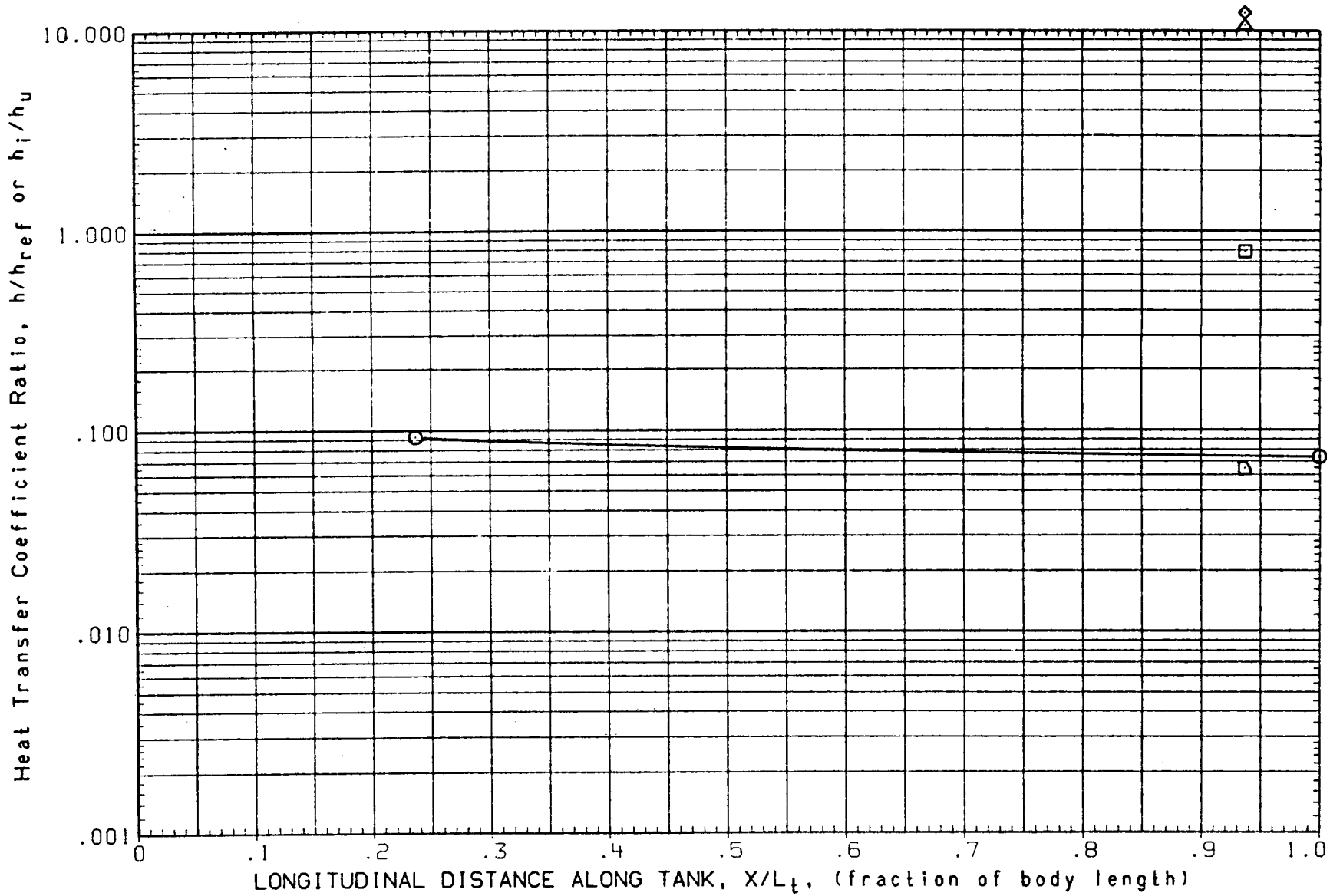

FIG. 4-13 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 352.200

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT24)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	4.500
(C9NT24)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	4.500
(V4LT45)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	4.500
(X4LT45)	◇	IH85 (W.L. TEST) OTS/ET = V4LT45/C9NT24=	HI/HU	4.020	-5.000	4.500
(Y4LT45)	△	IH85 (W.L. THEORY) OTS/ET = V4LT45/A9NT24=	HI/HU	4.020	-5.000	4.500

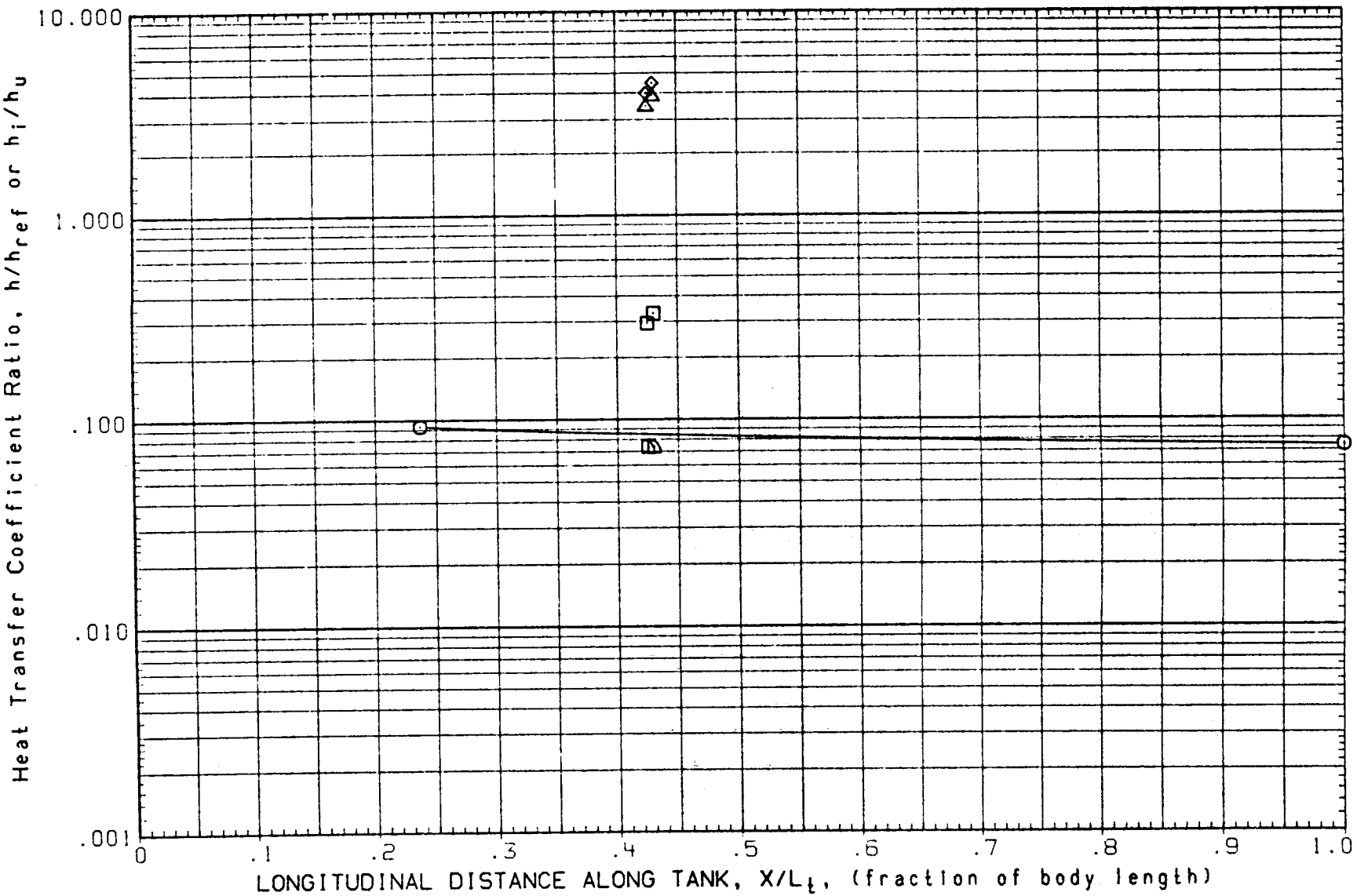

FIG. 4-13 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 354.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT24)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	4.500
(C9NT24)	⬠	DATA NOT AVAILABLE		4.020	-5.000	4.500
(Y4LT45)	□	DATA NOT AVAILABLE		4.020	-5.000	4.500
(X4LT45)	◇	DATA NOT AVAILABLE		4.020	-5.000	4.500
(Y4LT45)	△	DATA NOT AVAILABLE		4.020	-5.000	4.500

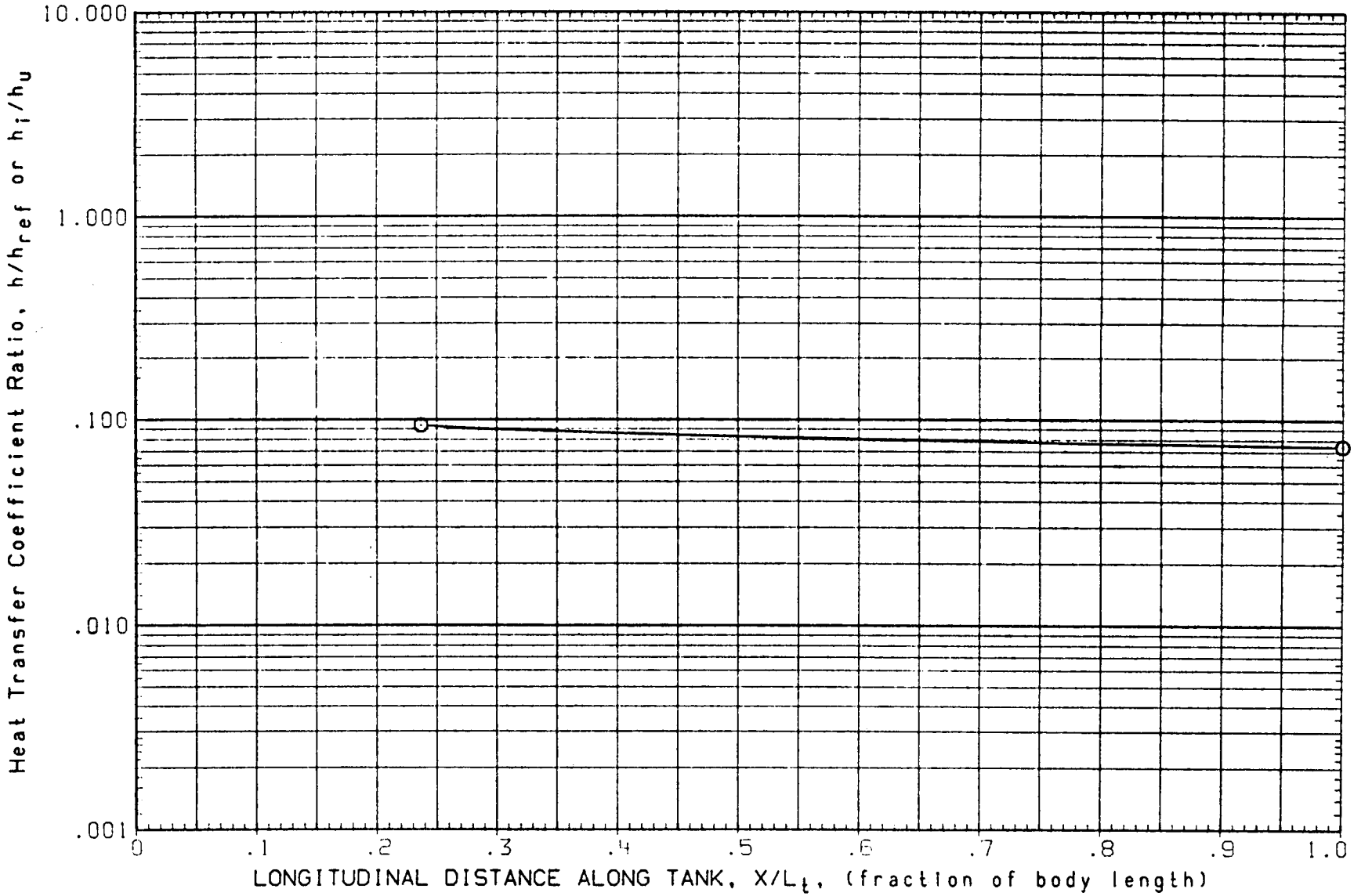

FIG. 4-13 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 355.160

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT24)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	4.500
(C9NT24)	⌂	DATA NOT AVAILABLE		4.020	-5.000	4.500
(V4LT45)	□	DATA NOT AVAILABLE		4.020	-5.000	4.500
(X4LT45)	◇	DATA NOT AVAILABLE		4.020	-5.000	4.500
(Y4LT45)	△	DATA NOT AVAILABLE		4.020	-5.000	4.500

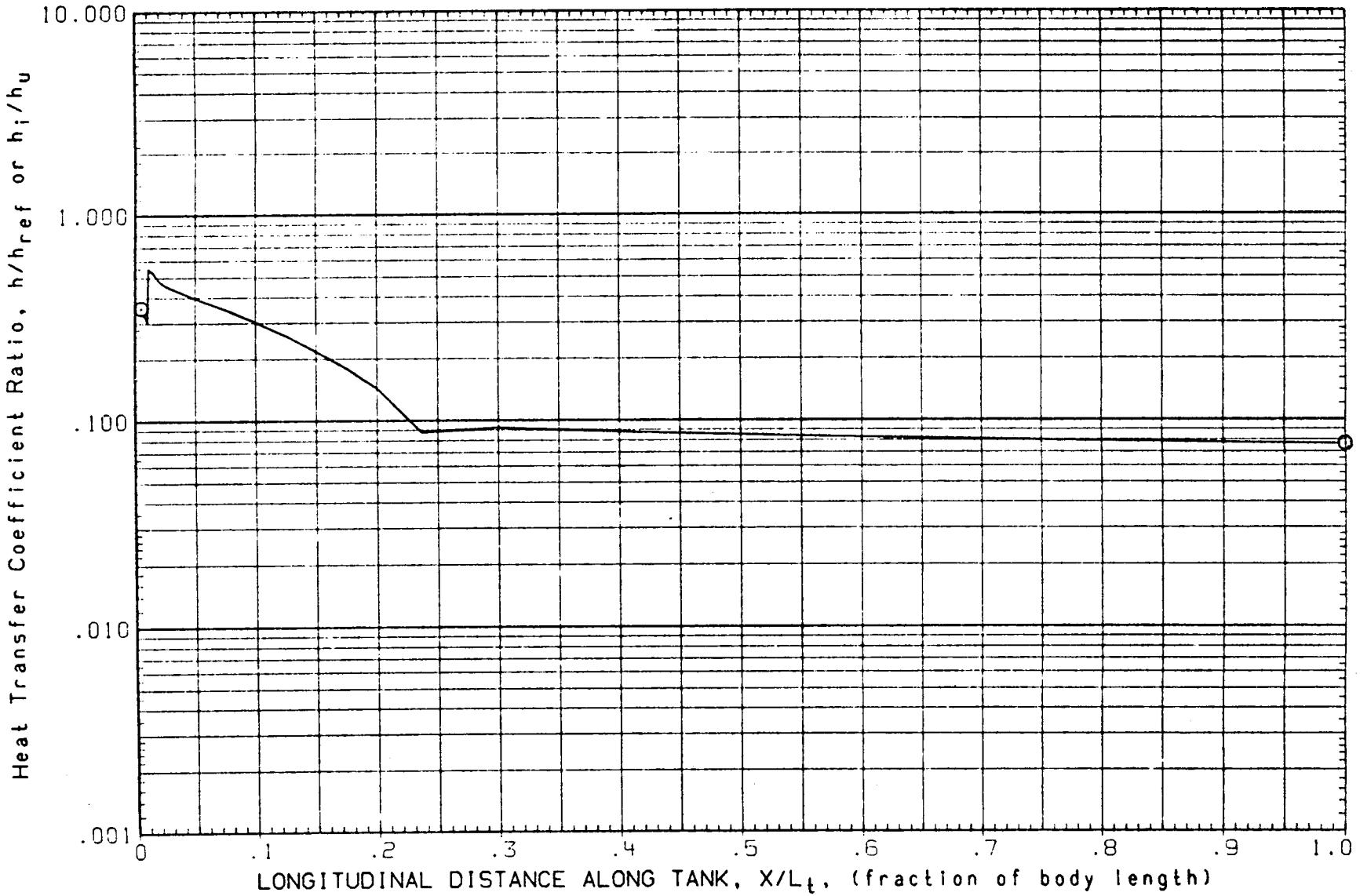

FIG. 4-13 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 360.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT26)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	7.500
(C9NT26)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	7.500
(V4LT47)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	7.500
(X4LT47)	◇	IH85 (W.L. TEST) OTS/ET = V4LT47/C9NT26= HI/HU		4.020	-5.000	7.500
(Y4LT47)	△	IH85 (W.L. THEORY) OTS/ET = V4LT47/A9NT26= HI/HU		4.020	-5.000	7.500

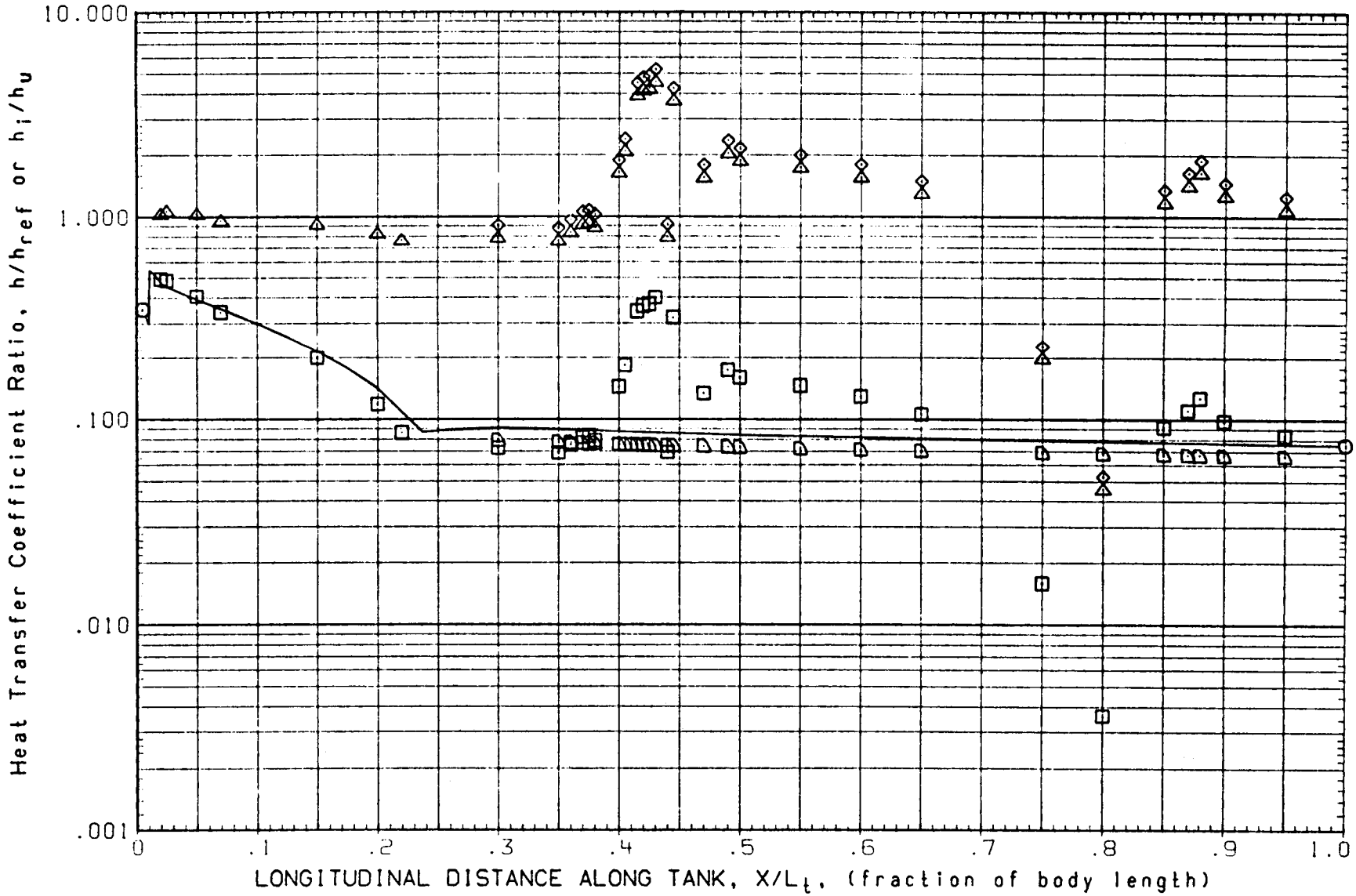

FIG. 4-14 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = .000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT26)	○	DATA NOT AVAILABLE	4.020	-5.000	7.500
(C9NT26)	⊿	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	4.020	-5.000	7.500
(V4LT47)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	-5.000	7.500
(X4LT47)	◇	IH85 (W.L. TEST) OTS/ET = V4LT47/C9NT26= HI/HU	4.020	-5.000	7.500
(Y4LT47)	△	IH85 (W.L. THEORY) OTS/ET = V4LT47/A9NT26= HI/HU	4.020	-5.000	7.500

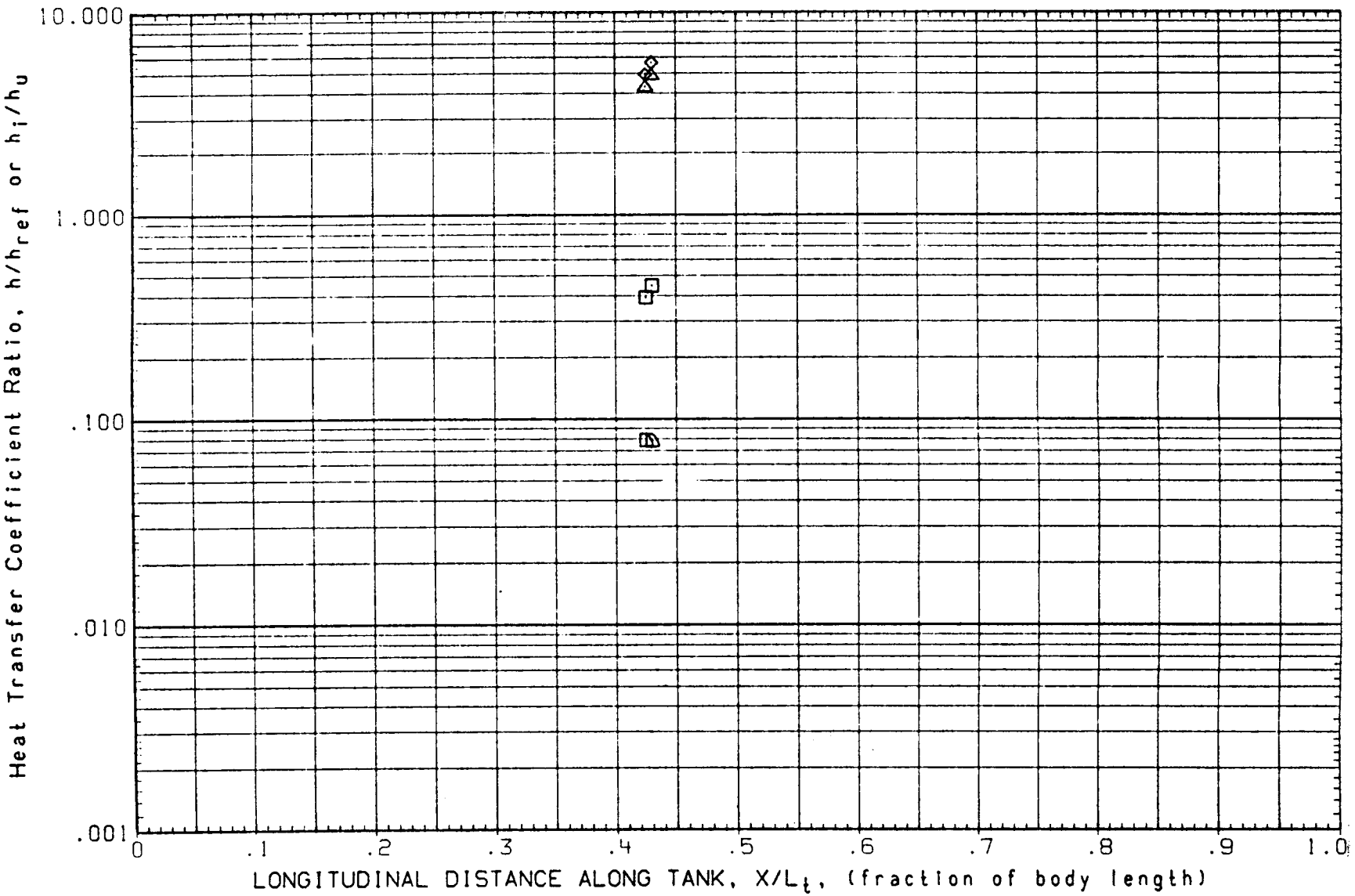

FIG. 4-14 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 5.625

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT26)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	7.500
(C9NT26)	◗	DATA NOT AVAILABLE		4.020	-5.000	7.500
(V4LT47)	□	DATA NOT AVAILABLE		4.020	-5.000	7.500
(X4LT47)	◇	DATA NOT AVAILABLE		4.020	-5.000	7.500
(Y4LT47)	△	DATA NOT AVAILABLE		4.020	-5.000	7.500

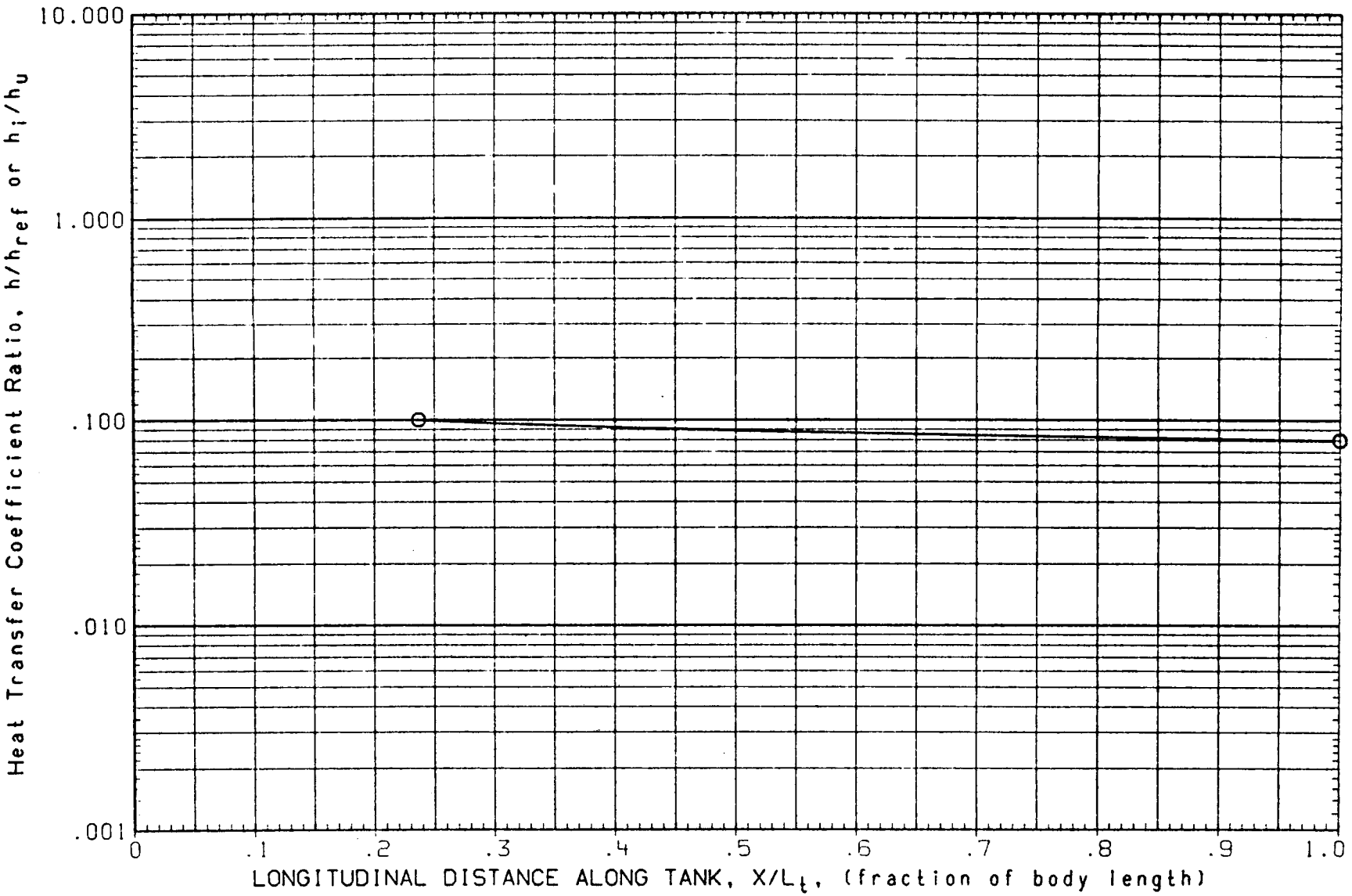

FIG. 4-14 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 5.630

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT26)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	7.500
(C9NT26)	⊿	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	7.500
(V4LT47)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	7.500
(X4LT47)	◇	IH85 (W.L. TEST) OTS/ET = V4LT47/C9NT26=	HI/HU	4.020	-5.000	7.500
(Y4LT47)	△	IH85 (W.L. THEORY) OTS/ET = V4LT47/A9NT26=	HI/HU	4.020	-5.000	7.500

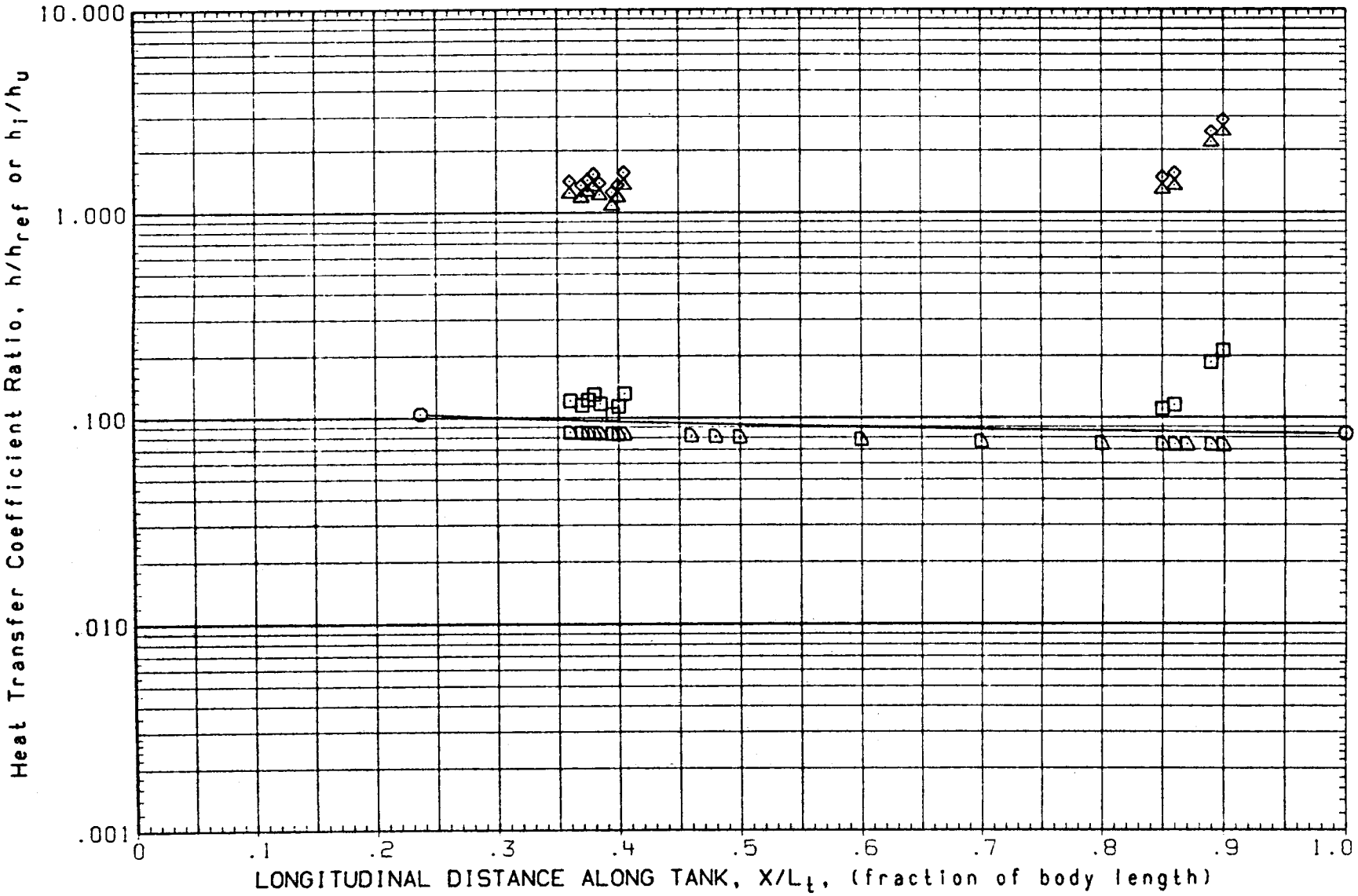

FIG. 4-14 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 11.250

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT26)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	7.500
(C9NT26)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	7.500
(V4LT47)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	7.500
(X4LT47)	◇	IH95 (W.L. TEST) OTS/ET = V4LT47/C9NT26= HI/HU		4.020	-5.000	7.500
(Y4LT47)	△	IH85 (W.L. THEORY) OTS/ET = V4LT47/A9NT26= HI/HU		4.020	-5.000	7.500

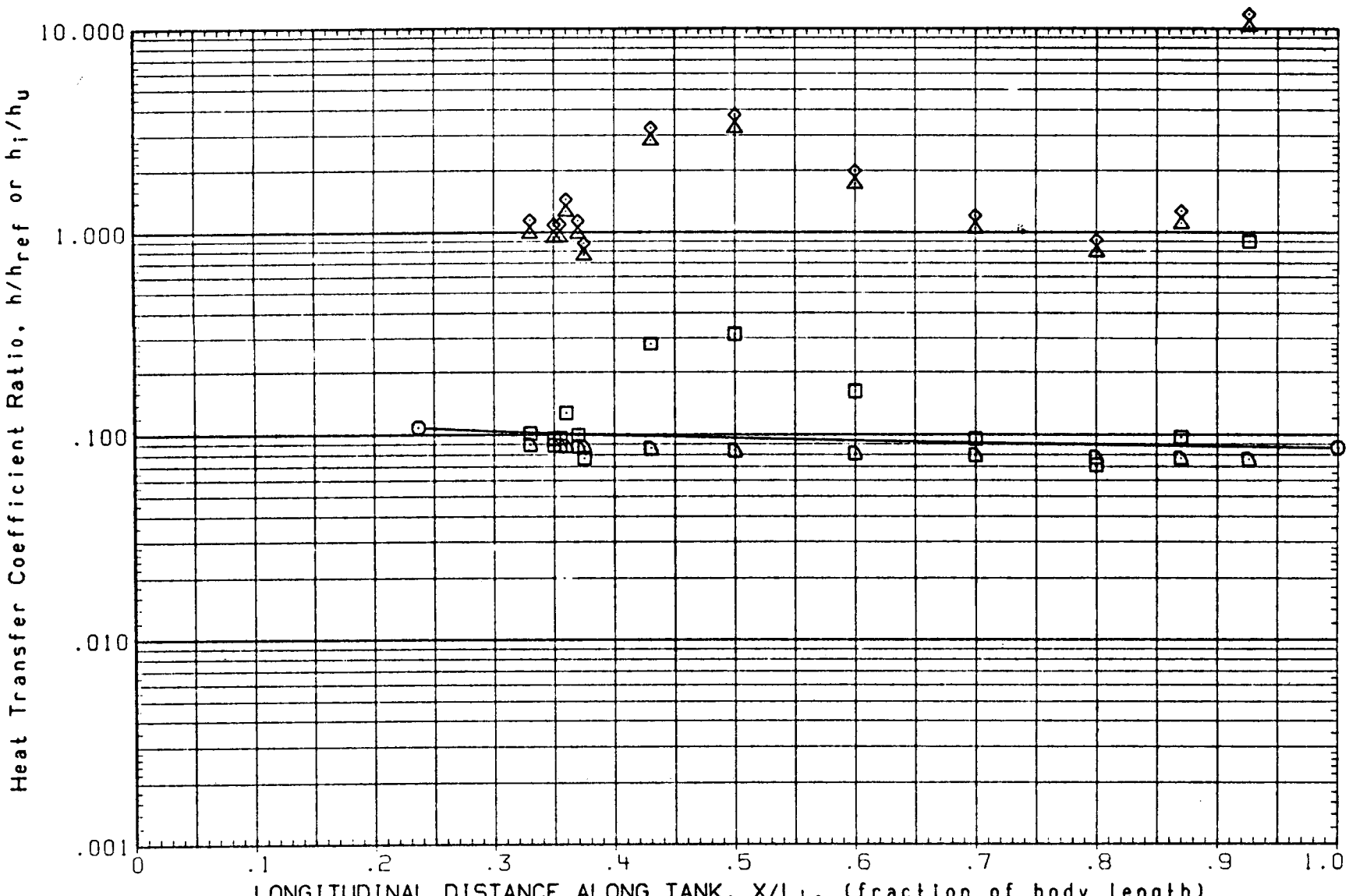

FIG. 4-14 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 17.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT26)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	7.500
(C9NT26)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	7.500
(V4LT47)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	7.500
(X4LT47)	◇	IH85 (W.L. TEST) OTS/ET = V4LT47/C9NT26=	HI/HU	4.020	-5.000	7.500
(Y4LT47)	△	IH85 (W.L. THEORY) OTS/ET = V4LT47/A9NT26=	HI/HU	4.020	-5.000	7.500

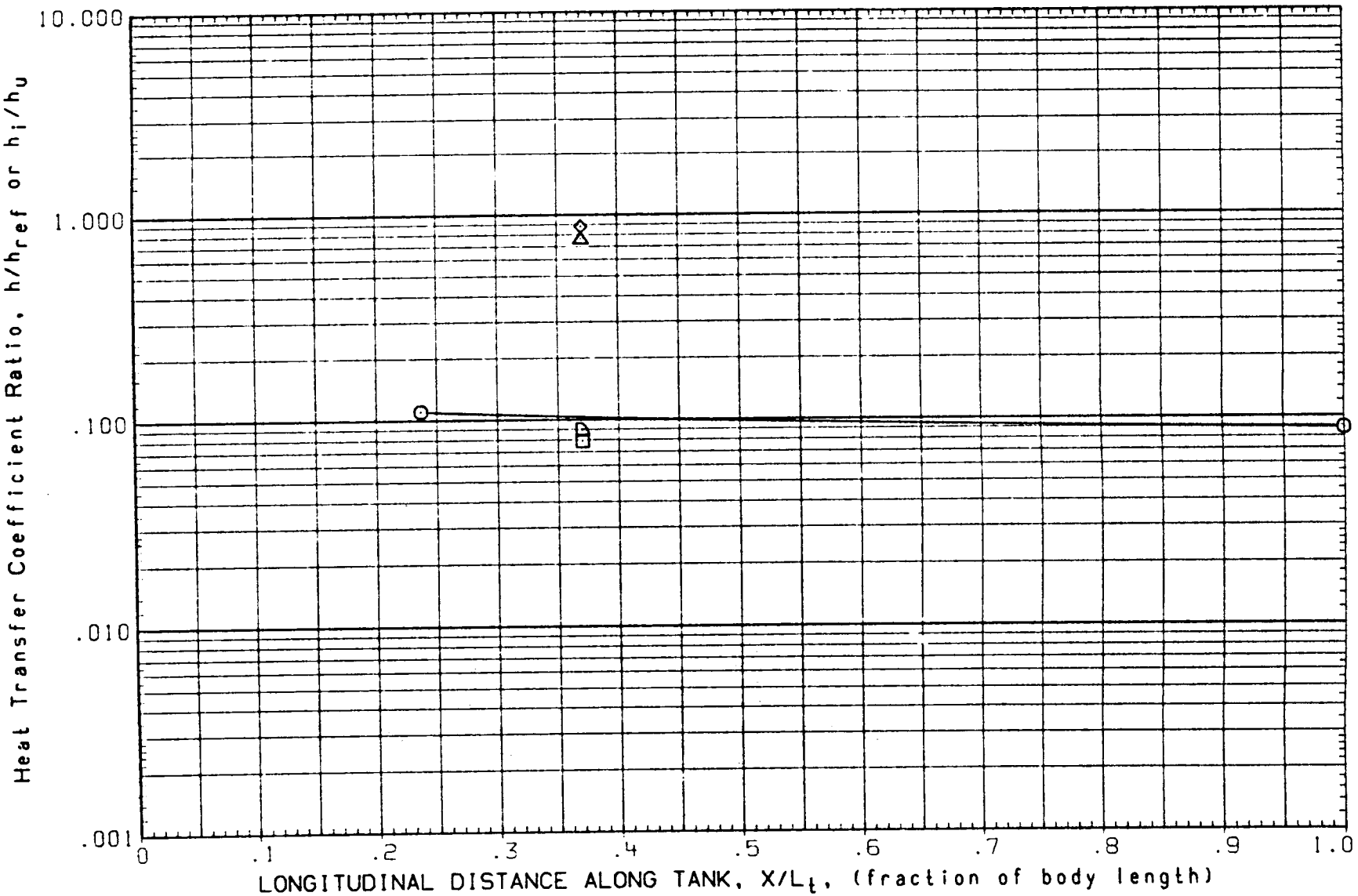

FIG. 4-14 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 20.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT26)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	7.500
(C9NT26)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	7.500
(V4LT47)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	7.500
(X4LT47)	◇	IH85 (W.L. TEST) OTS/ET = V4LT47/C9NT26=	HI/HU	4.020	-5.000	7.500
(Y4LT47)	△	IH85 (W.L. THEORY) OTS/ET = V4LT47/A9NT26=	HI/HU	4.020	-5.000	7.500

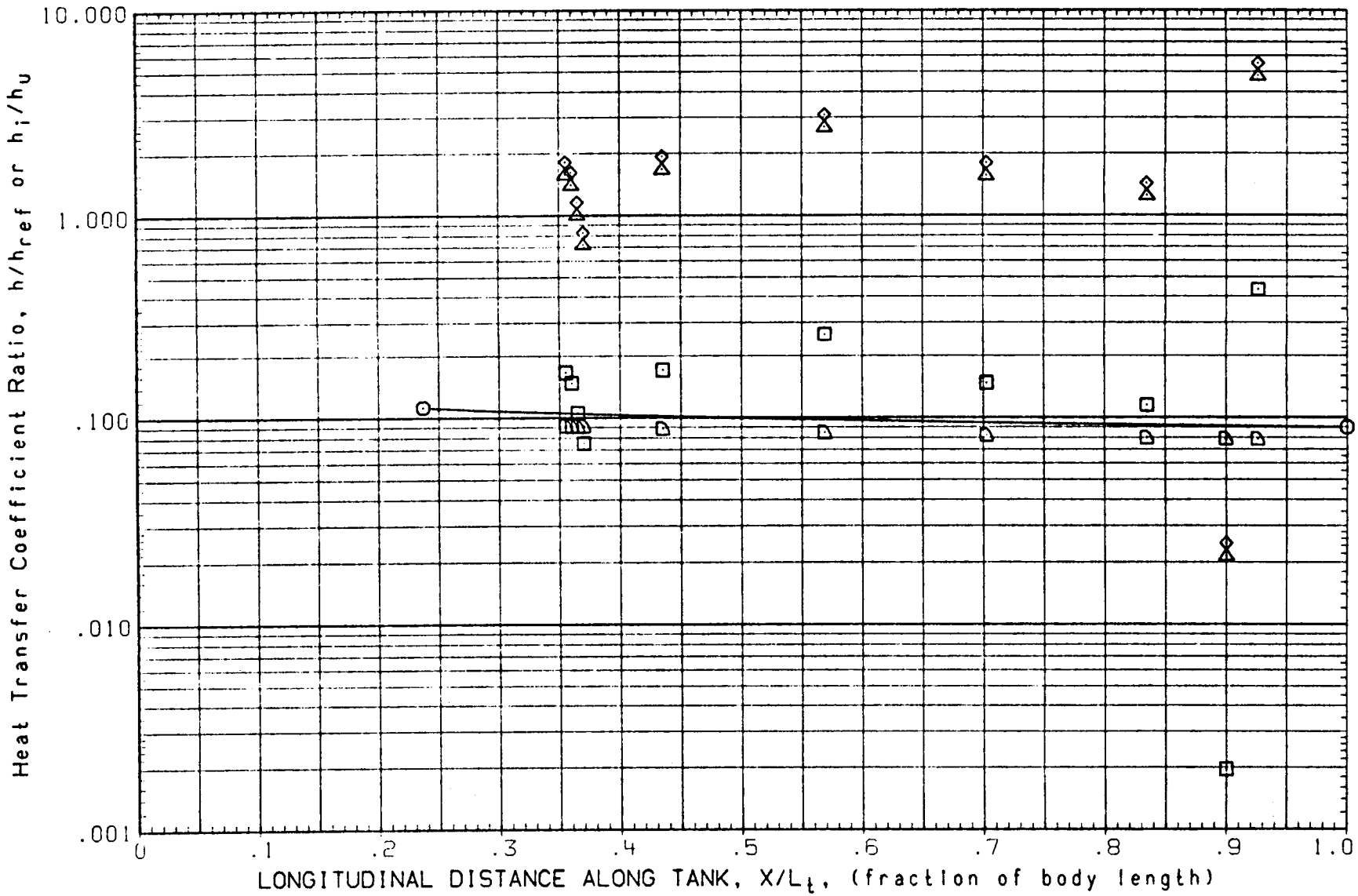

FIG. 4-14 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 23.070

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT26)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	4.020	-5.000	7.500
(C9NT26)	⊐	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	4.020	-5.000	7.500
(V4LT47)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	-5.000	7.500
(X4LT47)	◇	IH85 (W.L. TEST) OTS/ET = V4LT47/C9NT26= HI/HU	4.020	-5.000	7.500
(Y4LT47)	△	IH85 (W.L. THEORY) OTS/ET = V4LT47/A9NT26= HI/HU	4.020	-5.000	7.500

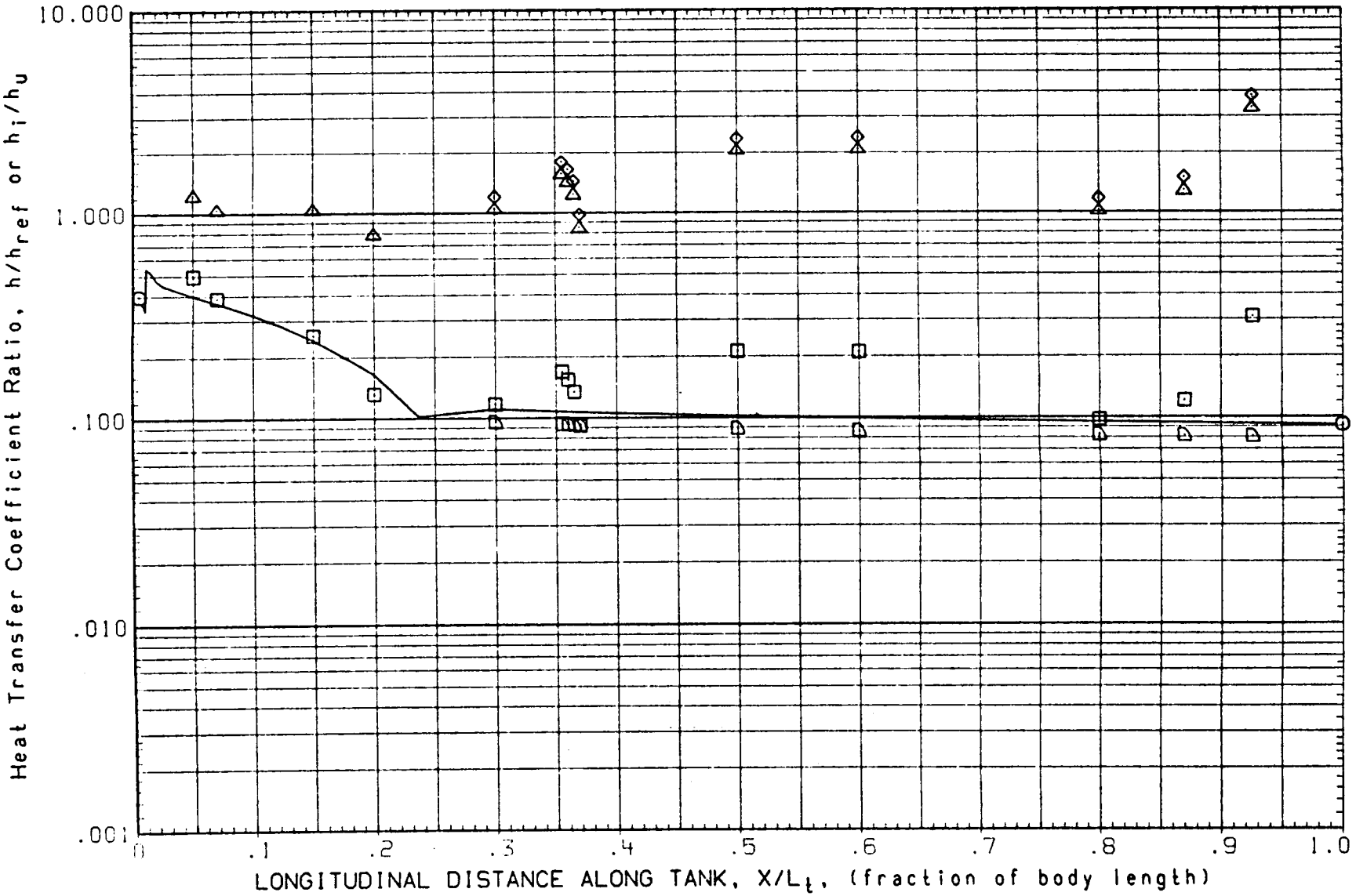

FIG. 4-14 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 29.800

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT26)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	7.500
(C9NT26)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	7.500
(V4LT47)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	7.500
(X4LT47)	◇	IH85 (W.L. TEST) OTS/ET = V4LT47/C9NT26= HI/HU		4.020	-5.000	7.500
(Y4LT47)	△	IH85 (W.L. THEORY) OTS/ET = V4LT47/A9NT26= HI/HU		4.020	-5.000	7.500

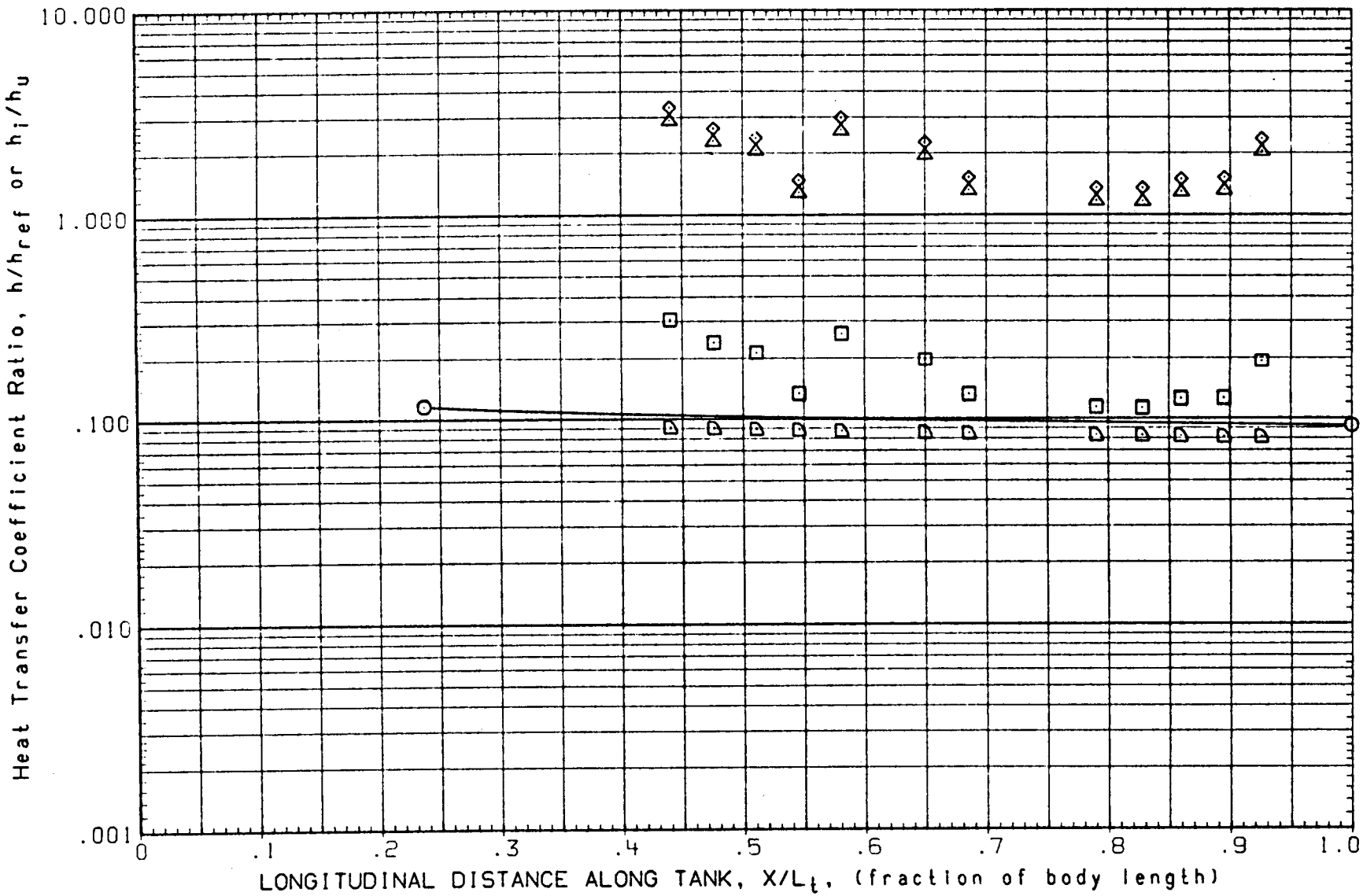

FIG. 4-14 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 31.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT26)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	7.500
(C9NT26)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	7.500
(V4LT47)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	7.500
(X4LT47)	◇	IH85 (W.L. TEST) OTS/ET = V4LT47/C9NT26=	HI/HU	4.020	-5.000	7.500
(Y4LT47)	△	IH85 (W.L. THEORY) OTS/ET = V4LT47/A9NT26=	HI/HU	4.020	-5.000	7.500

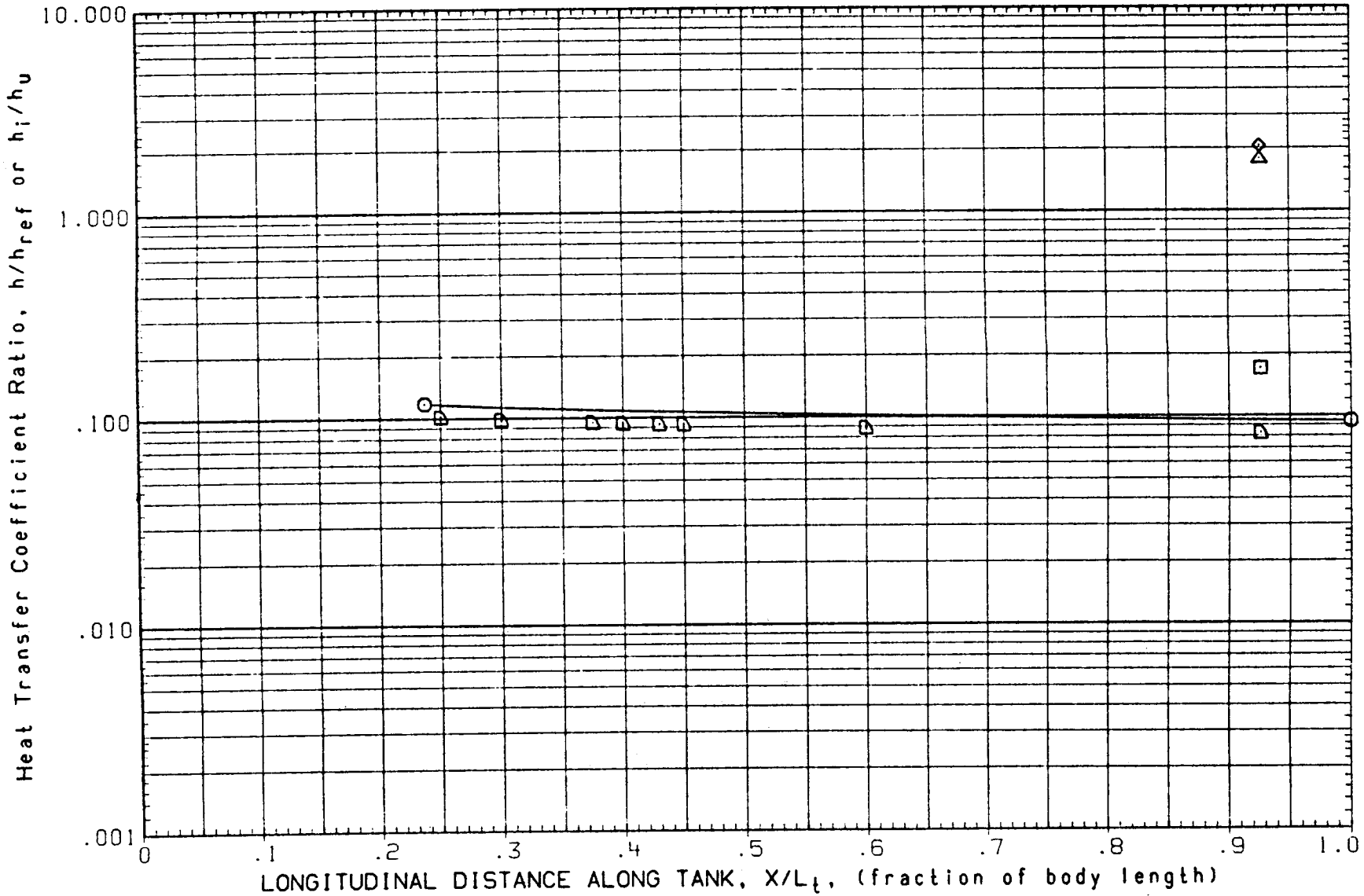

FIG. 4-14 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 33.750

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT26)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	7.500
(C9NT26)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	7.500
(V4LT47)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	7.500
(X4LT47)	◇	IH85 (W.L. TEST) OTS/ET = V4LT47/C9NT26=	HI/HU	4.020	-5.000	7.500
(Y4LT47)	△	IH85 (W.L. THEORY) OTS/ET = V4LT47/A9NT26=	HI/HU	4.020	-5.000	7.500

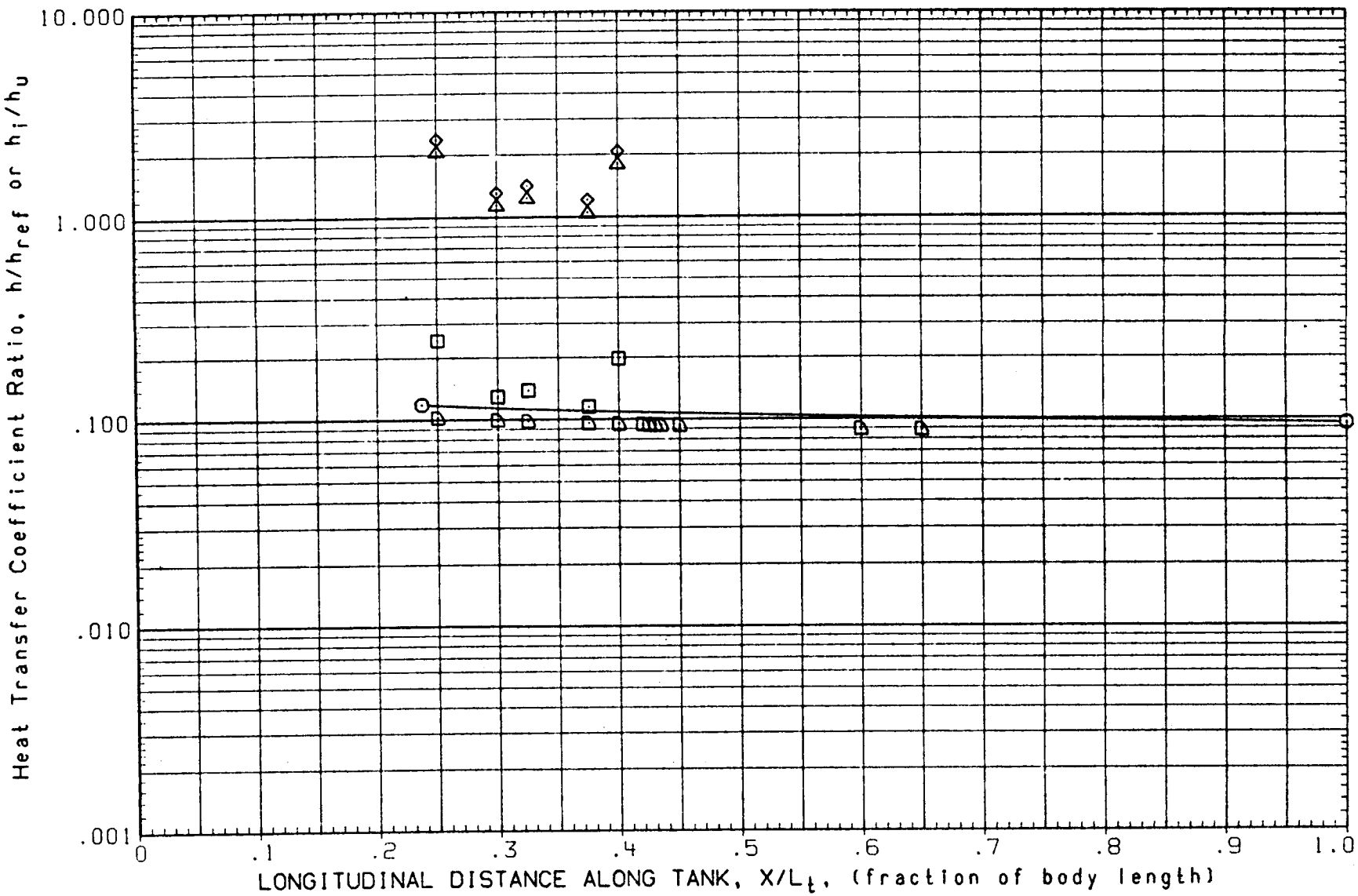

FIG. 4-14 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 36.320

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT26)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	7.500
(C9NT26)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	7.500
(V4LT47)	□	IH85, AEDC V4!A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	7.500
(X4LT47)	◇	IH85 (W.L. TEST) OTS/ET = V4LT47/C9NT26=	HI/HU	4.020	-5.000	7.500
(Y4LT47)	△	IH85 (W.L. THEORY) OTS/ET = V4LT47/A9NT26=	HI/HU	4.020	-5.000	7.500

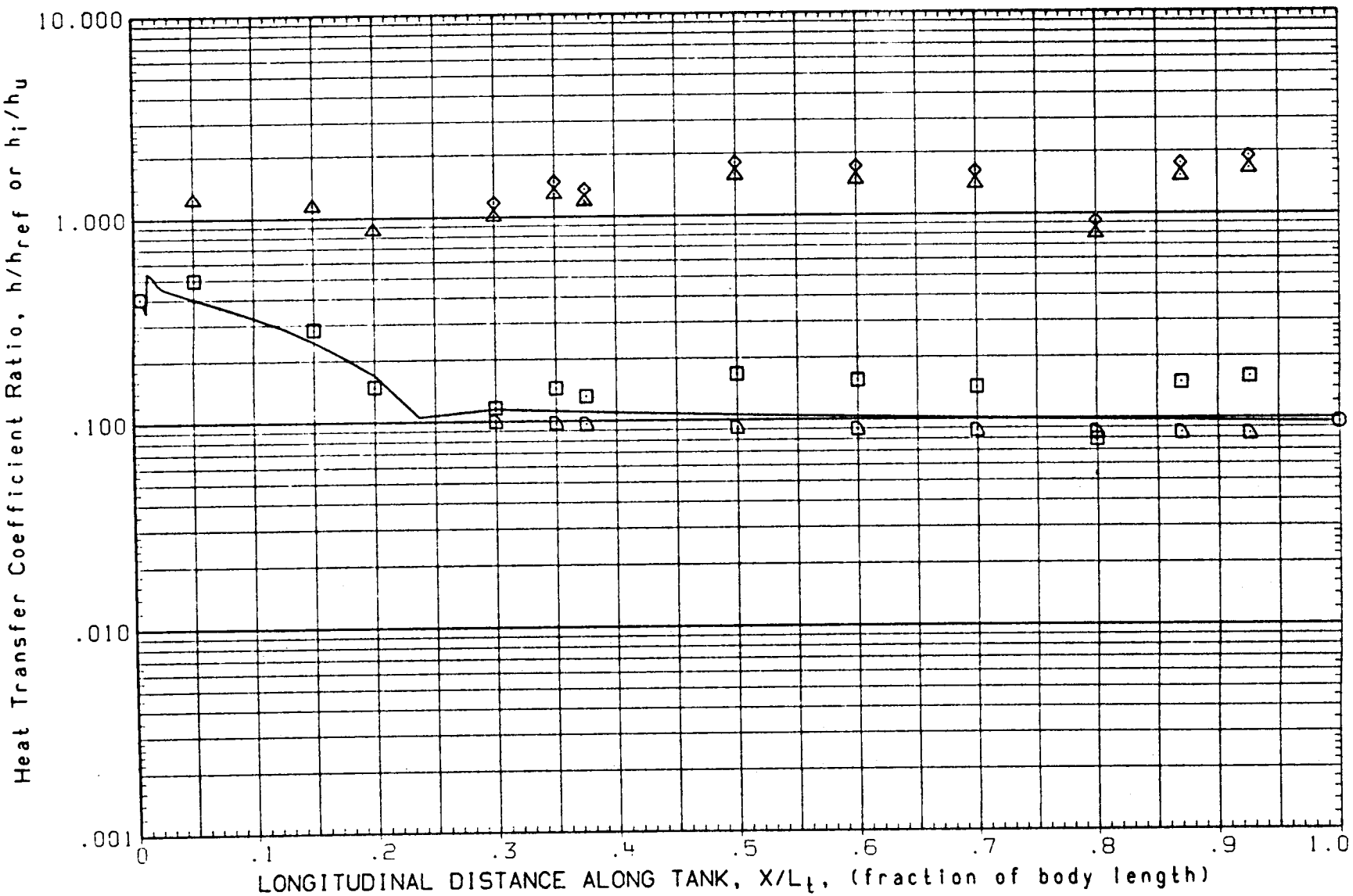

FIG. 4-14 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 7.5
0 < X/LT < 1.0 (L:NEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 37.700

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT26)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	7.500
(L9NT26)	⬠	DATA NOT AVAILABLE		4.020	-5.000	7.500
(Y4LT47)	□	DATA NOT AVAILABLE		4.020	-5.000	7.500
(X4LT47)	◇	DATA NOT AVAILABLE		4.020	-5.000	7.500
(Y4LT47)	△	DATA NOT AVAILABLE		4.020	-5.000	7.500

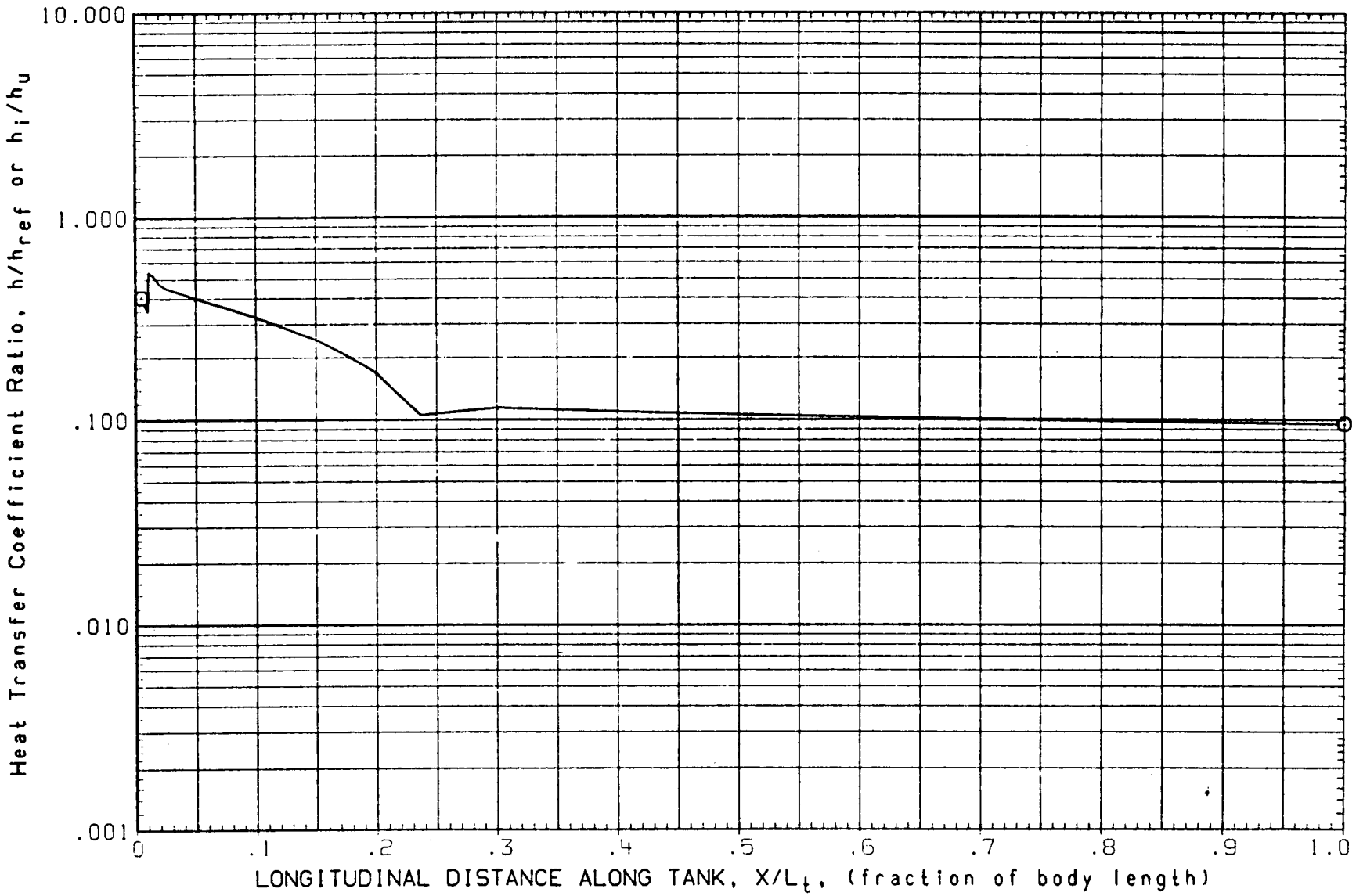

FIG. 4-14 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 39.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT26)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	7.500
(C9NT26)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	7.500
(V4LT47)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	7.500
(X4LT47)	◇	IH85 (W.L. TEST) OTS/ET = V4LT47/C9NT26=	HI/HU	4.020	-5.000	7.500
(Y4LT47)	△	IH85 (W.L. THEORY) OTS/ET = V4LT47/A9NT26=	HI/HU	4.020	-5.000	7.500

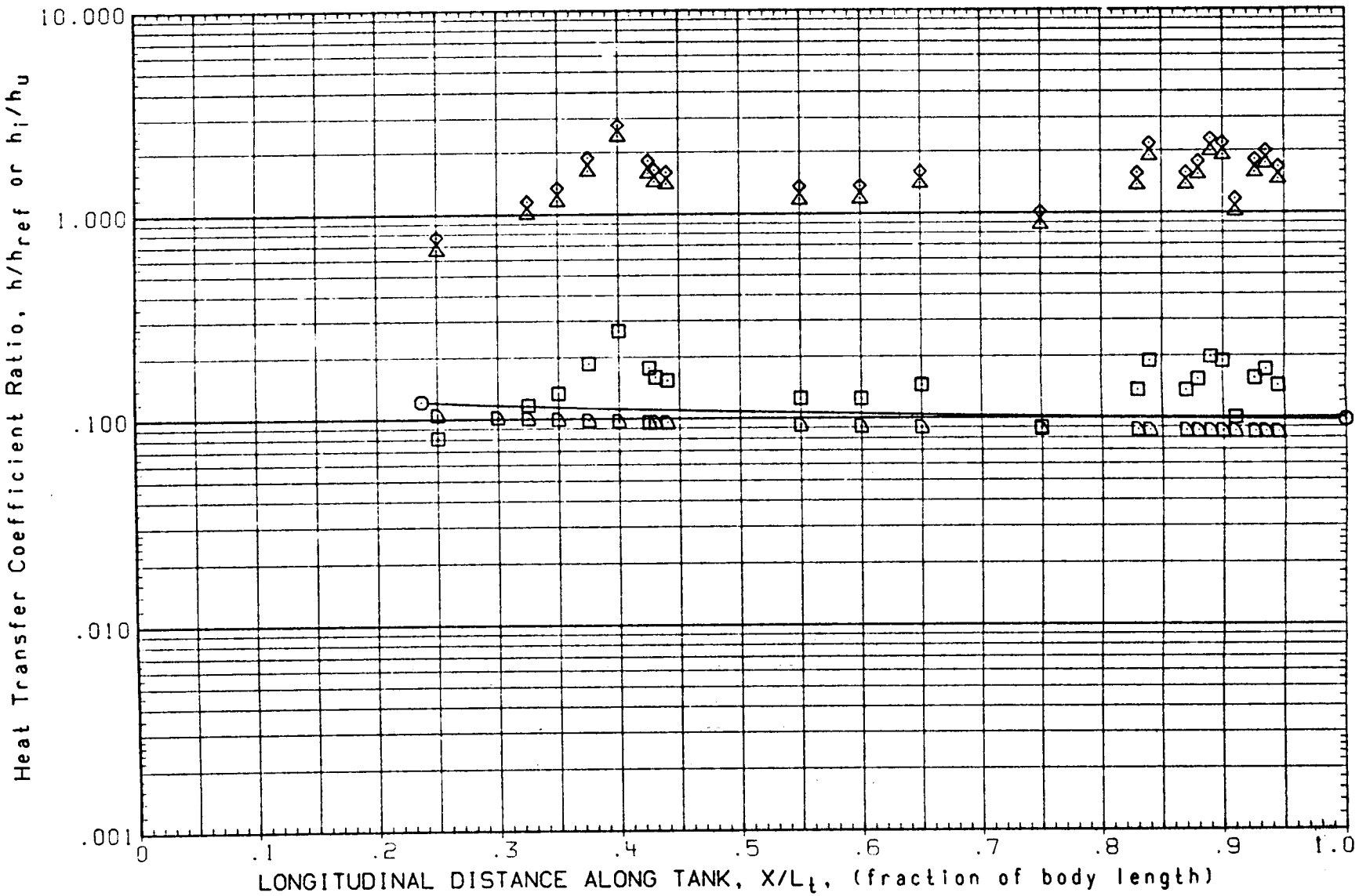

FIG. 4-14 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 45.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT26)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	4.020	-5.000	7.500
(C9NT26)	⬠	DATA NOT AVAILABLE	4.020	-5.000	7.500
(V4LT47)	□	1H85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	-5.000	7.500
(X4LT47)	◇	DATA NOT AVAILABLE	4.020	-5.000	7.500
(Y4LT47)	△	1H85 (W.L. THEORY) OTS/ET = V4LT47/A9NT26= HI/HU	4.020	-5.000	7.500

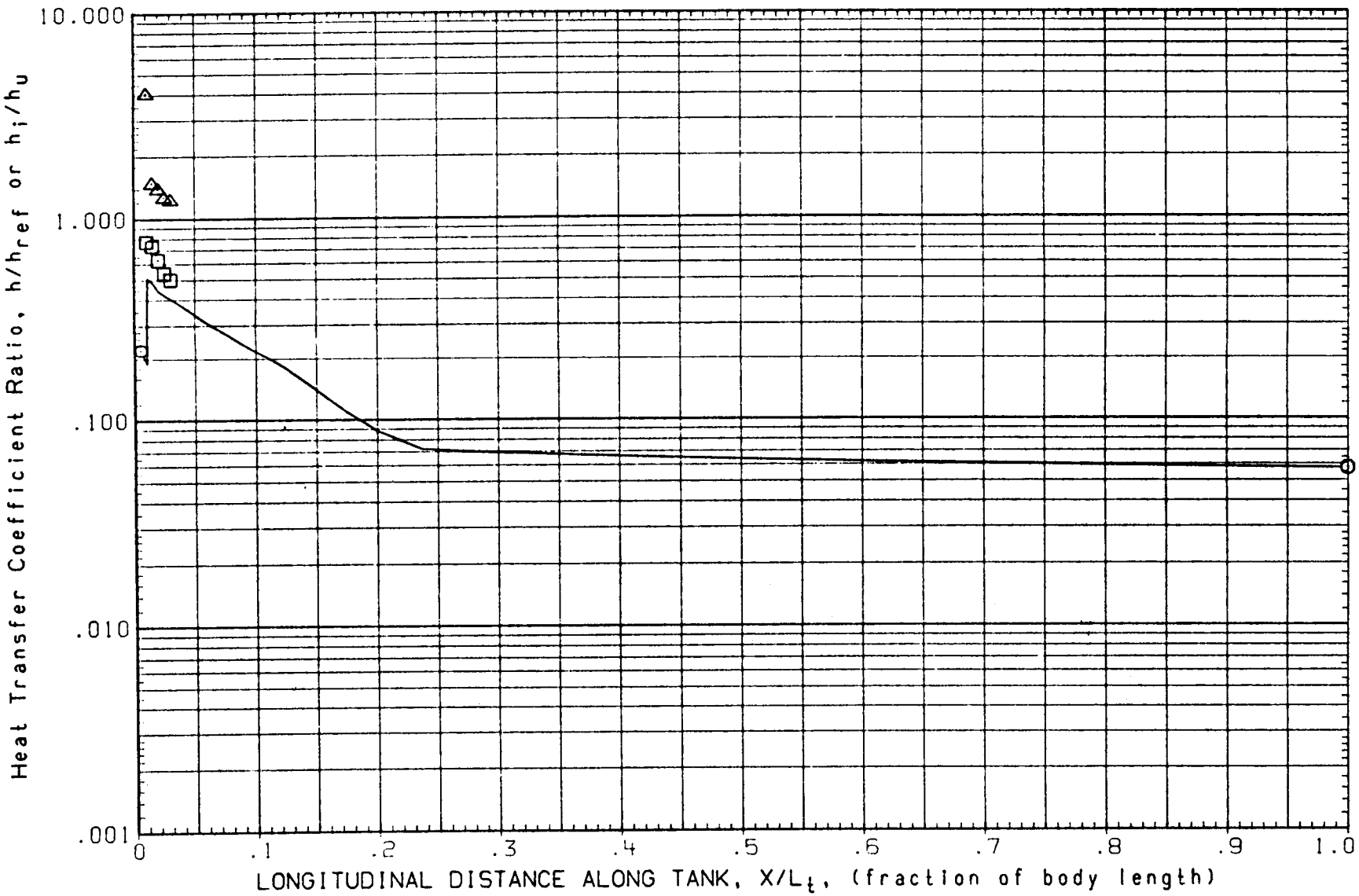

FIG. 4-14 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 180.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT26)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	7.500
(C9NT26)	⬠	DATA NOT AVAILABLE		4.020	-5.000	7.500
(V4LT47)	□	DATA NOT AVAILABLE		4.020	-5.000	7.500
(X4LT47)	◇	DATA NOT AVAILABLE		4.020	-5.000	7.500
(Y4LT47)	△	DATA NOT AVAILABLE		4.020	-5.000	7.500

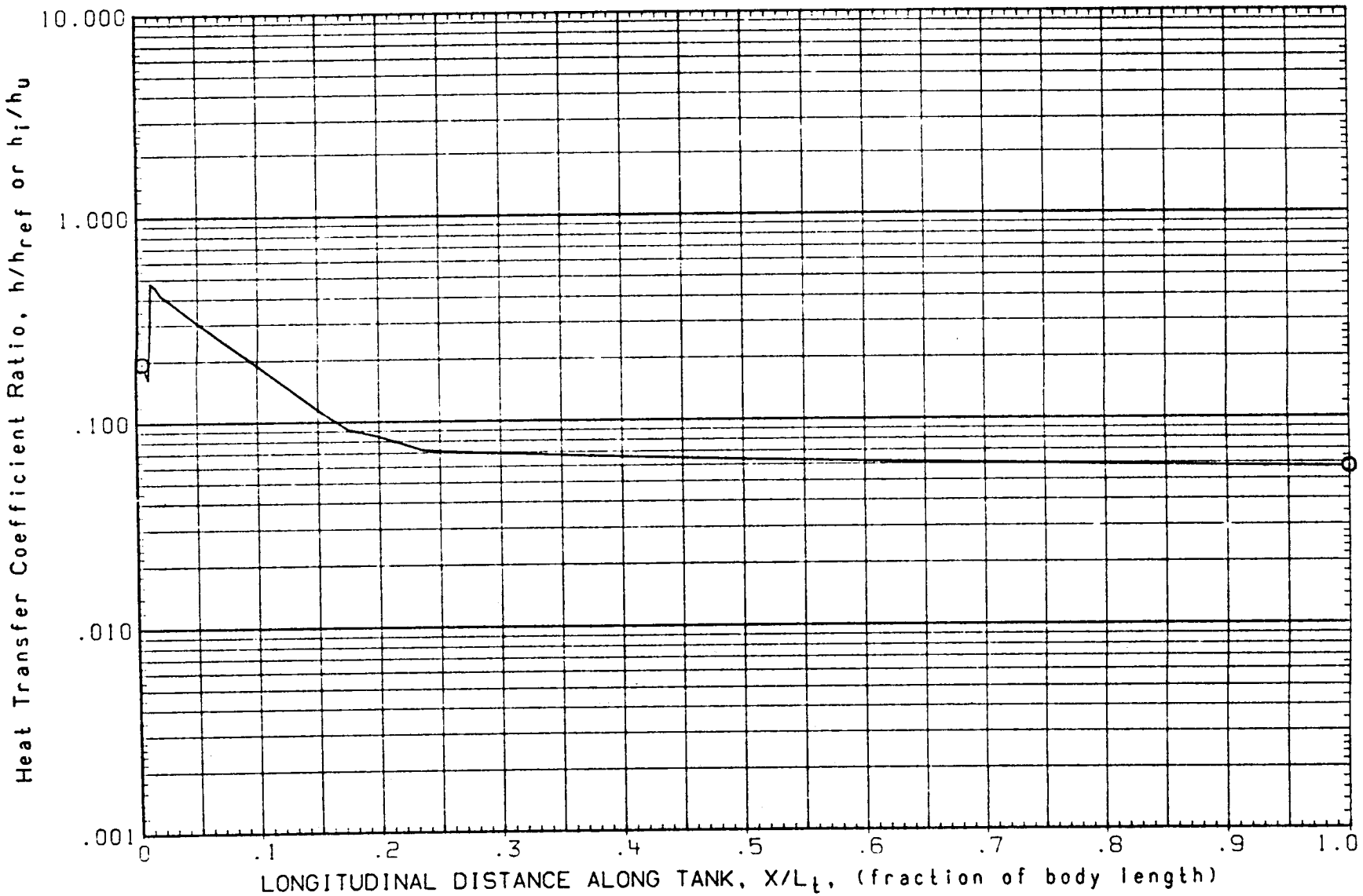

FIG. 4-14 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 235.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT26)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	7.500
(C9NT26)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	7.500
(V4LT47)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	7.500
(X4LT47)	◇	IH85 (W.L. TEST) OTS/ET = V4LT47/C9NT26= HI/HU		4.020	-5.000	7.500
(Y4LT47)	△	IH85 (W.L. THEORY) OTS/ET = V4LT47/A9NT26= HI/HU		4.020	-5.000	7.500

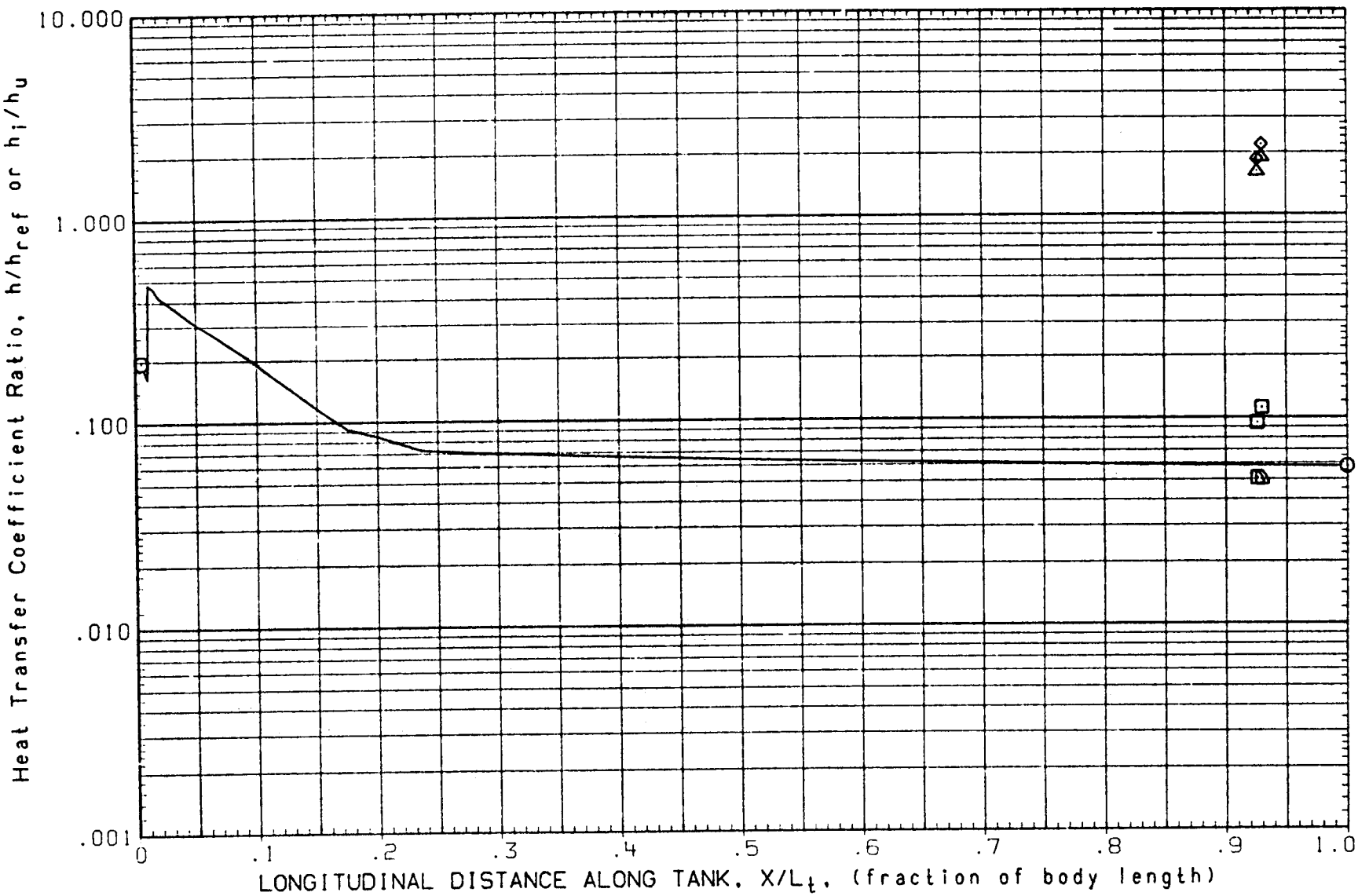

FIG. 4-14 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 247.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT26)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	7.500
(C9NT26)	⬠	DATA NOT AVAILABLE		4.020	-5.000	7.500
(V4LT47)	□	DATA NOT AVAILABLE		4.020	-5.000	7.500
(X4LT47)	◇	DATA NOT AVAILABLE		4.020	-5.000	7.500
(Y4LT47)	△	DATA NOT AVAILABLE		4.020	-5.000	7.500

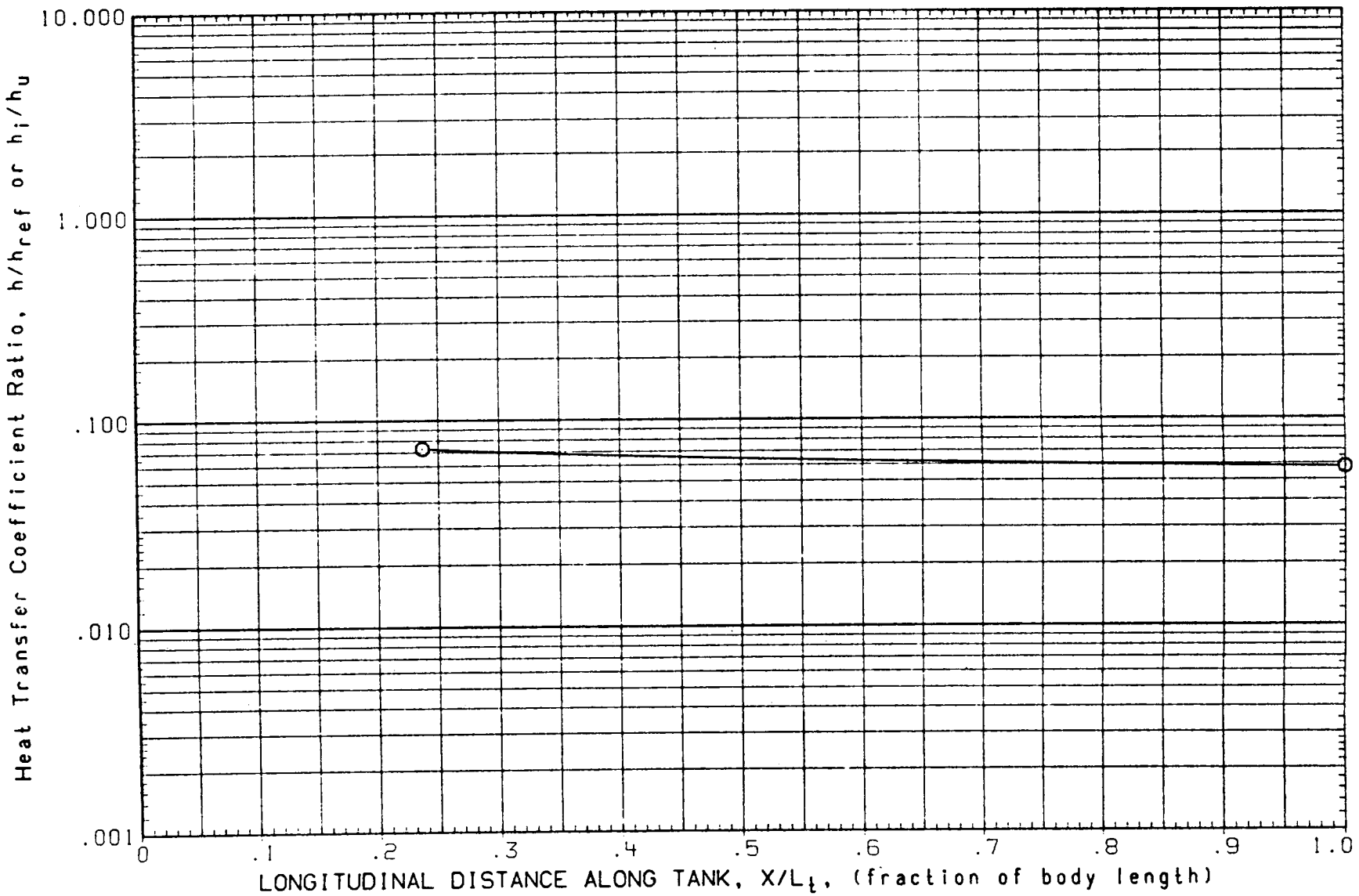

FIG. 4-14 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 247.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT26)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	7.500
(C9NT26)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	7.500
(V4LT47)	□	IH85, AEDC V41A-N5, CONFIGURATION 0 (T) S		4.020	-5.000	7.500
(X4LT47)	◇	IH95 (W.L. TEST) OTS/ET = V4LT47/C9NT26=	HI/HU	4.020	-5.000	7.500
(Y4LT47)	△	IH85 (W.L. THEORY) OTS/ET = V4LT47/A9NT26=	HI/HU	4.020	-5.000	7.500

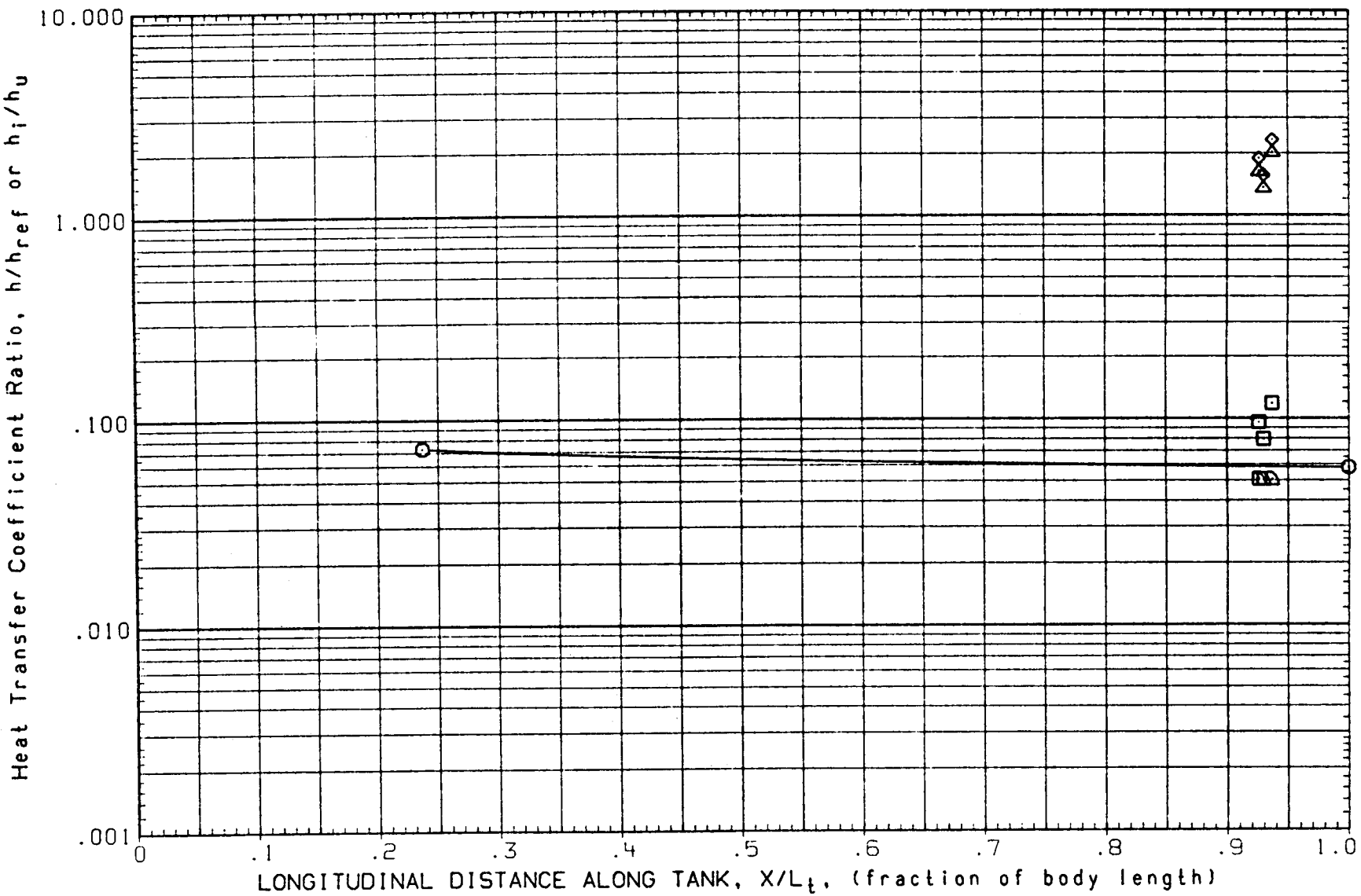

FIG. 4-14 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 250.570

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT26)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	7.500
(C9NT26)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	7.500
(V4LT47)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	7.500
(X4LT47)	◇	IH85 (W.L. TEST) OTS/ET = V4LT47/C9NT26=	HI/HU	4.020	-5.000	7.500
(Y4LT47)	△	IH85 (W.L. THEORY) OTS/ET = V4LT47/A9NT26=	HI/HU	4.020	-5.000	7.500

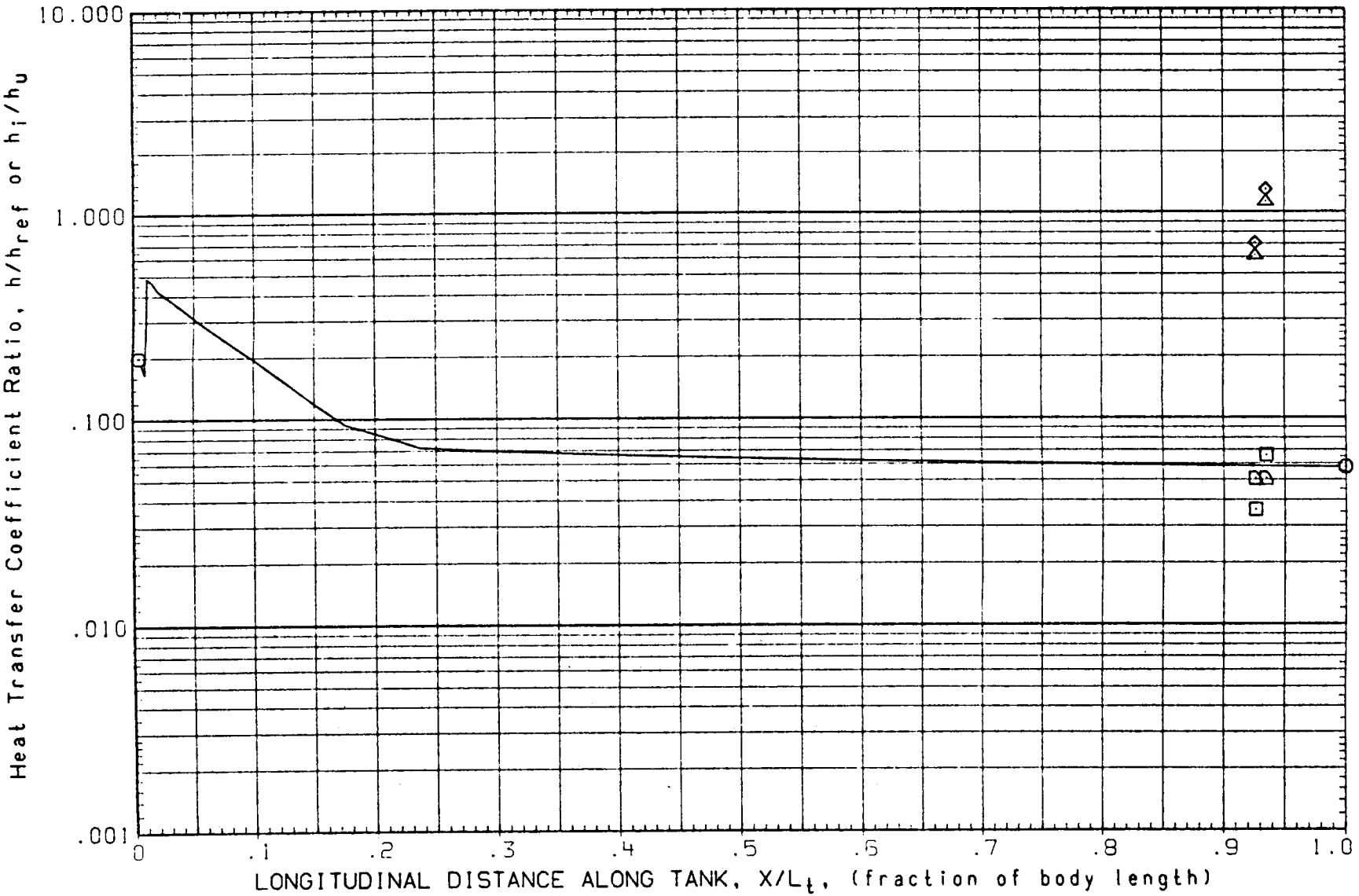

FIG. 4-14 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 258.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT26)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	7.500
(C9NT26)	⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	7.500
(V4LT47)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	7.500
(X4LT47)	◇	IH85 (W.L. TEST) OTS/ET = V4LT47/C9NT26=	HI/HU	4.020	-5.000	7.500
(Y4LT47)	△	IH85 (W.L. THEORY) OTS/ET = V4LT47/A9NT26=	HI/HU	4.020	-5.000	7.500

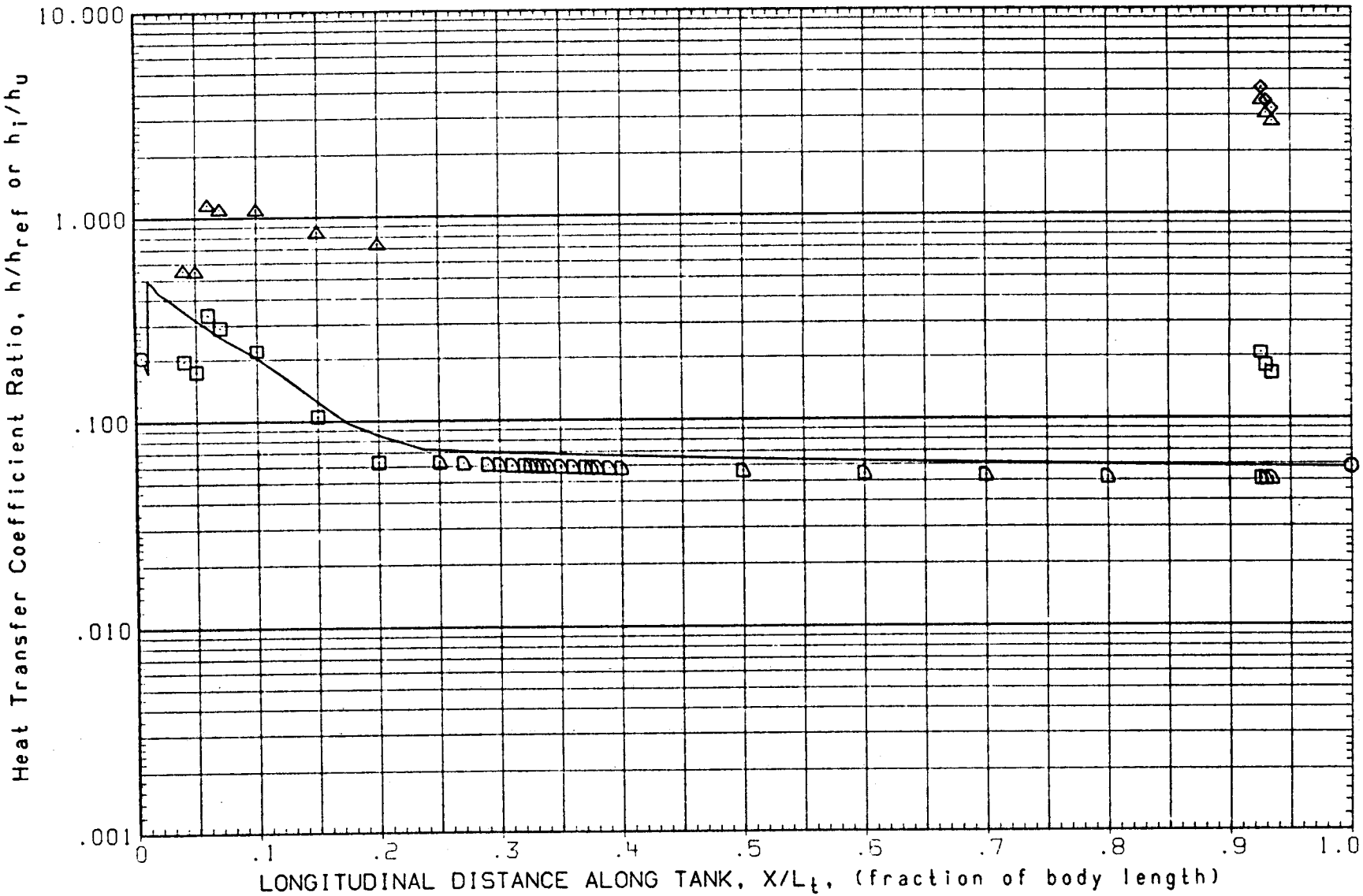

FIG. 4-14 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 270.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT26)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	7.500
(C9NT26)	⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	7.500
(V4LT47)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	7.500
(X4LT47)	◇	IH85 (W.L. TEST) OTS/ET = V4LT47/C9NT26=	HI/HU	4.020	-5.000	7.500
(Y4LT47)	△	IH85 (W.L. THEORY) OTS/ET = V4LT47/A9NT26=	HI/HU	4.020	-5.000	7.500

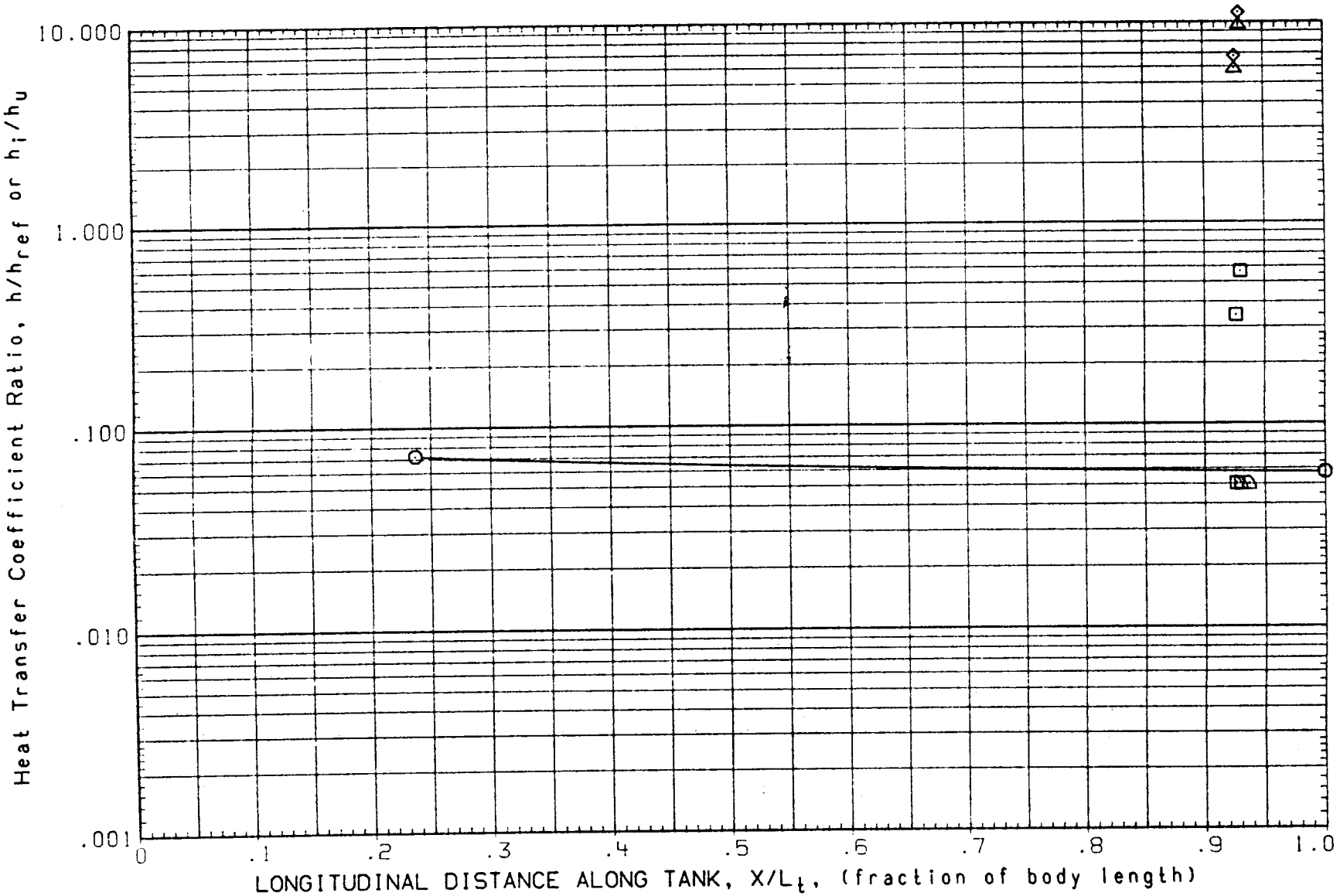

FIG. 4-14 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 289.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT26)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	7.500
(C9NT26)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	7.500
(V4LT47)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	7.500
(X4LT47)	◇	IH85 (W.L. TEST) OTS/ET = V4LT47/C9NT26= HI/HU		4.020	-5.000	7.500
(Y4LT47)	△	IH85 (W.L. THEORY) OTS/ET = V4LT47/A9NT26= HI/HU		4.020	-5.000	7.500

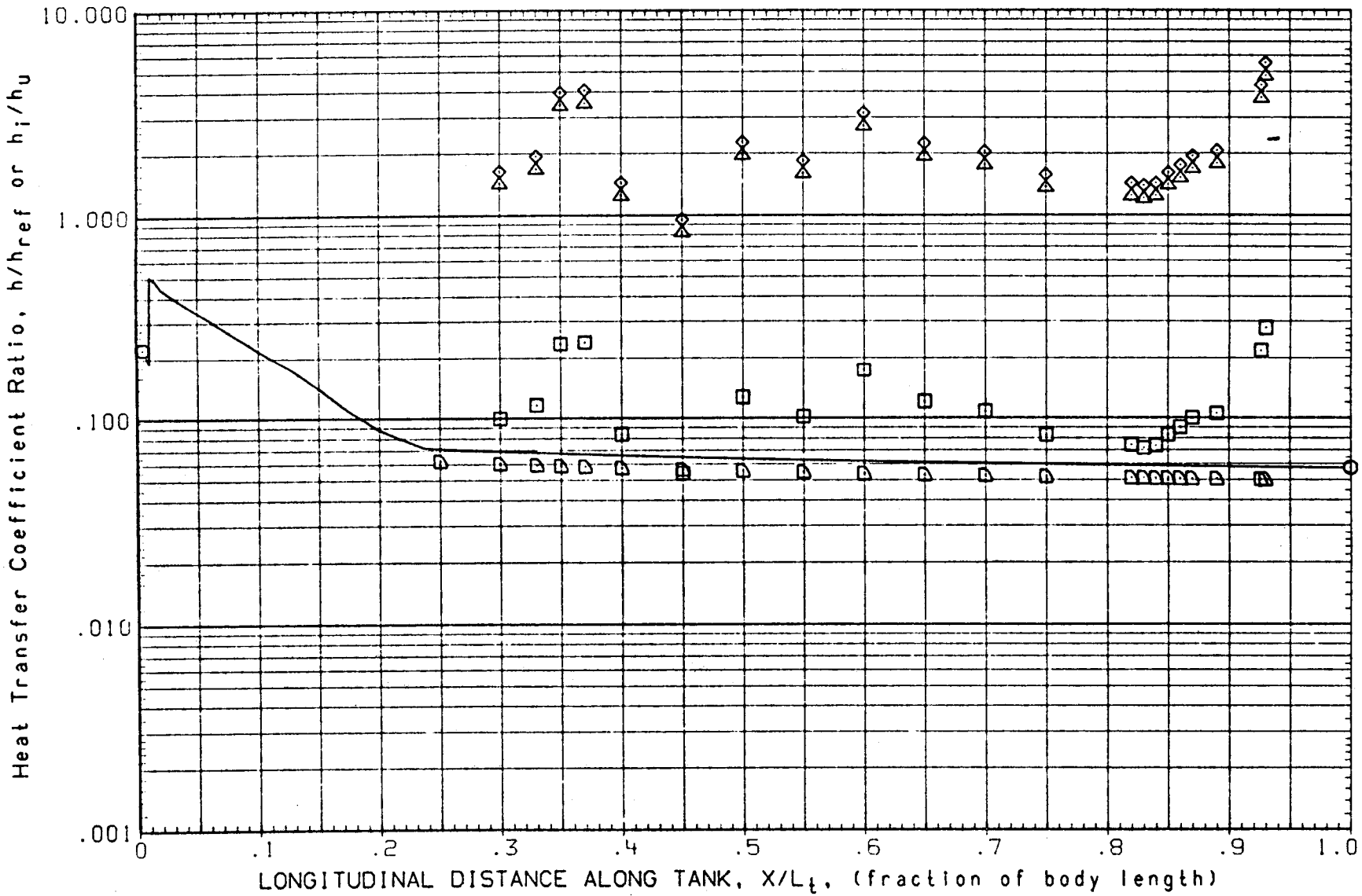

FIG. 4-14 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 292.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT26)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	4.020	-5.000	7.500
(C9NT26)	□	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	4.020	-5.000	7.500
(V4LT47)	⊡	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	-5.000	7.500
(X4LT47)	◇	IH85 (W.L. TEST) OTS/ET = V4LT47/C9NT26= HI/HU	4.020	-5.000	7.500
(Y4LT47)	△	IH85 (W.L. THEORY) OTS/ET = V4LT47/A9NT26= HI/HU	4.020	-5.000	7.500

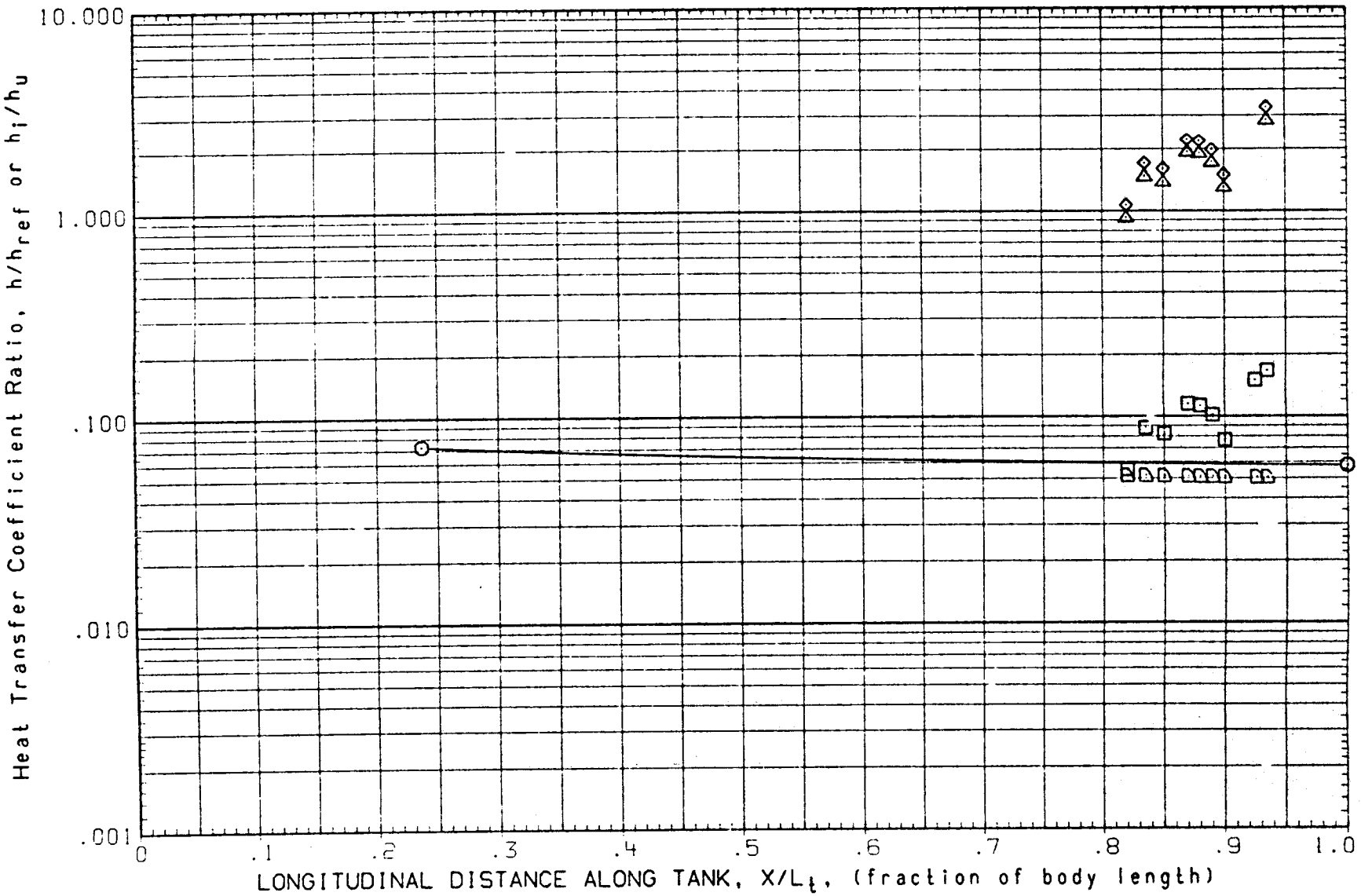

FIG. 4-14 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 301.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT26)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	7.500
(C9NT26)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	7.500
(V4LT47)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	7.500
(X4LT47)	◇	IH85 (W.L. TEST) OTS/ET = V4LT47/C9NT26=	HI/HU	4.020	-5.000	7.500
(Y4LT47)	△	IH85 (W.L. THEORY) OTS/ET = V4LT47/A9NT26=	HI/HU	4.020	-5.000	7.500

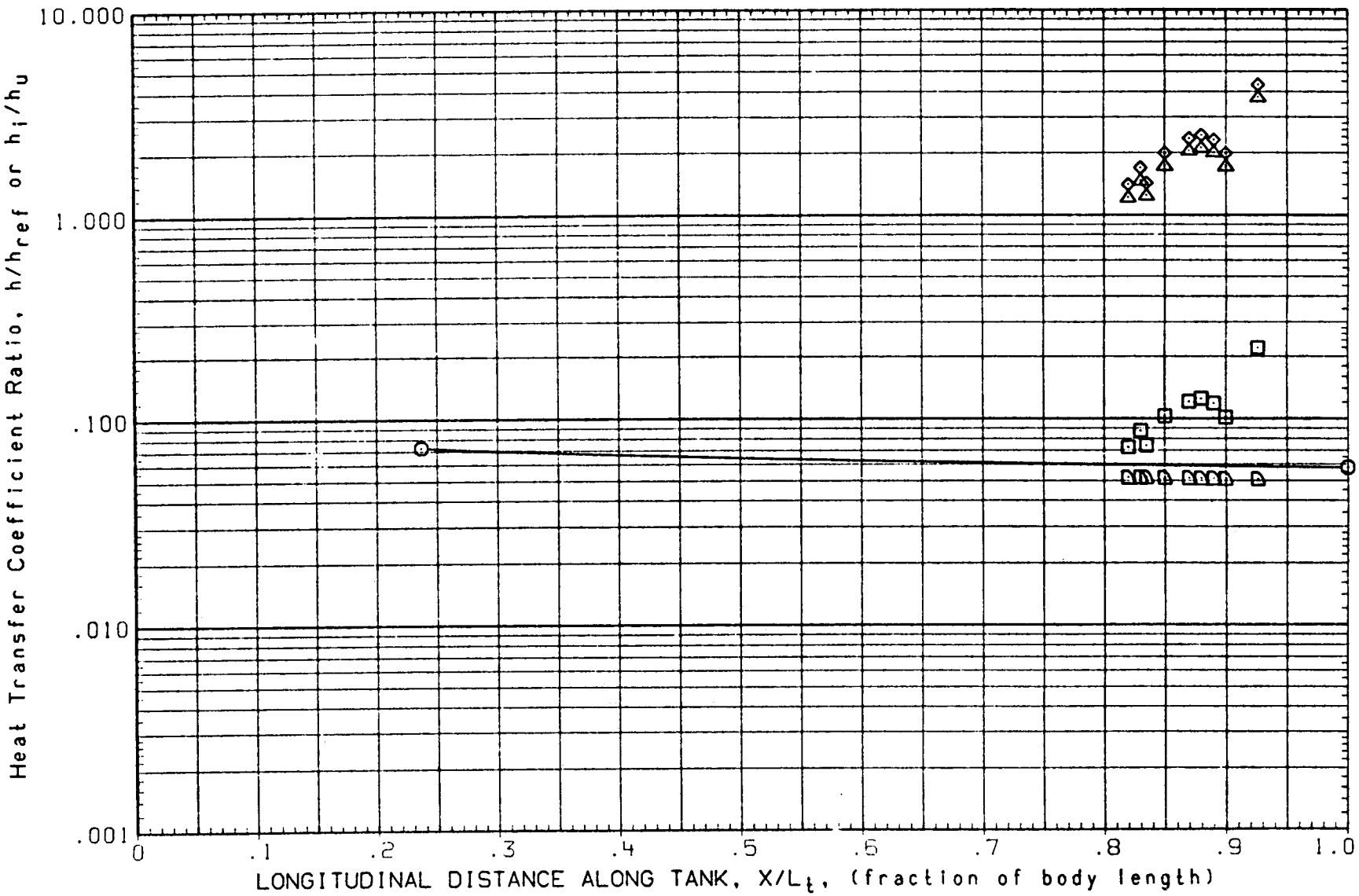

FIG. 4-14 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 305.400

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OF POOR QUALITY

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT26)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	7.500
(C9NT26)	⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	7.500
(V4LT47)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	7.500
(X4LT47)	◇	IH85 (W.L. TEST) OTS/ET = V4LT47/C9NT26=	HI/HU	4.020	-5.000	7.500
(Y4LT47)	△	IH85 (W.L. THEORY) OTS/ET = V4LT47/A9NT26=	HI/HU	4.020	-5.000	7.500

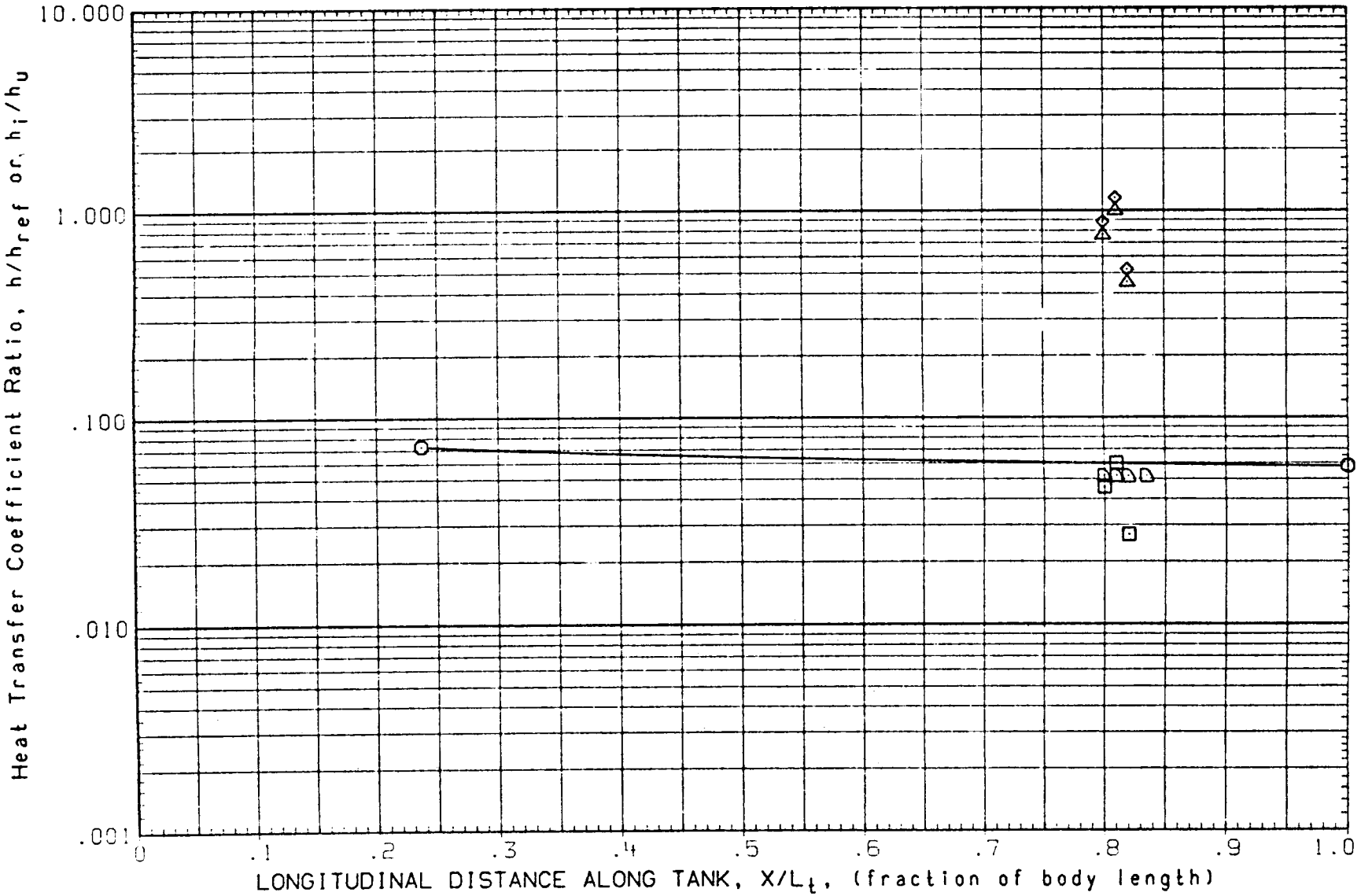

FIG. 4-14 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 309.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT26)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	7.500
(C9NT26)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	7.500
(V4LT47)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	7.500
(X4LT47)	◇	IH85 (W.L. TEST) OTS/ET = V4LT47/C9NT26=	HI/HU	4.020	-5.000	7.500
(Y4LT47)	△	IH85 (W.L. THEORY) OTS/ET = V4LT47/A9NT26=	HI/HU	4.020	-5.000	7.500

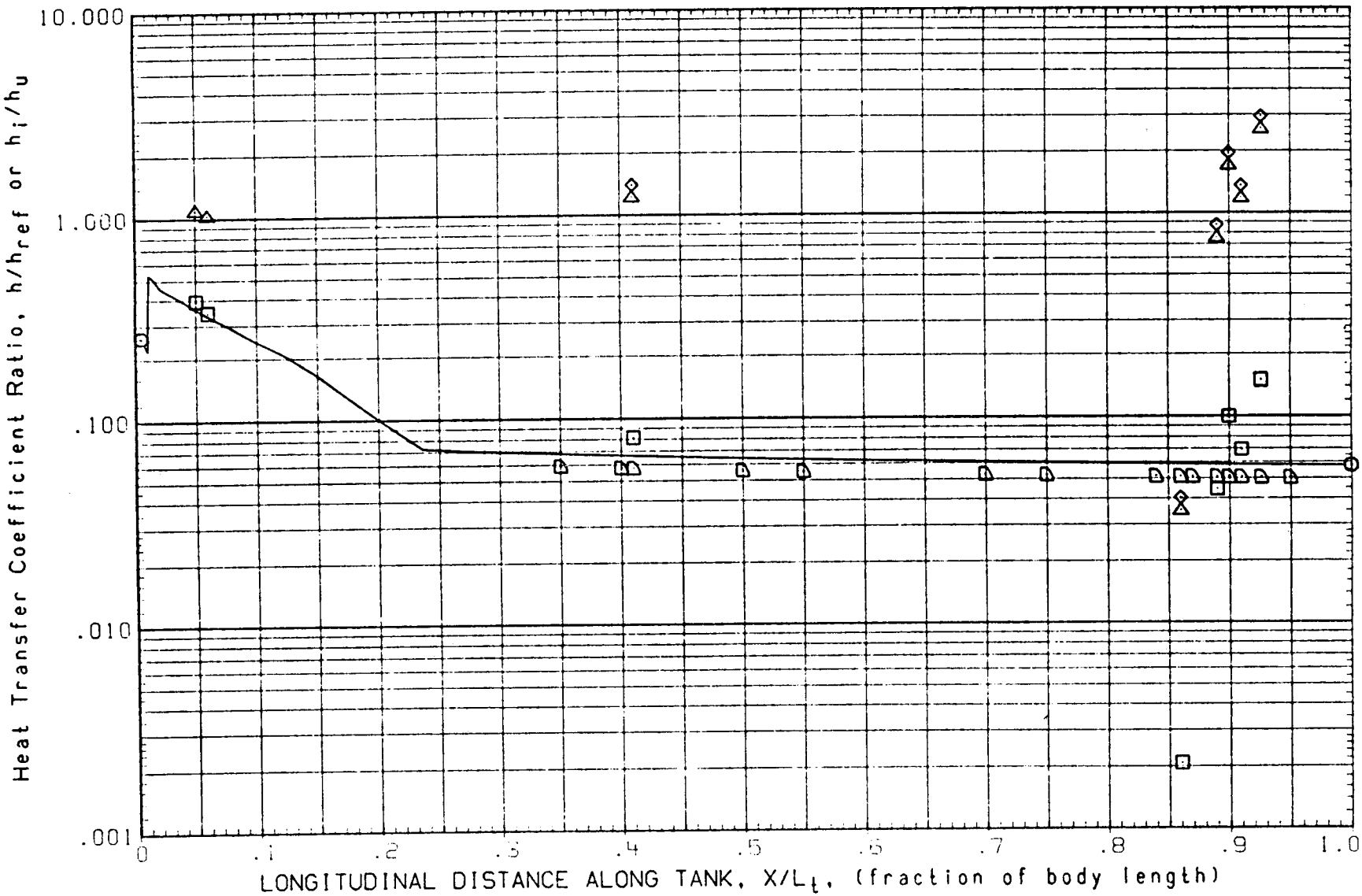

FIG. 4-14 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 315.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(09NT26)	○	EXTERNAL TANK THEORY, N.S., TURBULENT	HU/HREF	4.020	-5.000	7.500
(09NT26)	□	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	7.500
(V4LT47)	◇	H85, AFDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	7.500
(X4LT47)	◇	H85 (W.L. TEST) OTS/ET = V4LT47/09NT26	HI/HU	4.020	-5.000	7.500
(Y4LT47)	△	H85 (W.L. THEORY) OTS/ET = V4LT47 A.NT26	HI/HU	4.020	-5.000	7.500

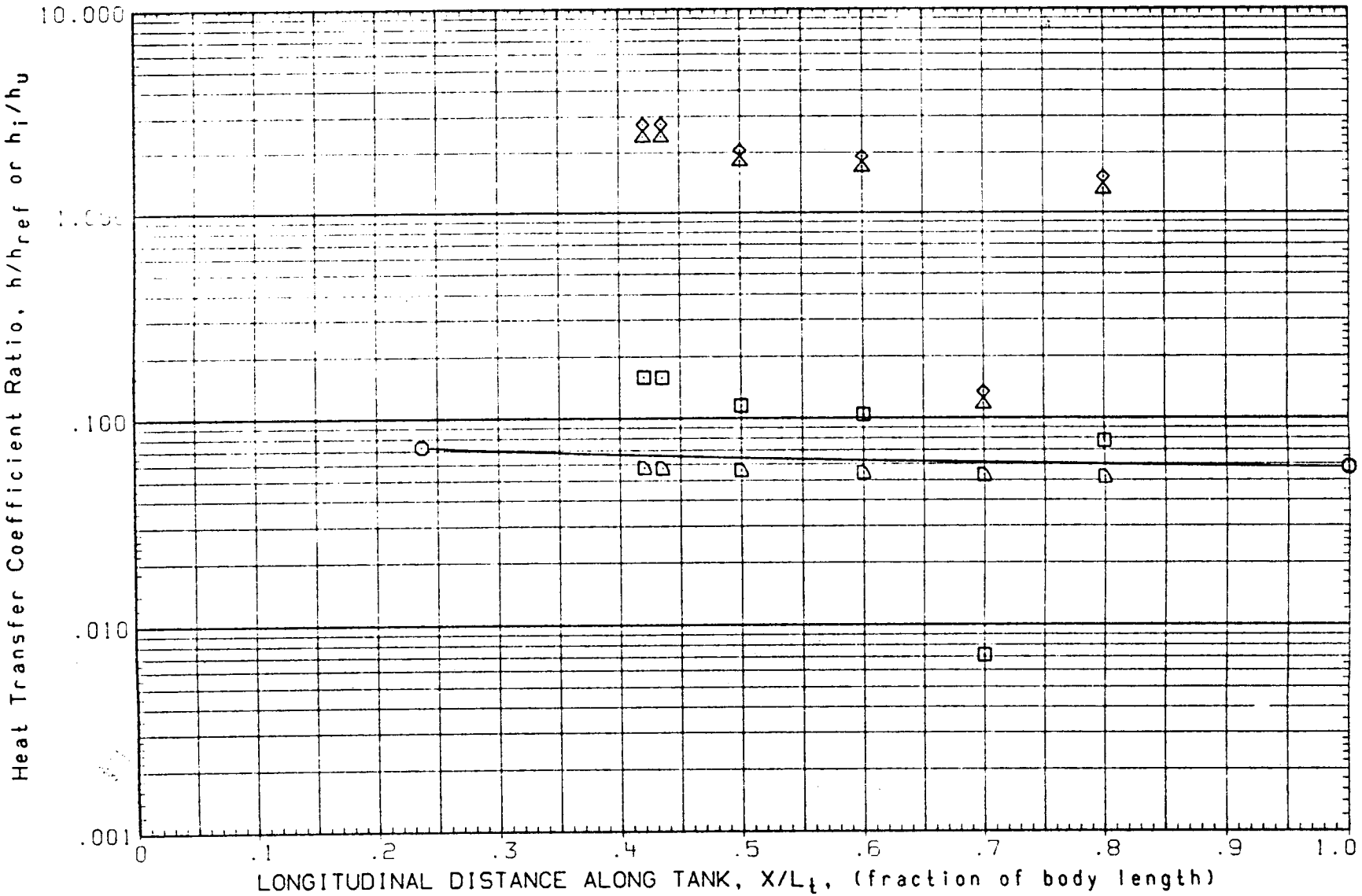

FIG. 4-14 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 322.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT26)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	7.500
(C9NT26)	◁	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	7.500
(V4LT47)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	7.500
(X4LT47)	◇	IH85 (W.L. TEST) OTS/ET = V4LT47/C9NT26=	HI/HU	4.020	-5.000	7.500
(Y4LT47)	△	IH25 (W.L. THEORY) OTS/ET = V4LT47/A9NT26=	HI/HU	4.020	-5.000	7.500

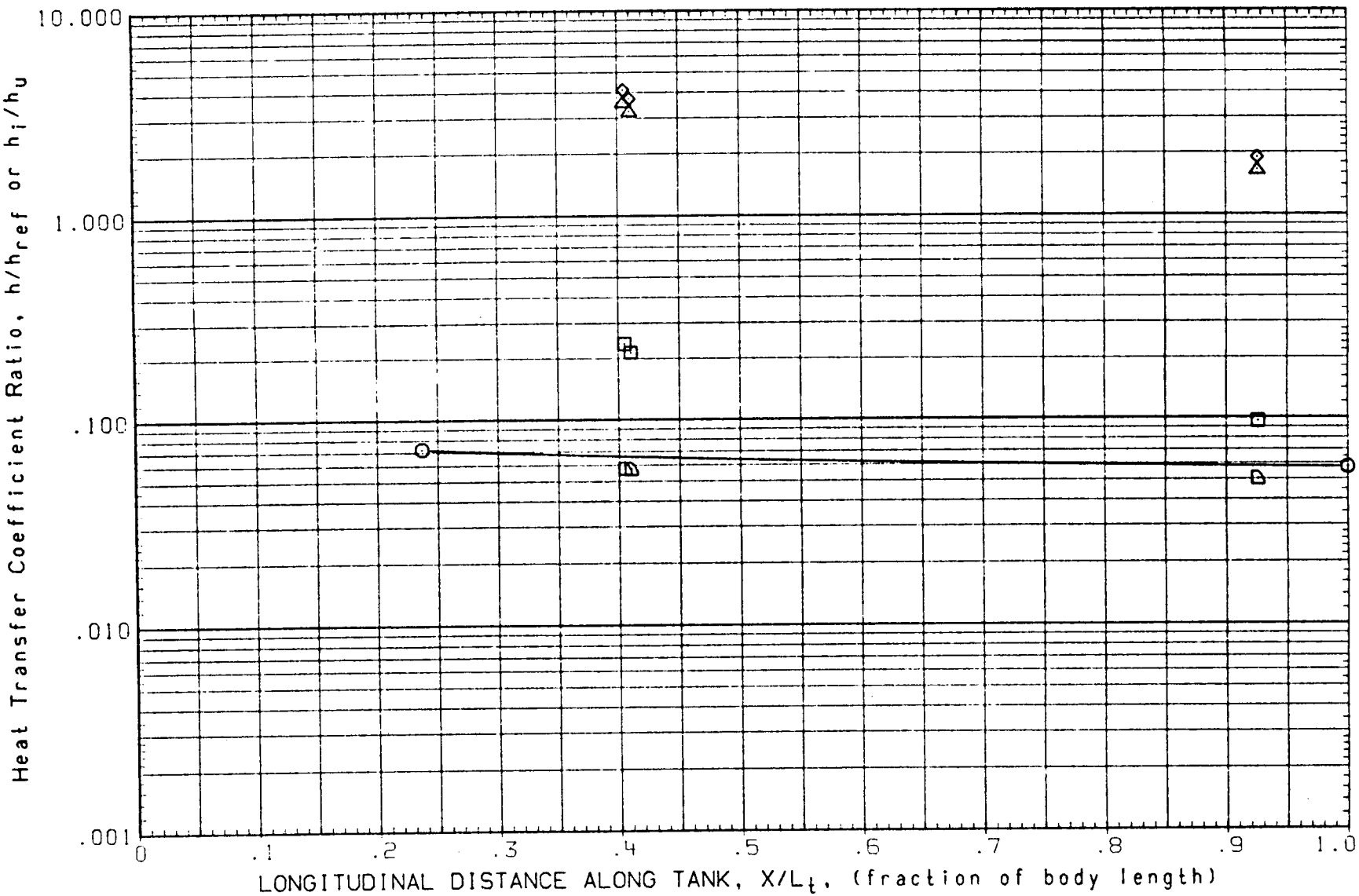

FIG. 4-14 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 324.450

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT26)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	7.500
(C9NT26)	□	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	7.500
(V4LT47)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	7.500
(X4LT47)	◇	IH85 (W.L. TEST) OTS/ET = V4LT47/C9NT26=	HI/HU	4.020	-5.000	7.500
(Y4LT47)	△	IH85 (W.L. THEORY) OTS/ET = V4LT47/A9NT26=	HI/HU	4.020	-5.000	7.500

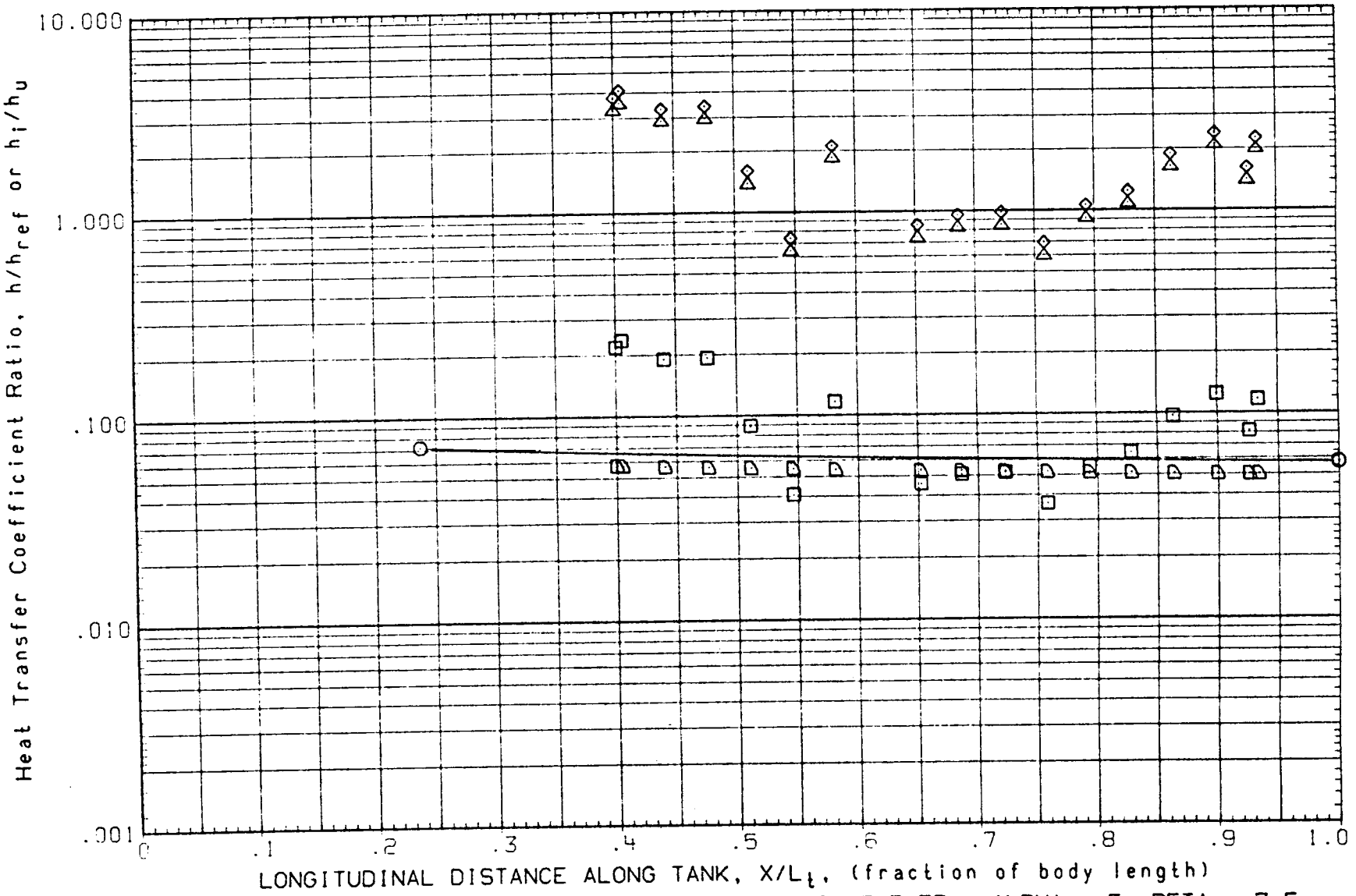

FIG. 4-14 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 326.850

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT26)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	7.500
(C9NT26)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	7.500
(V4LT47)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	7.500
(X4LT47)	◇	IH85 (W.L. TEST) OTS/ET = V4LT47/C9NT26= HI/HU		4.020	-5.000	7.500
(Y4LT47)	△	IH85 (W.L. THEORY) OTS/ET = V4LT47/A9NT26= HI/HU		4.020	-5.000	7.500

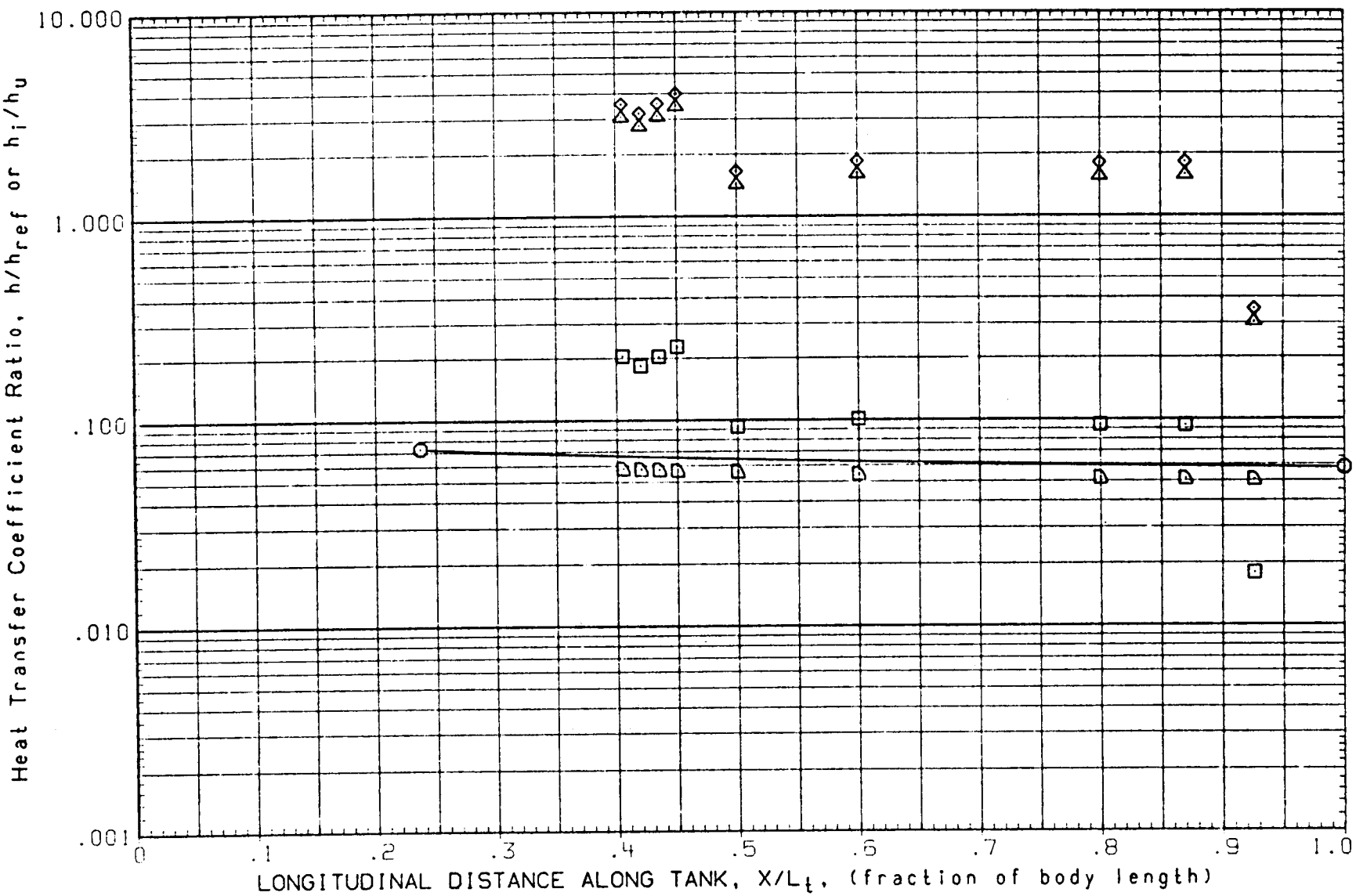

FIG. 4-14 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 330.200

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT26)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	7.500
(C9NT26)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	7.500
(V4LT47)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	7.500
(X4LT47)	◇	IH85 (W.L. TEST) OTS/ET = V4LT47/C9NT26= HI/HU		4.020	-5.000	7.500
(Y4LT47)	△	IH85 (W.L. THEORY) OTS/ET = V4LT47/A9NT26= HI/HU		4.020	-5.000	7.500

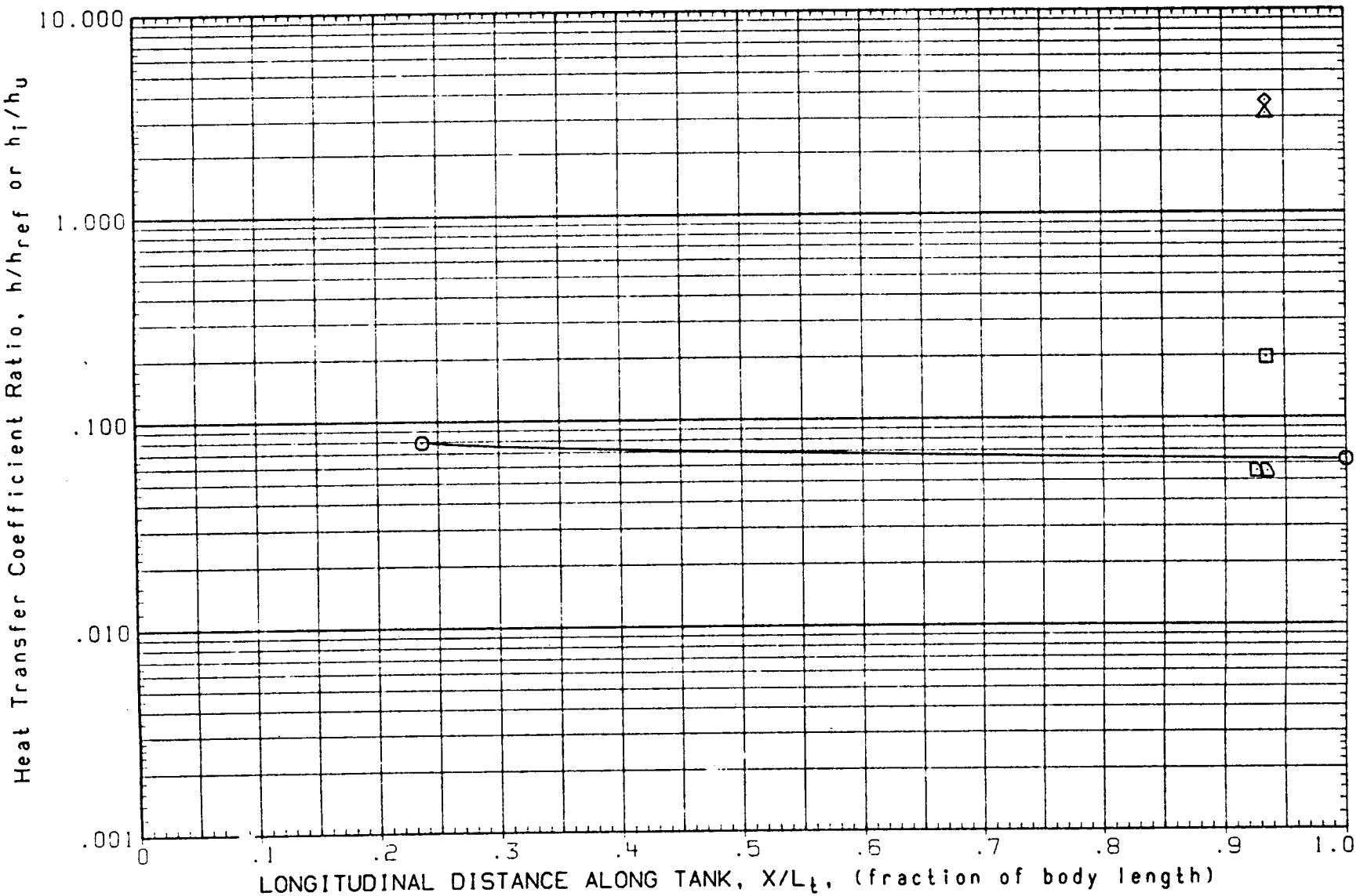

FIG. 4-14 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 334.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT26)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	7.500
(C9NT26)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	7.500
(V4LT47)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	7.500
(X4LT47)	◇	IH85 (W.L. TEST) OTS/ET = V4LT47/C9NT26= HI/HU		4.020	-5.000	7.500
(Y4LT47)	△	IH85 (W.L. THEORY) OTS/ET = V4LT47/A9NT26= HI/HU		4.020	-5.000	7.500

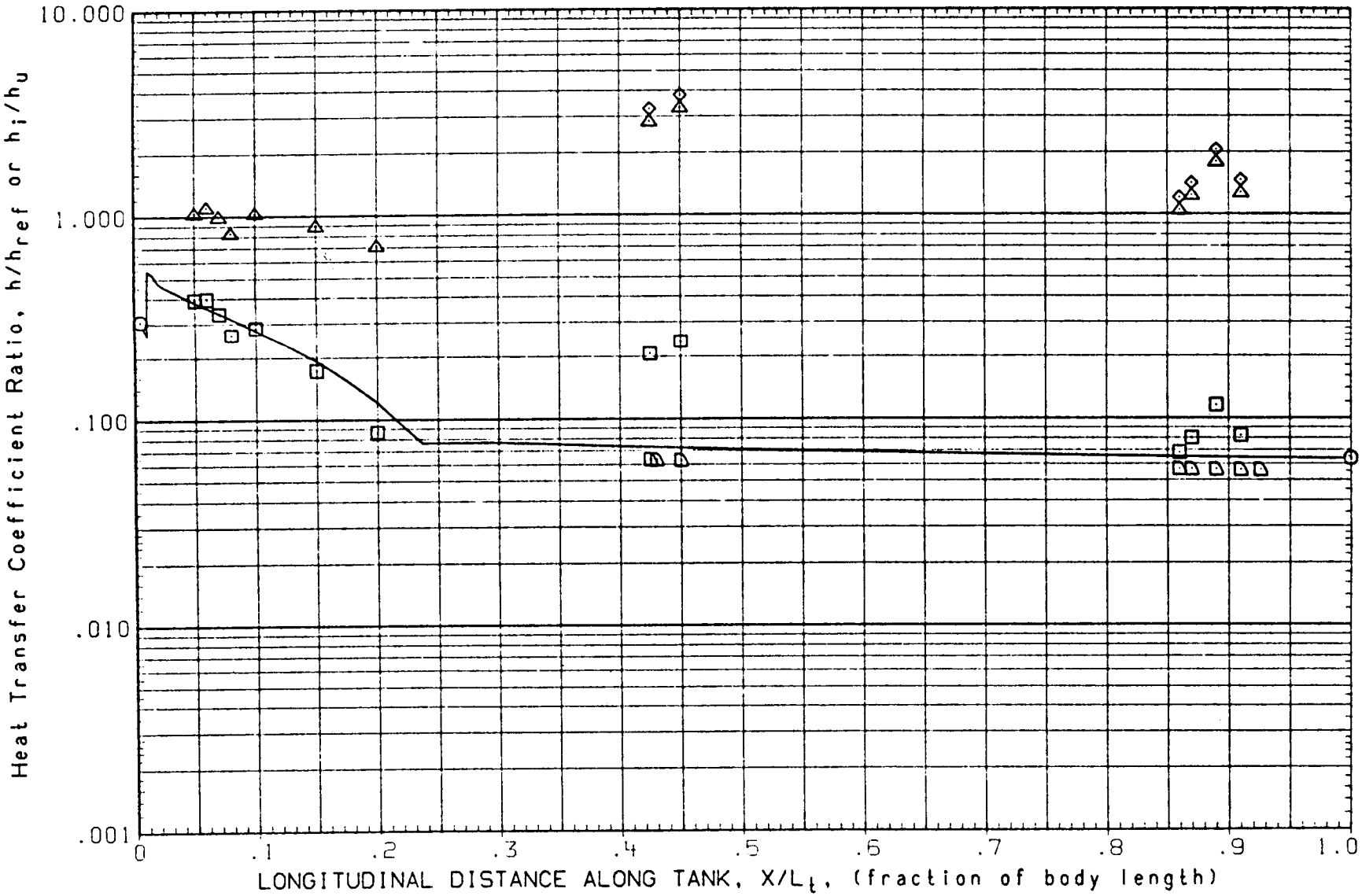

FIG. 4-14 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 337.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT26)	○	EXTERNAL TANK THEORY, N.S..TURBULENT	HU/HREF	4.020	-5.000	7.500
(C3NT26)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	7.500
(Y4LT47)	□	DATA NOT AVAILABLE		4.020	-5.000	7.500
(X4LT47)	◇	DATA NOT AVAILABLE		4.020	-5.000	7.500
(Y4LT47)	△	DATA NOT AVAILABLE		4.020	-5.000	7.500

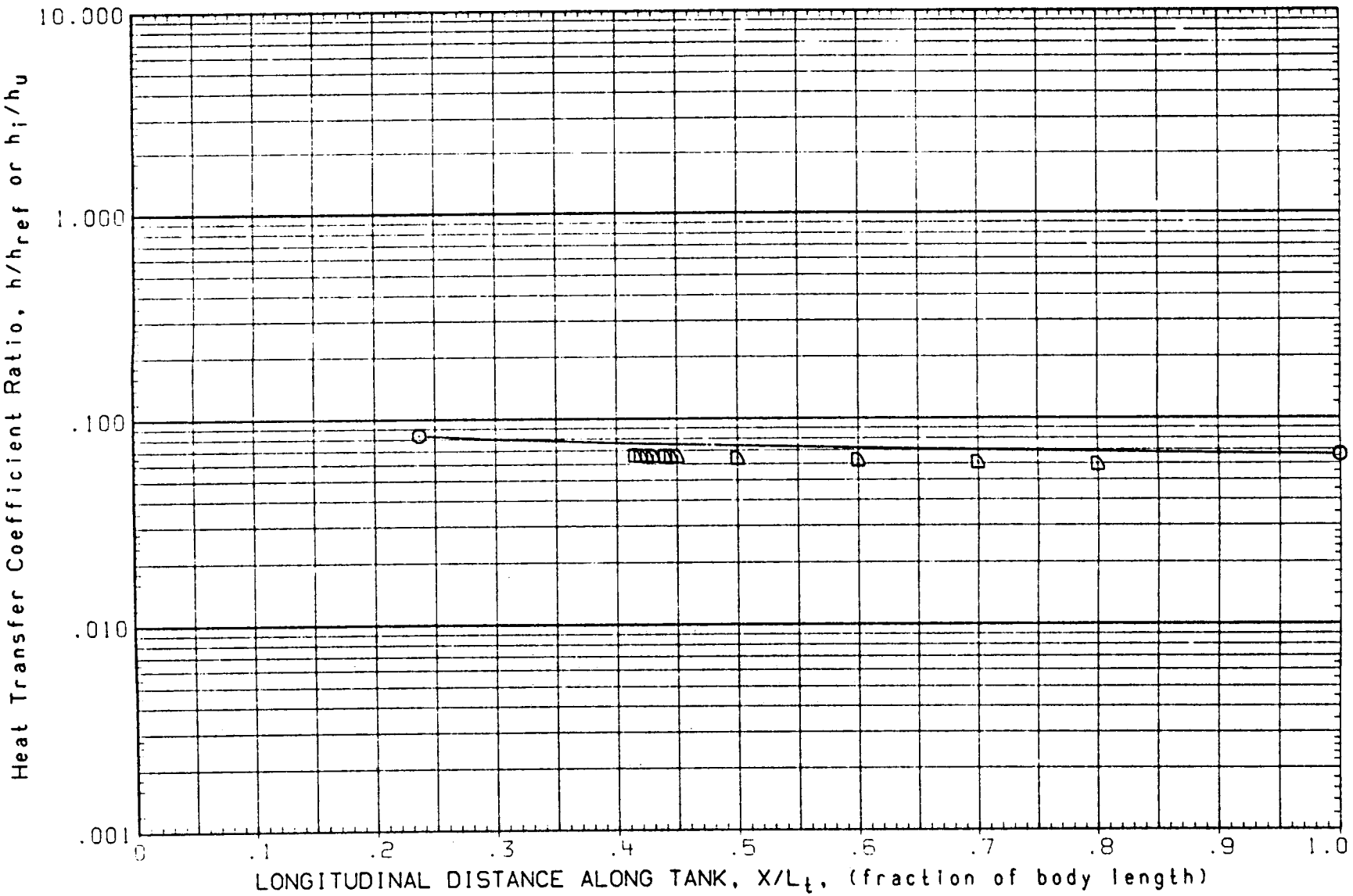

FIG. 4-14 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 343.120

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT26)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	7.500
(C9NT26)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	7.500
(V4LT47)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	7.500
(X4LT47)	◇	IH85 (W.L. TEST) OTS/ET = V4LT47/C9NT26=	HI/HU	4.020	-5.000	7.500
(Y4LT47)	△	IH85 (W.L. THEORY) OTS/ET = V4LT47/A9NT26=	HI/HU	4.020	-5.000	7.500

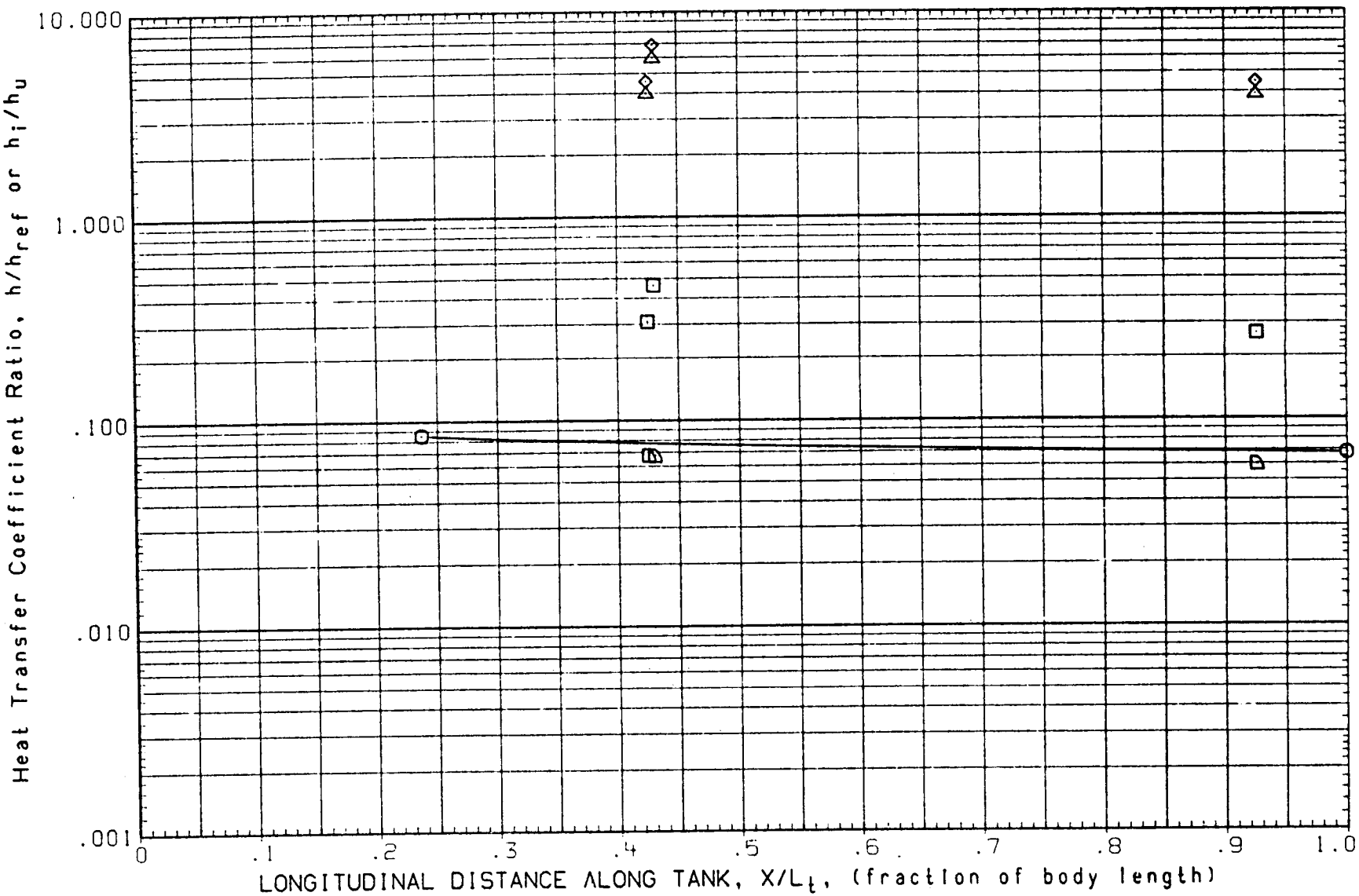

FIG. 4-14 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 345.560

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT26)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	7.500
(C9NT26)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	7.500
(V4LT47)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	7.500
(X4LT47)	◇	IH85 (W.L. TEST) OTS/ET = V4LT47/C9NT26=	HI/HU	4.020	-5.000	7.500
(Y4LT47)	△	IH85 (W.L. THEORY) OTS/ET = V4LT47/A9NT26=	HI/HU	4.020	-5.000	7.500

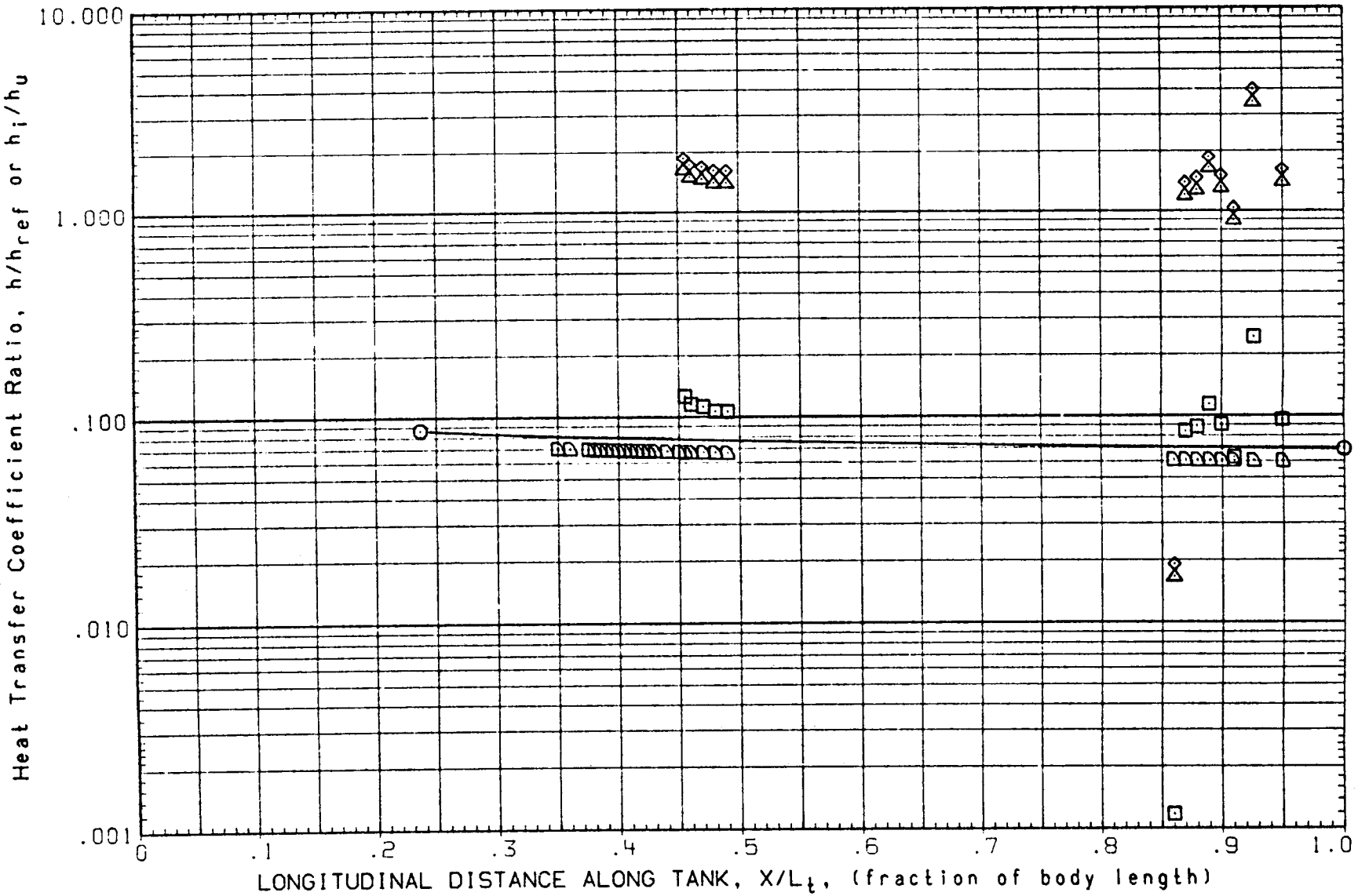

FIG. 4-14 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 348.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT26)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	7.500
(C9NT26)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	7.500
(V4LT47)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	7.500
(X4LT47)	◇	IH85 (W.L. TEST) OTS/ET = V4LT47/C9NT26=	HI/HU	4.020	-5.000	7.500
(Y4LT47)	△	IH85 (W.L. THEORY) OTS/ET = V4LT47/A9NT26=	HI/HU	4.020	-5.000	7.500

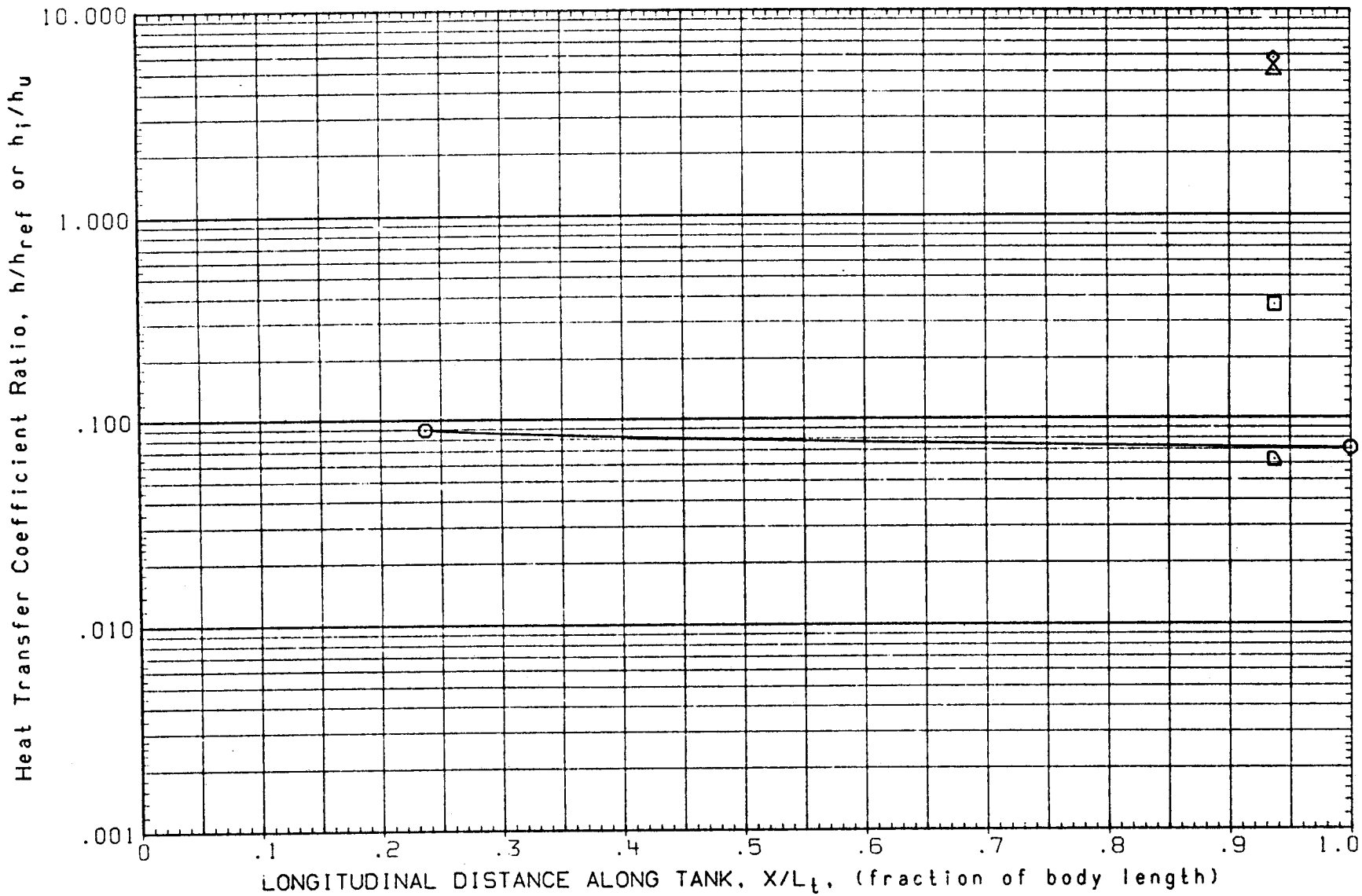

FIG. 4-14 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 352.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT26)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	7.500
(C9NT26)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	-5.000	7.500
(V4LT47)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	-5.000	7.500
(X4LT47)	◇	IH85 (W.L. TEST) OTS/ET = V4LT47/C9NT26=	HI/HU	4.020	-5.000	7.500
(Y4LT47)	△	IH85 (W.L. THEORY) OTS/ET = V4LT47/A9NT26=	HI/HU	4.020	-5.000	7.500

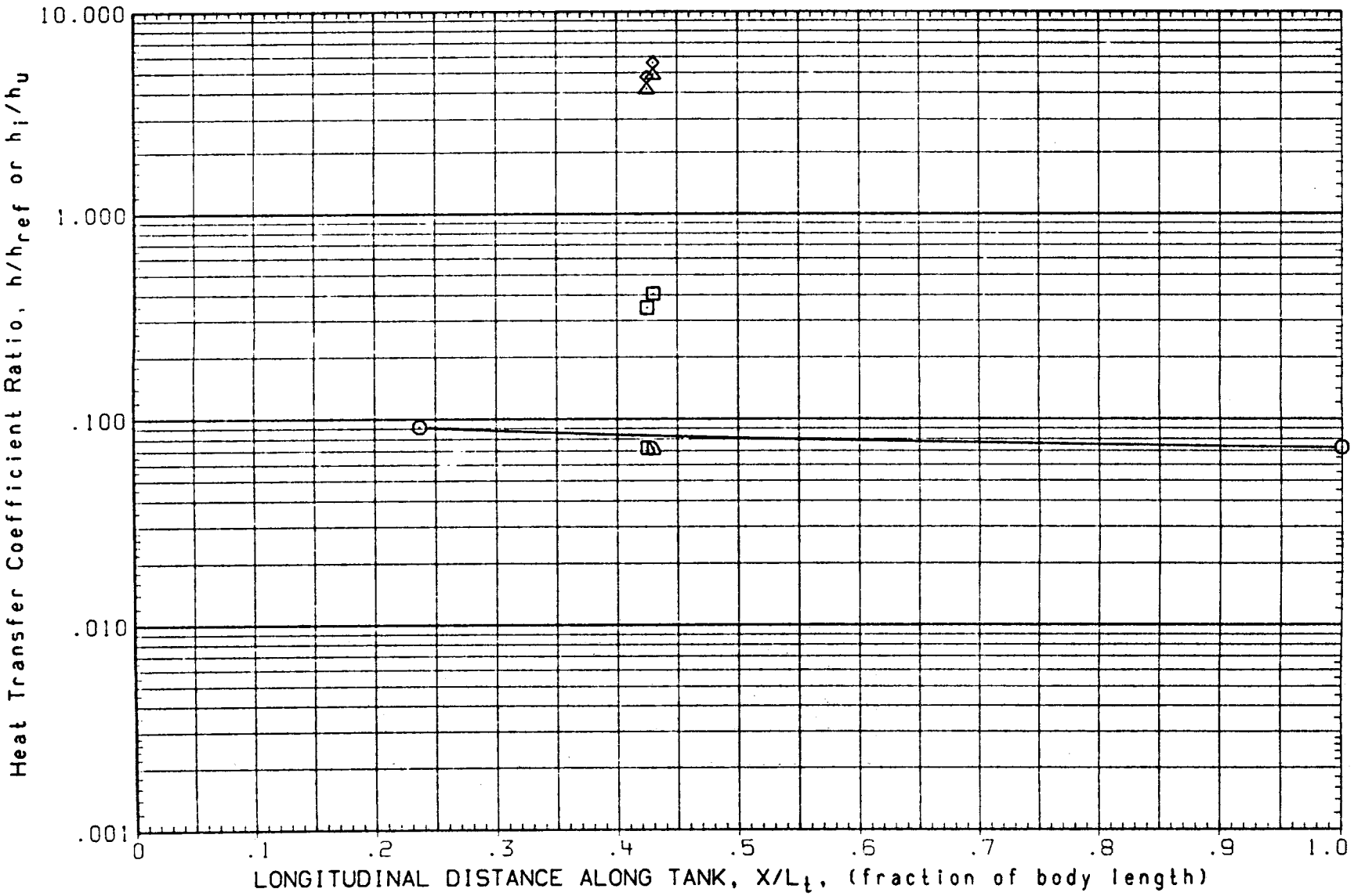

FIG. 4-14 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 354.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT26)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	7.500
(C9NT26)	⌂	DATA NOT AVAILABLE		4.020	-5.000	7.500
(V4LT47)	□	DATA NOT AVAILABLE		4.020	-5.000	7.500
(X4LT47)	◇	DATA NOT AVAILABLE		4.020	-5.000	7.500
(Y4LT47)	△	DATA NOT AVAILABLE		4.020	-5.000	7.500

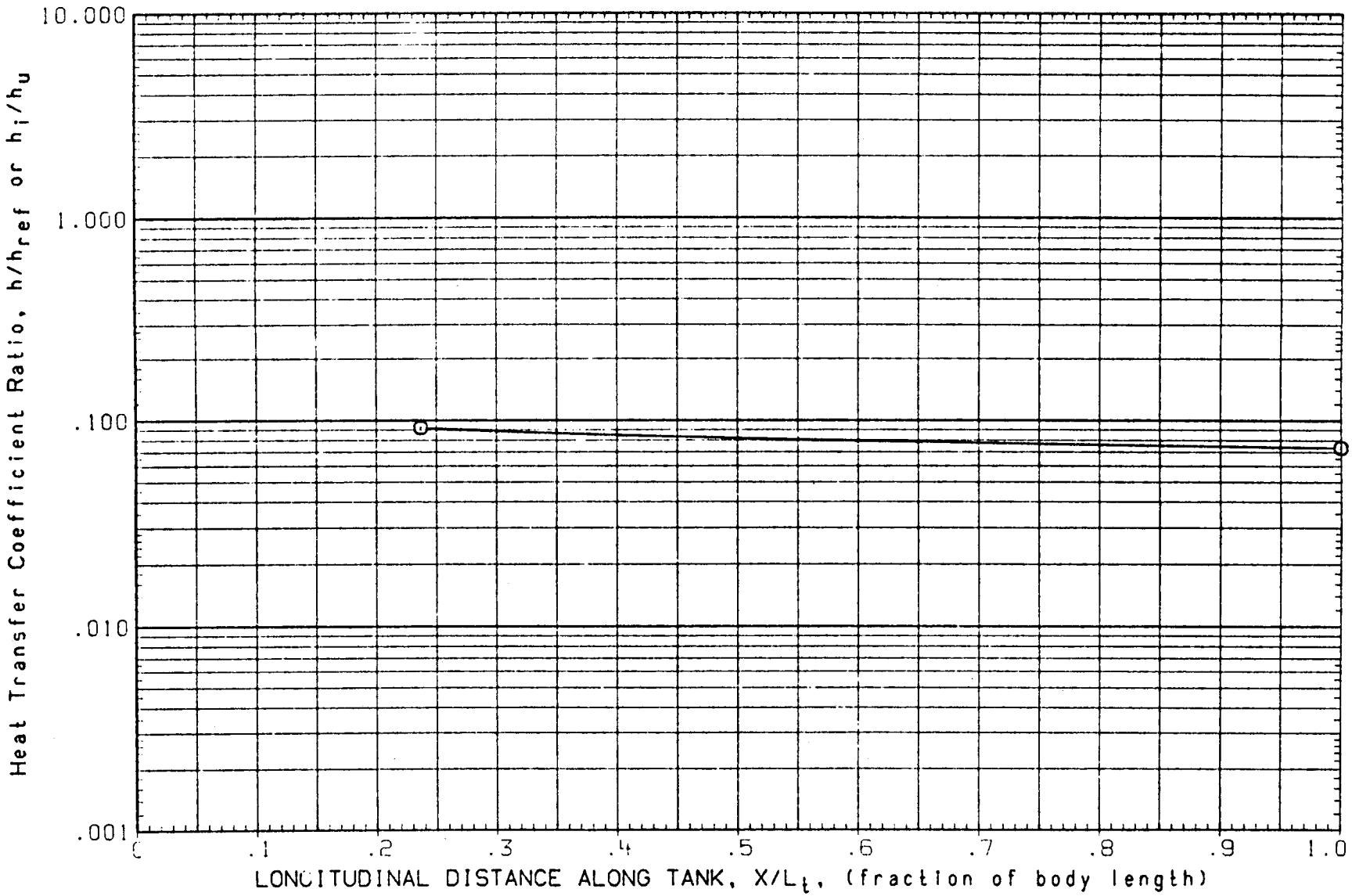

FIG. 4-14 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 355.160

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT26)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	-5.000	7.500
(C9NT26)	⬠	DATA NOT AVAILABLE		4.020	-5.000	7.500
(V4LT47)	□	DATA NOT AVAILABLE		4.020	-5.000	7.500
(X4LT47)	◇	DATA NOT AVAILABLE		4.020	-5.000	7.500
(Y4LT47)	△	DATA NOT AVAILABLE		4.020	-5.000	7.500

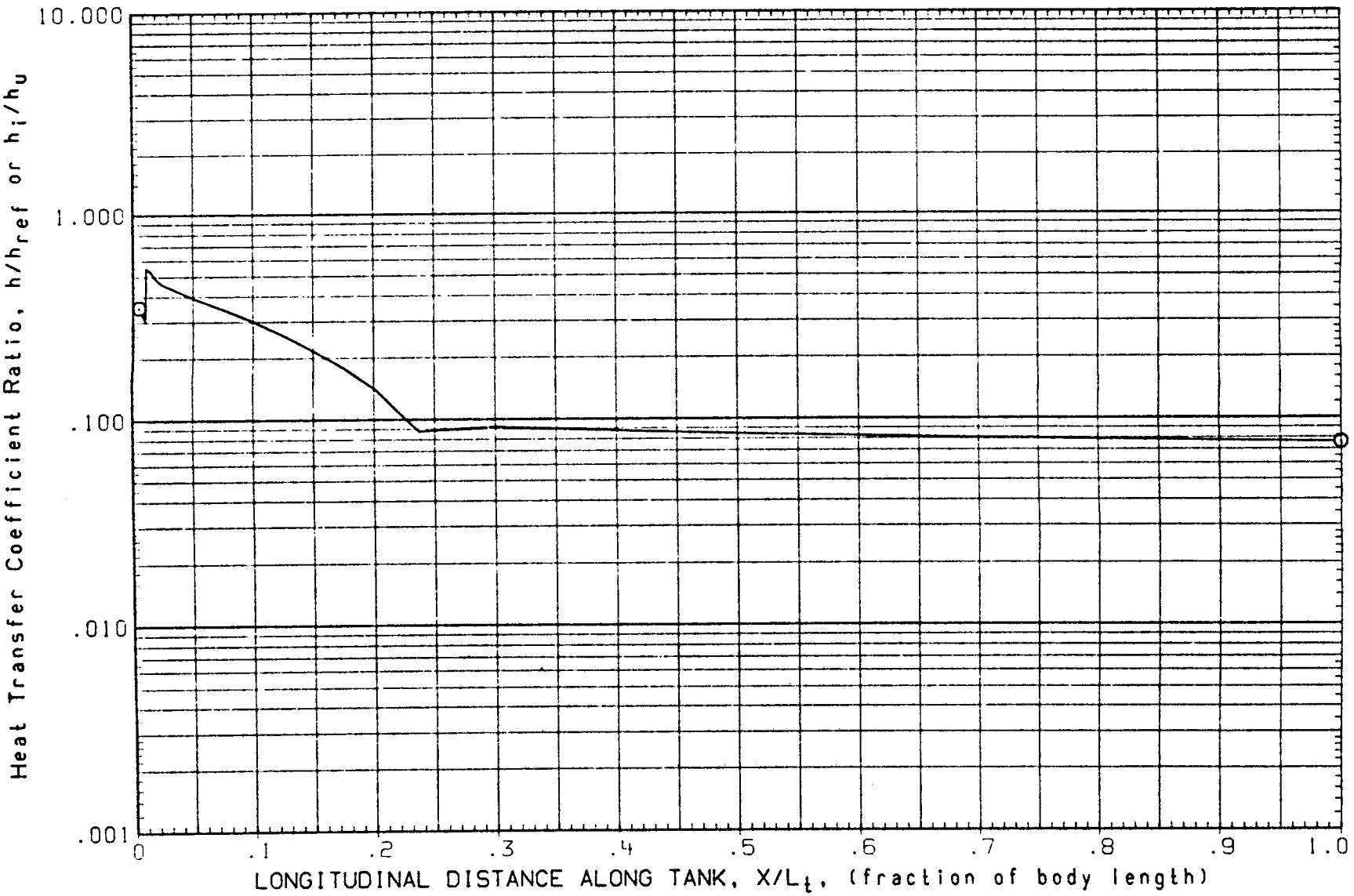

FIG. 4-14 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= -5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = -5.000 PHI = 360.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT50)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-7.500
(C9NT50)	⬡	TANK ALONE CREATED DATA (.67 * THEORY)	HU/HREF	4.020	5.000	-7.500
(V4LT50)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-7.500
(X4LT50)	◇	IH85 (W.L. TEST) OTS/ET = V4LT50/C9NT50=	HI/HU	4.020	5.000	-7.500
(Y4LT50)	△	IH85 (W.L. THEORY) OTS/ET = V4LT50/A9NT50=	HI/HU	4.020	5.000	-7.500

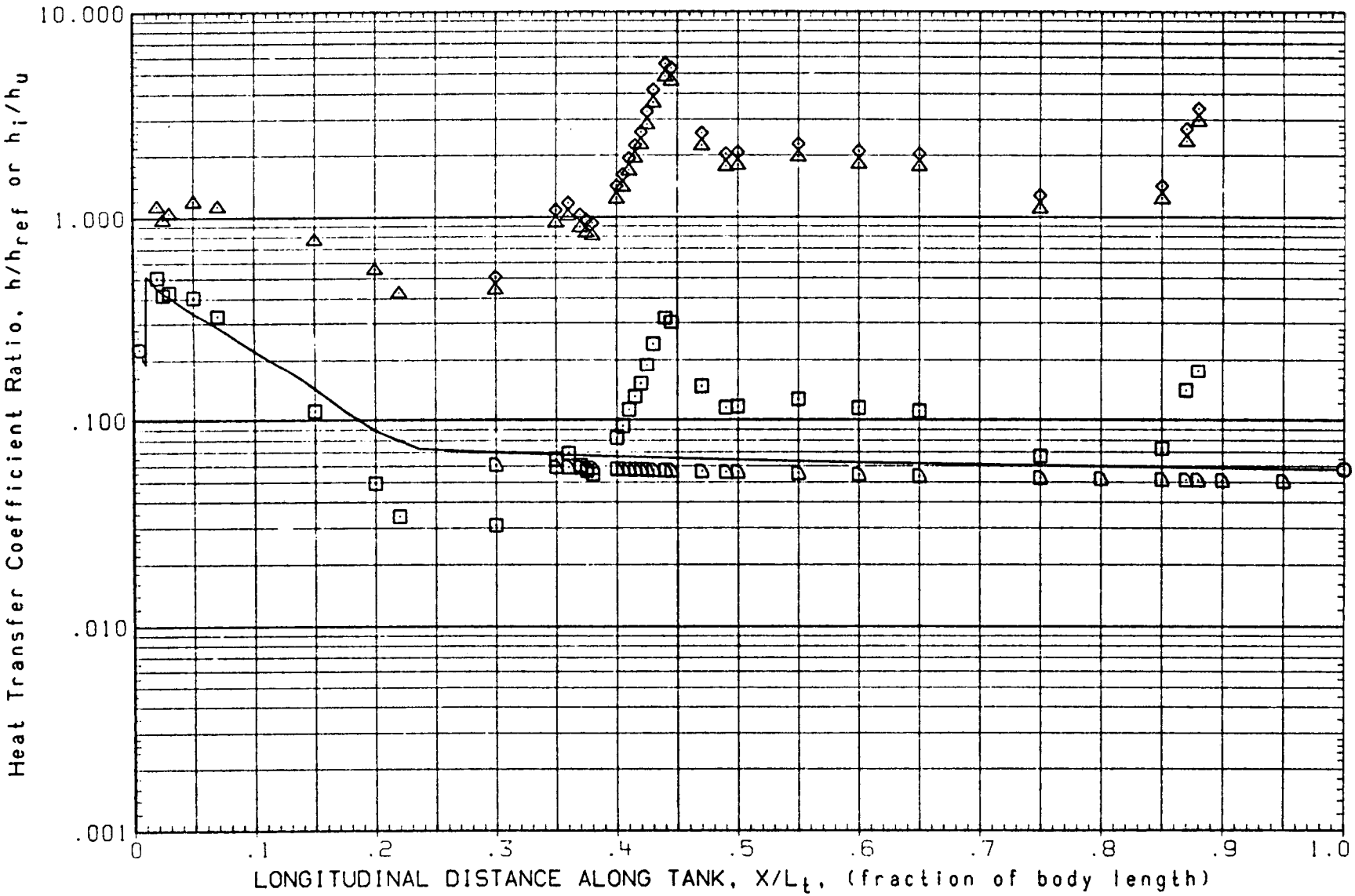

FIG. 4-15 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = .000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT50)	○	DATA NOT AVAILABLE	4.020	5.000	-7.500
(C9NT50)	⬭	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	4.020	5.000	-7.500
(V4LT50)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	5.000	-7.500
(X4LT50)	◇	IH85 (W.L. TEST) OTS/ET = V4LT50/C9NT50= HI/HU	4.020	5.000	-7.500
(Y4LT50)	△	IH85 (W.L. THEORY) OTS/ET = V4LT50/A9NT50= HI/HU	4.020	5.000	-7.500

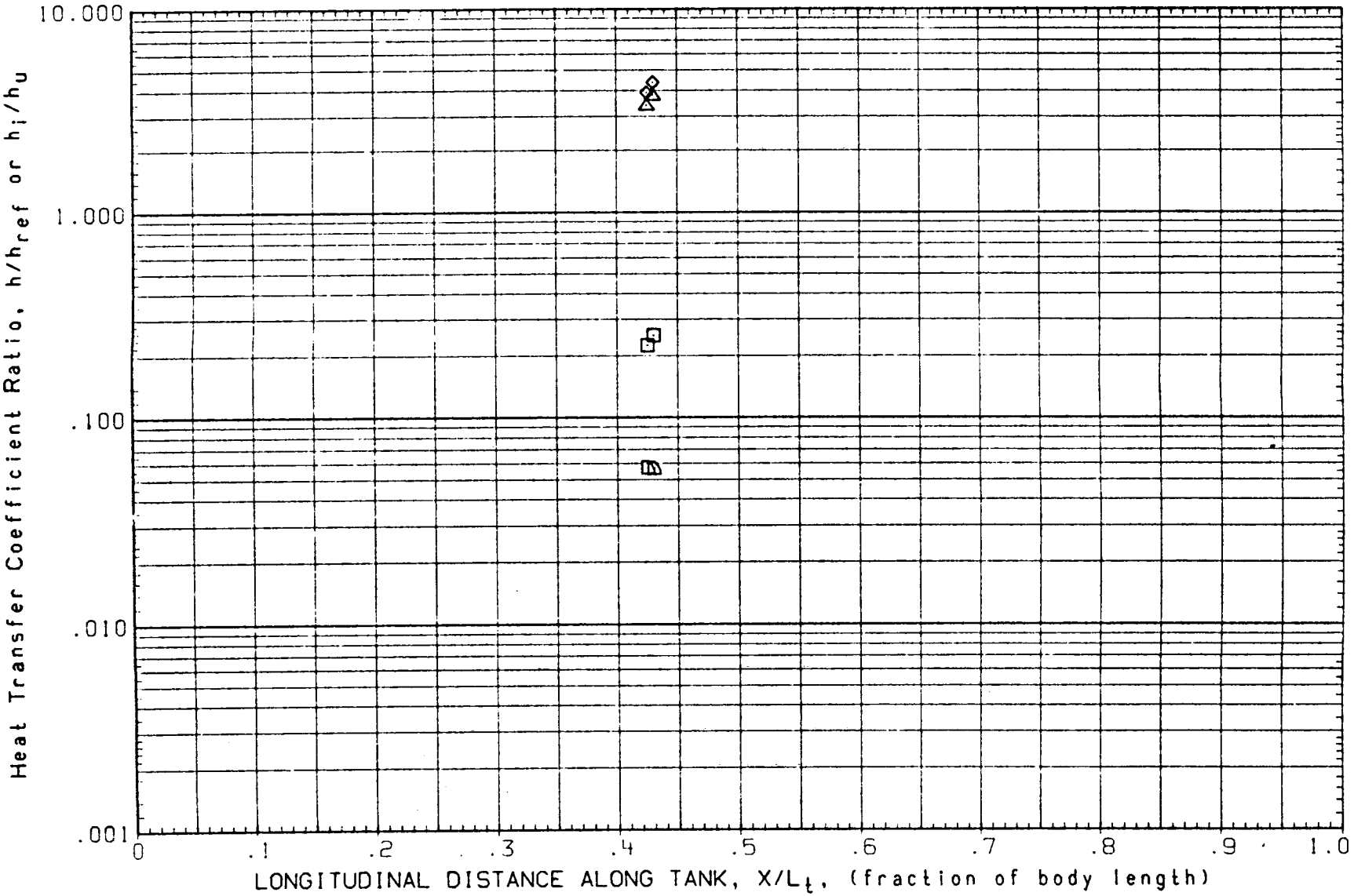

FIG. 4-15 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 5.625

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT50)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-7.500
(C9NT50)	⬠	DATA NOT AVAILABLE		4.020	5.000	-7.500
(V4LT50)	□	DATA NOT AVAILABLE		4.020	5.000	-7.500
(X4LT50)	◇	DATA NOT AVAILABLE		4.020	5.000	-7.500
(Y4LT50)	△	DATA NOT AVAILABLE		4.020	5.000	-7.500

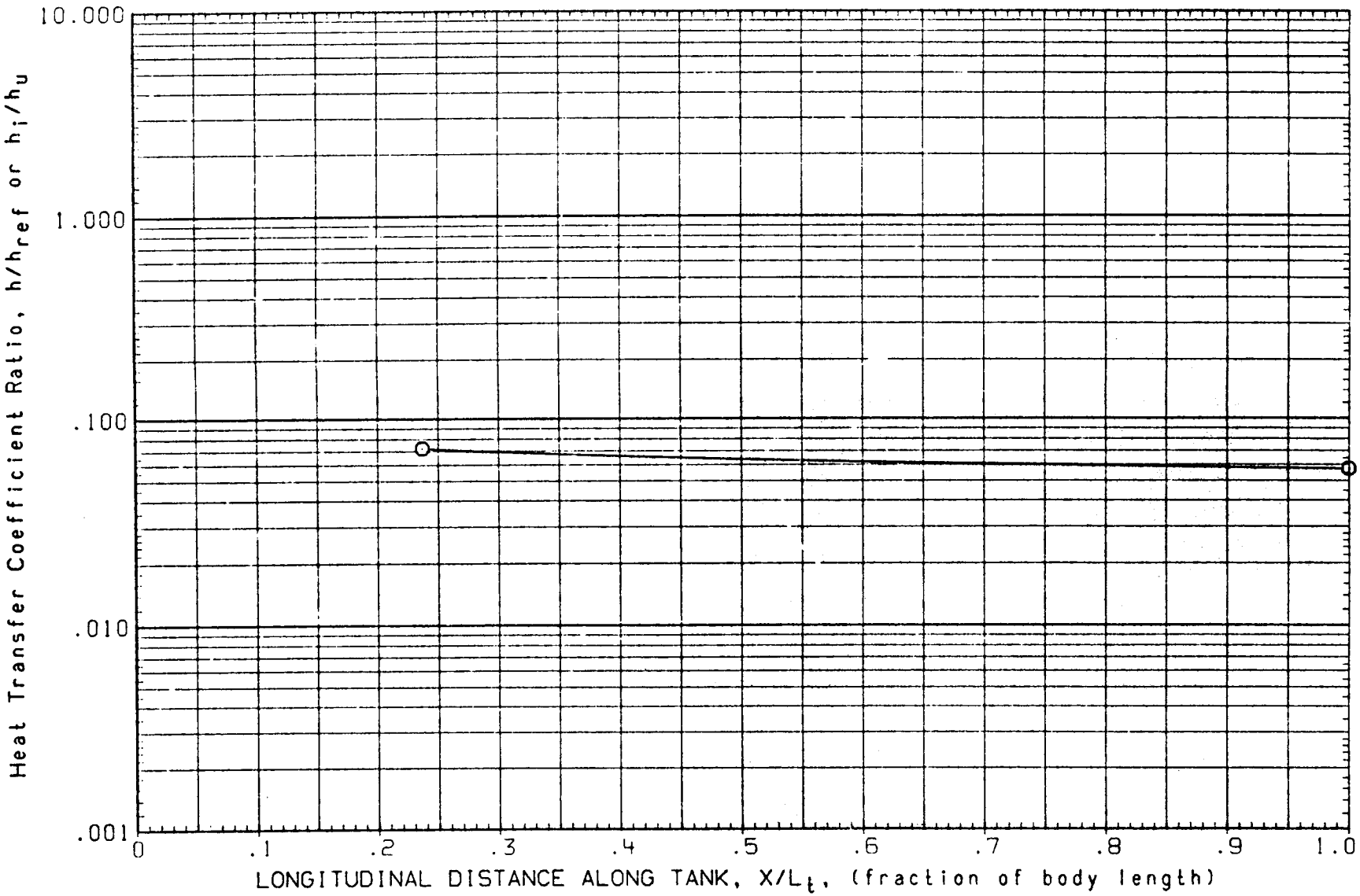

FIG. 4-15 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 5.630

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT50)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-7.500
(C9NT50)	□	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-7.500
(V4LT50)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-7.500
(X4LT50)	◇	IH85 (W.L. TEST) OTS/ET = V4LT50/C9NT50=	HI/HU	4.020	5.000	-7.500
(Y4LT50)	△	IH85 (W.L. THEORY) OTS/ET = V4LT50/A9NT50=	HI/HU	4.020	5.000	-7.500

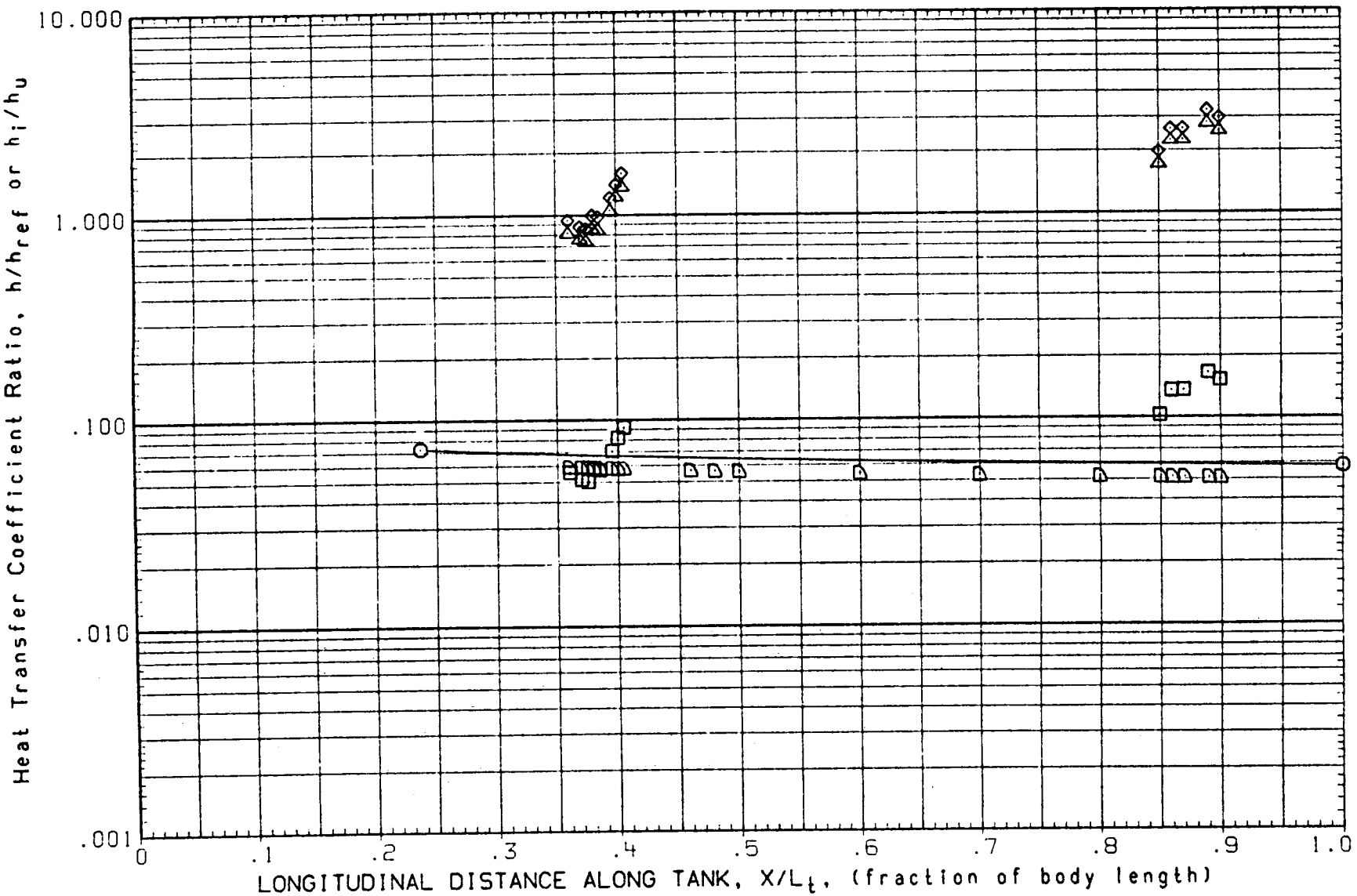

FIG. 4-15 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 11.250

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT50)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-7.500
(C9NT50)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-7.500
(V4LT50)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-7.500
(X4LT50)	◇	IH85 (W.L. TEST) OTS/ET = V4LT50/C9NT50=	HI/HU	4.020	5.000	-7.500
(Y4LT50)	△	IH85 (W.L. THEORY) OTS/ET = V4LT50/A9NT50=	HI/HU	4.020	5.000	-7.500

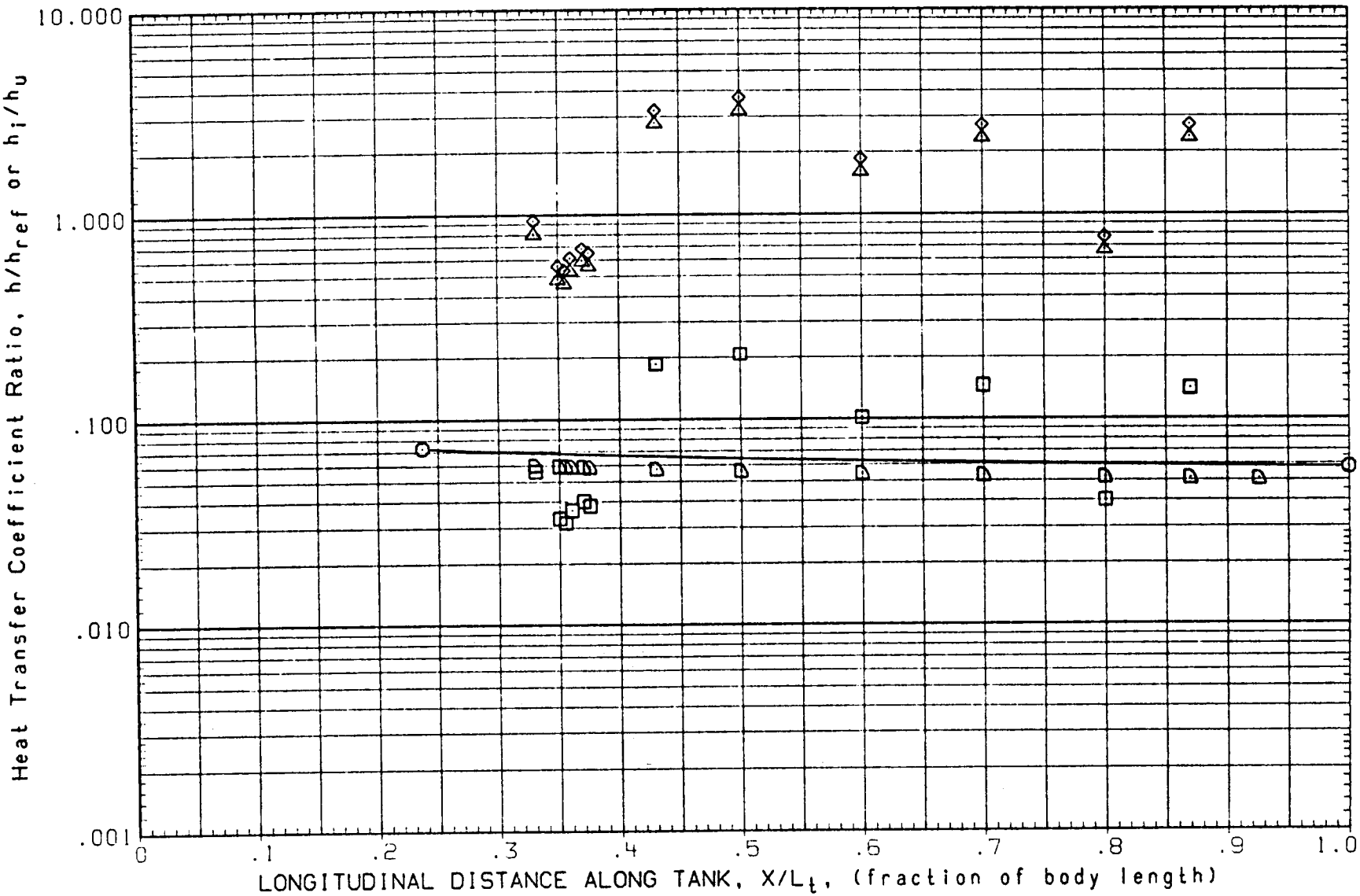

FIG. 4-15 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 17.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT50)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-7.500
(C9NT50)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-7.500
(V4LT50)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-7.500
(X4LT50)	◇	IH85 (W.L. TEST) OTS/ET = V4LT50/C9NT50=	HI/HU	4.020	5.000	-7.500
(Y4LT50)	△	IH85 (W.L. THEORY) OTS/ET = V4LT50/A9NT50=	HI/HU	4.020	5.000	-7.500

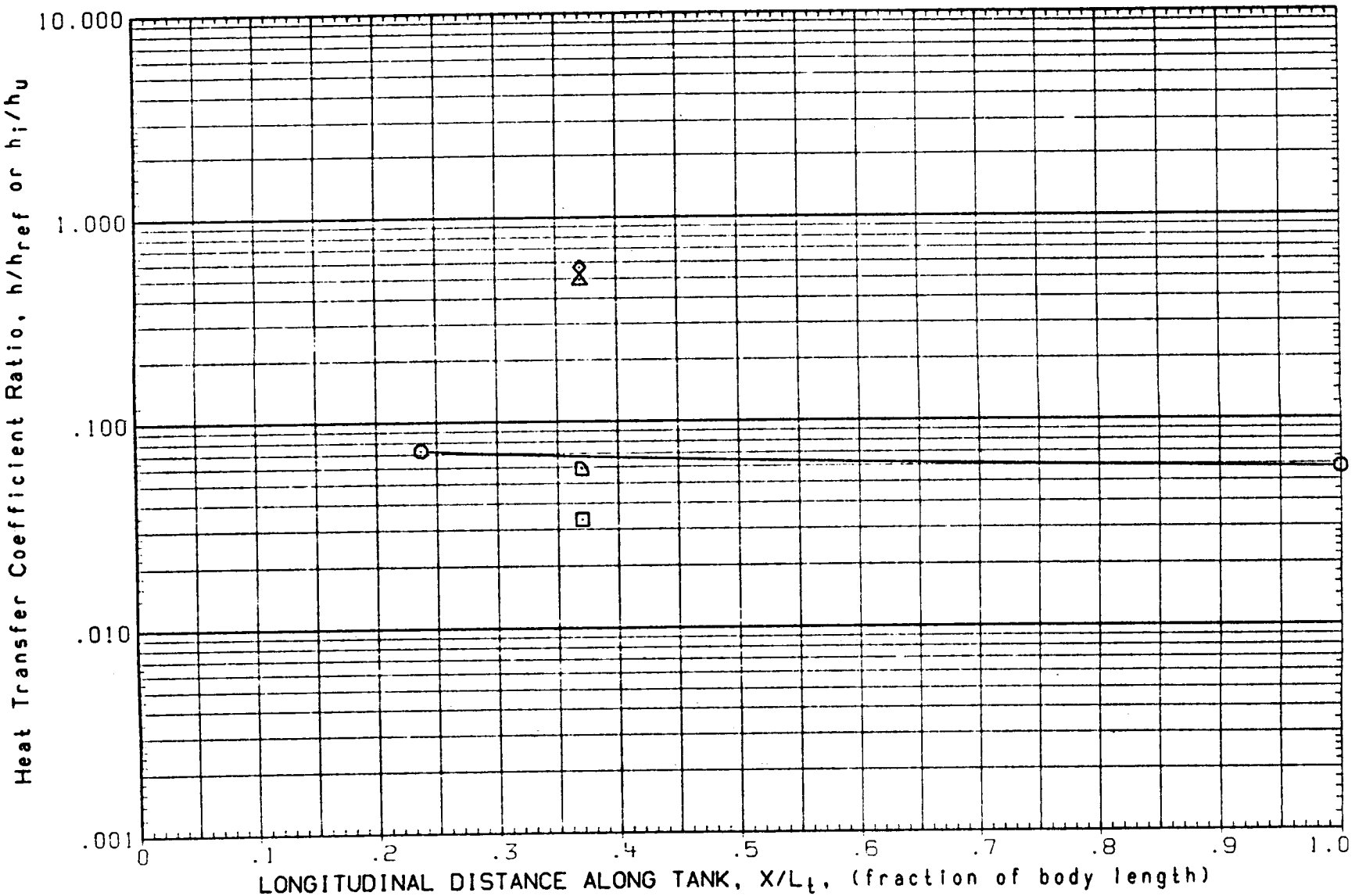

FIG. 4-15 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 20.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT50)	○	EXTERNAL TANK THEORY, N.S., TURBULENT	HU/HREF	4.020	5.000	-7.500
(C9NT50)	△	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-7.500
(V4LT50)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-7.500
(X4LT50)	◇	IH85 (W.L. TEST) OTS/ET = V4LT50/C9NT50=	HI/HU	4.020	5.000	-7.500
(Y4LT50)	△	IH85 (W.L. THEORY) OTS/ET = V4LT50/A9NT50=	HI/HU	4.020	5.000	-7.500

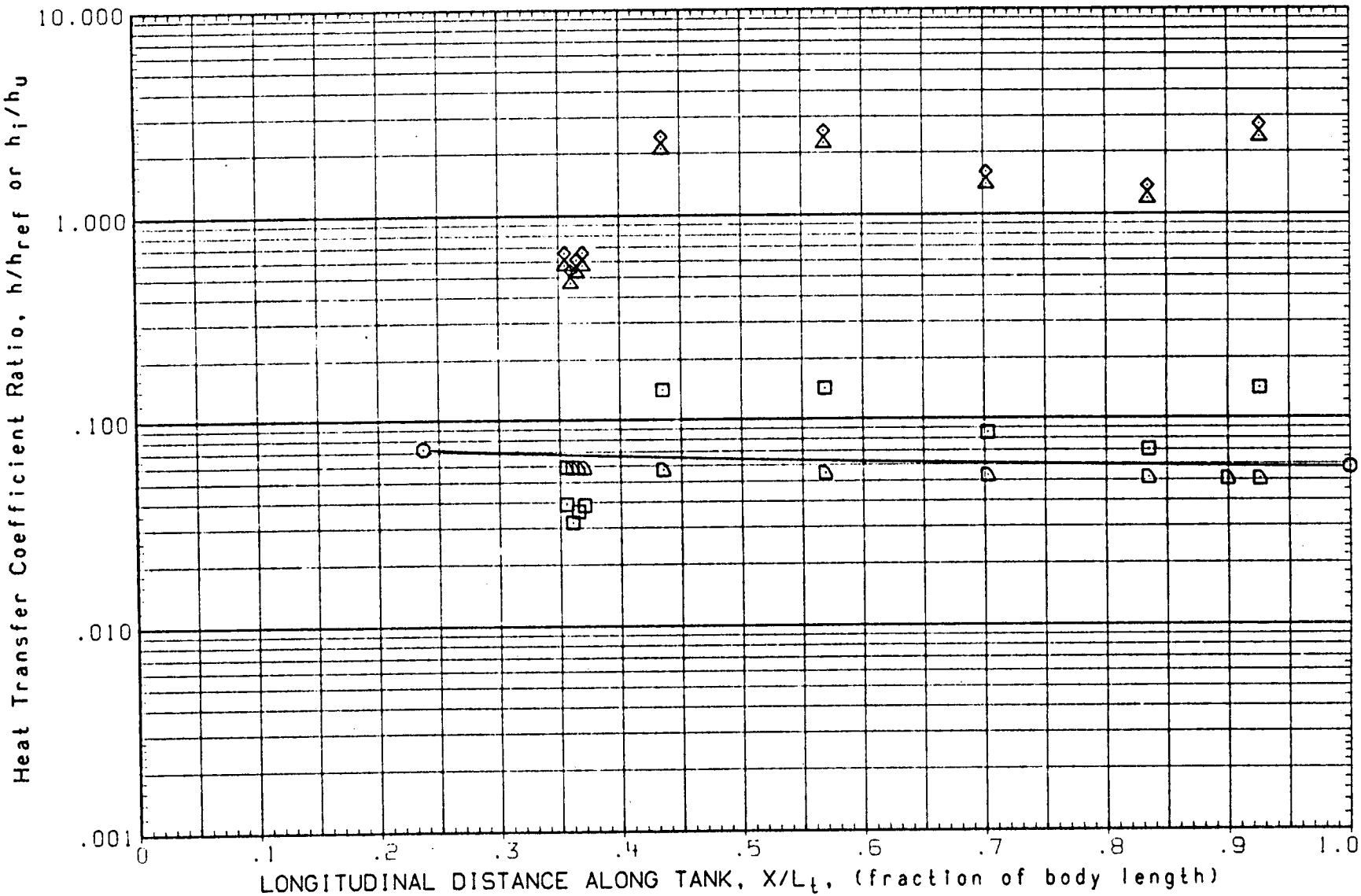

FIG. 4-15 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 23.070

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT50)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-7.500
(C9NT50)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-7.500
(V4LT50)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-7.500
(X4LT50)	◇	IH85 (W.L. TEST) OTS/ET = V4LT50/C9NT50=	HI/HU	4.020	5.000	-7.500
(Y4LT50)	△	IH85 (W.L. THEORY) OTS/ET = V4LT50/A9NT50=	HI/HU	4.020	5.000	-7.500

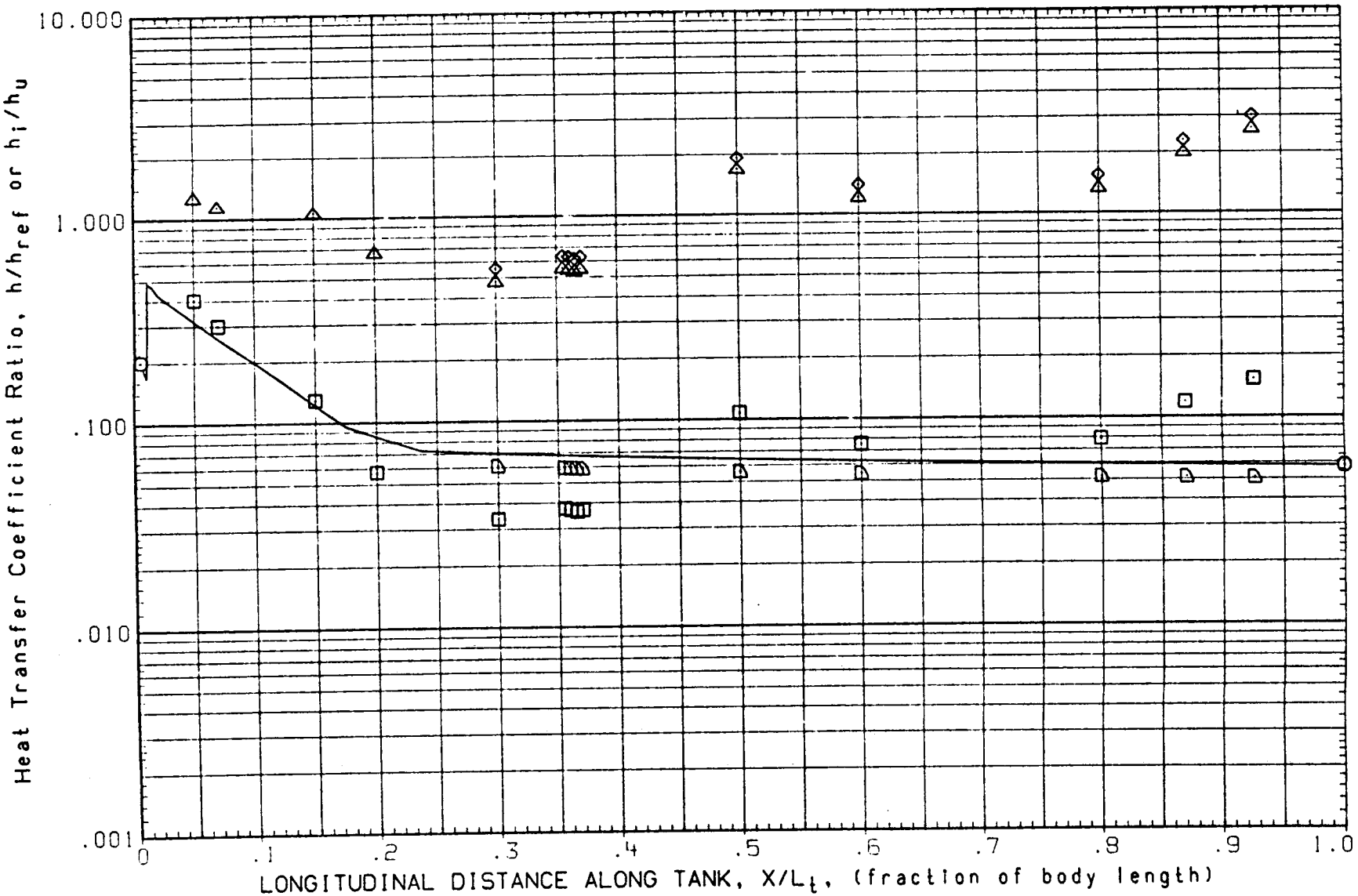

FIG. 4-15 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 29.800

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT50)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-7.500
(C9NT50)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-7.500
(V4LT50)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-7.500
(X4LT50)	◇	IH85 (W.L. TEST) OTS/ET = V4LT50/C9NT50=	HI/HU	4.020	5.000	-7.500
(Y4LT50)	△	IH85 (W.L. THEORY) OTS/ET = V4LT50/A9NT50=	HI/HU	4.020	5.000	-7.500

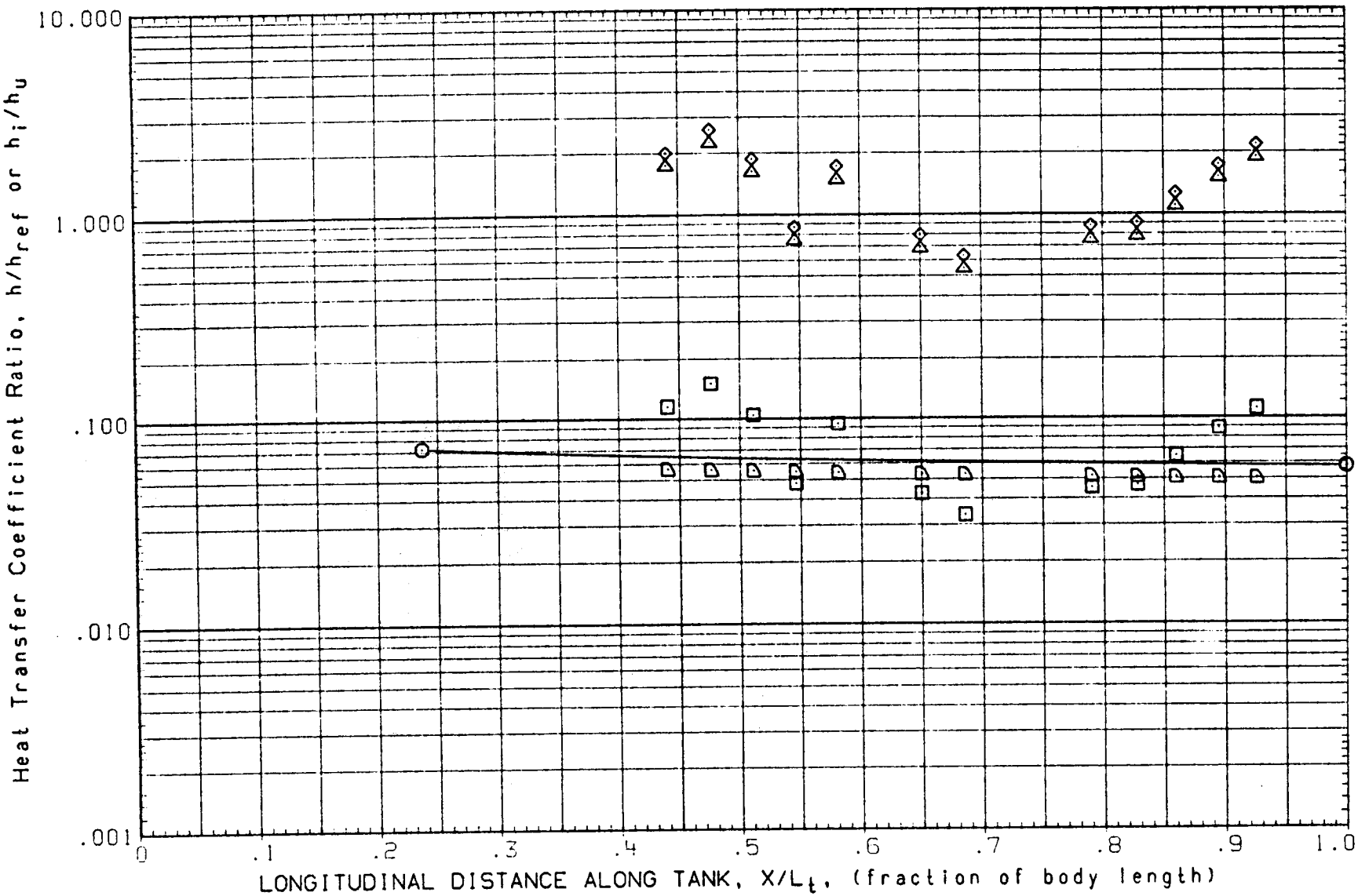

FIG. 4-15 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 31.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT50)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-7.500
(C9NT50)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-7.500
(V4LT50)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-7.500
(X4LT50)	◇	IH85 (W.L. TEST) OTS/ET = V4LT50/C9NT50=	HI/HU	4.020	5.000	-7.500
(Y4LT50)	△	IH85 (W.L. THEORY) OTS/ET = V4LT50/A9NT50=	HI/HU	4.020	5.000	-7.500

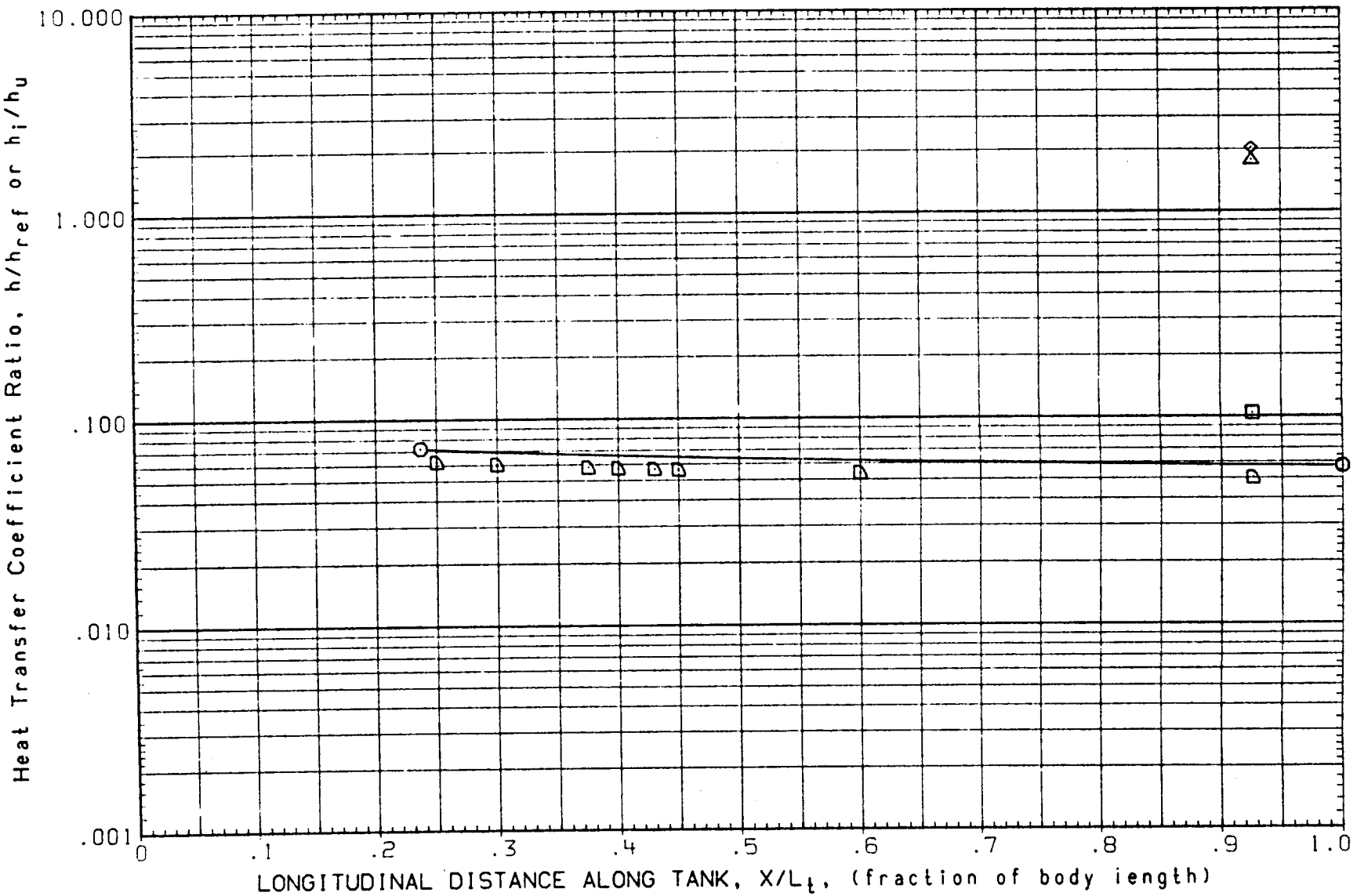

FIG. 4-15 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 33.750

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT50)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-7.500
(C9NT50)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-7.500
(V4LT50)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-7.500
(X4LT50)	◇	IH85 (W.L. TEST) OTS/ET = V4LT50/C9NT50=	HI/HU	4.020	5.000	-7.500
(Y4LT50)	△	IH85 (W.L. THEORY) OTS/ET = V4LT50/A9NT50=	HI/HU	4.020	5.000	-7.500

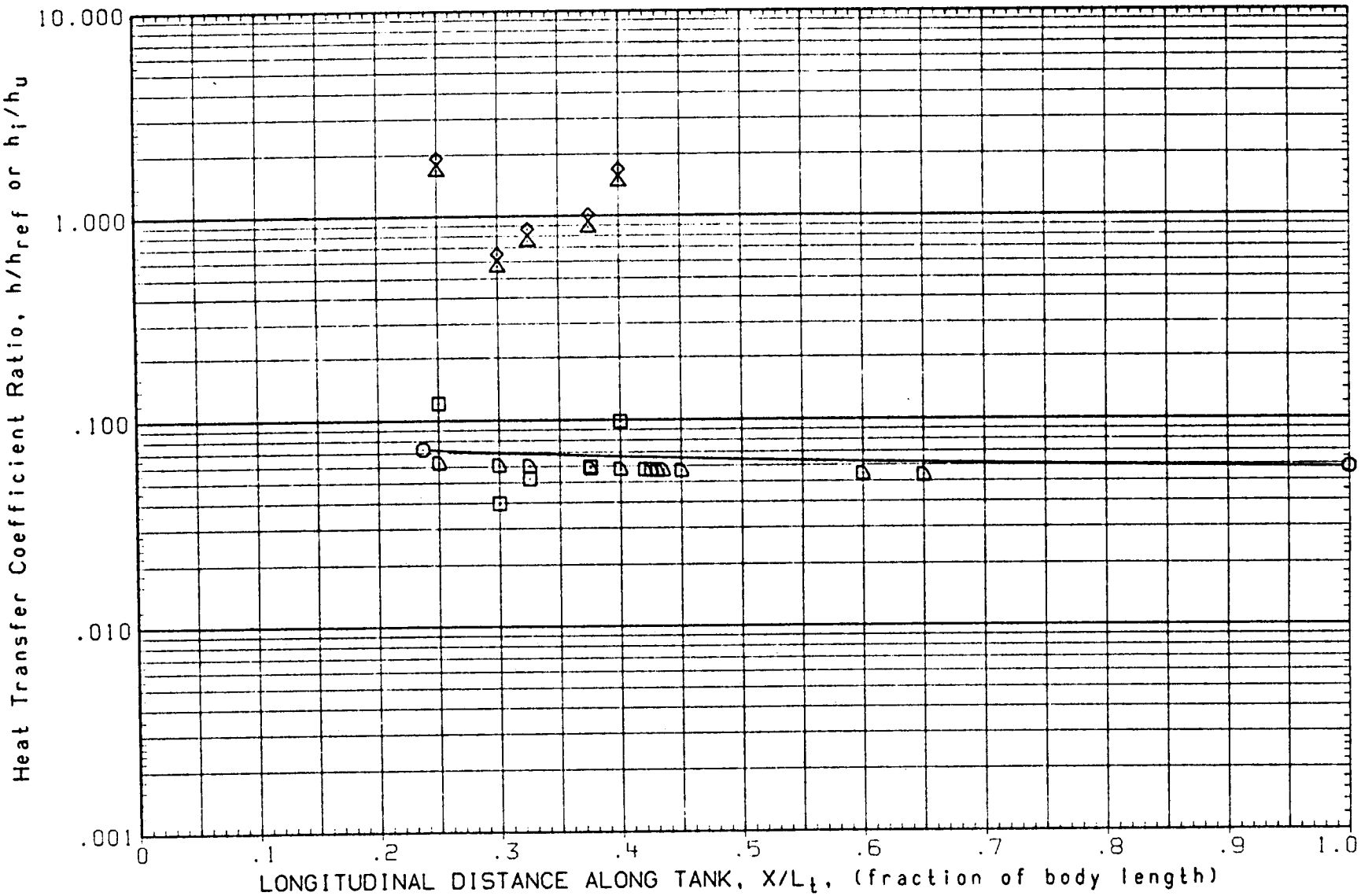

FIG. 4-15 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 36.320

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT50)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-7.500
(C9NT50)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-7.500
(V4LT50)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-7.500
(X4LT50)	◇	IH85 (W.L. TEST) OTS/ET = V4LT50/C9NT50=	HI/HU	4.020	5.000	-7.500
(Y4LT50)	△	IH85 (W.L. THEORY) OTS/ET = V4LT50/A9NT50=	HI/HU	4.020	5.000	-7.500

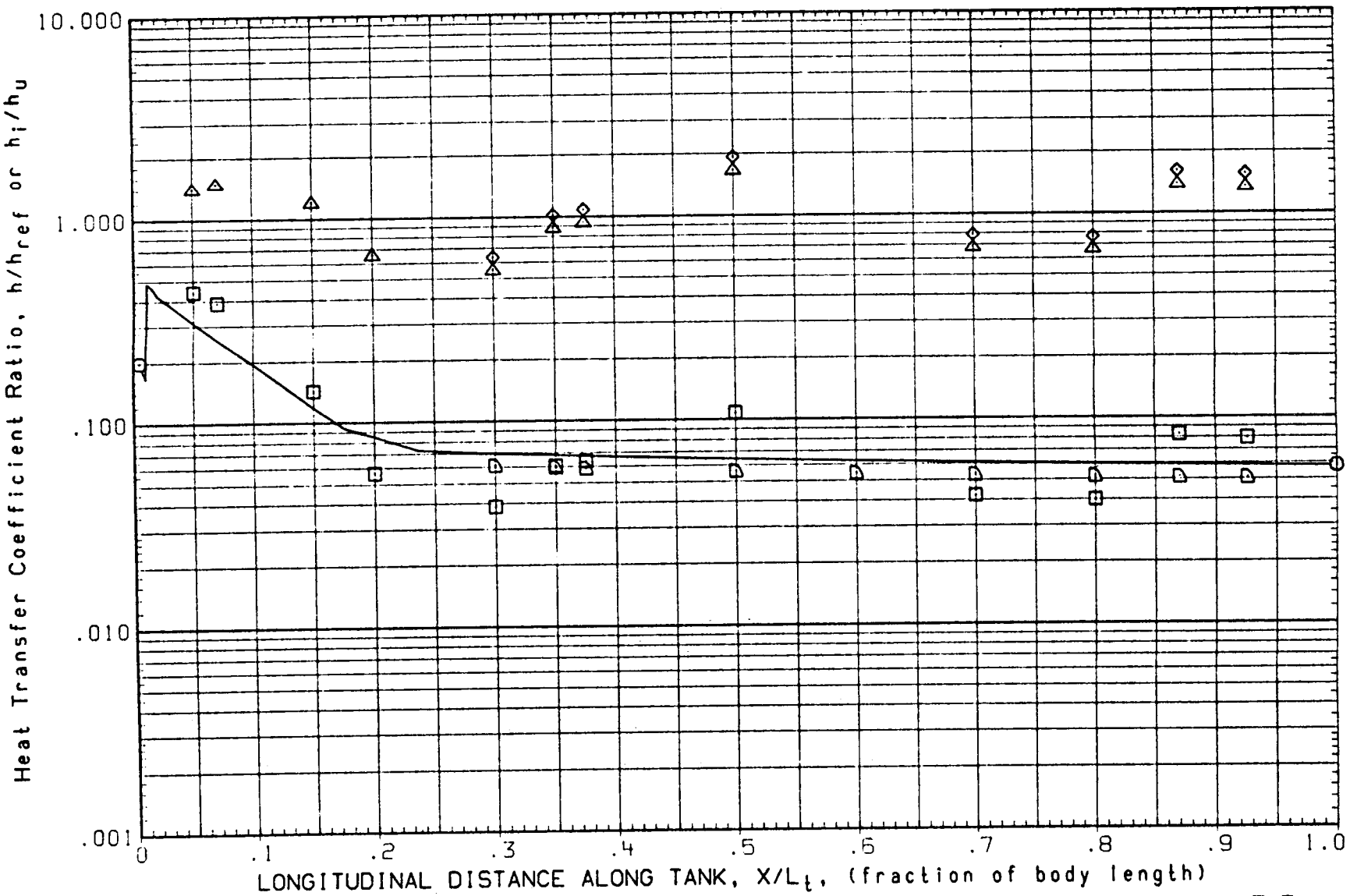

FIG. 4-15 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 37.700

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT50)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-7.500
(C9NT50)	⬠	DATA NOT AVAILABLE		4.020	5.000	-7.500
(V4LT50)	□	DATA NOT AVAILABLE		4.020	5.000	-7.500
(X4LT50)	◇	DATA NOT AVAILABLE		4.020	5.000	-7.500
(Y4LT50)	△	DATA NOT AVAILABLE		4.020	5.000	-7.500

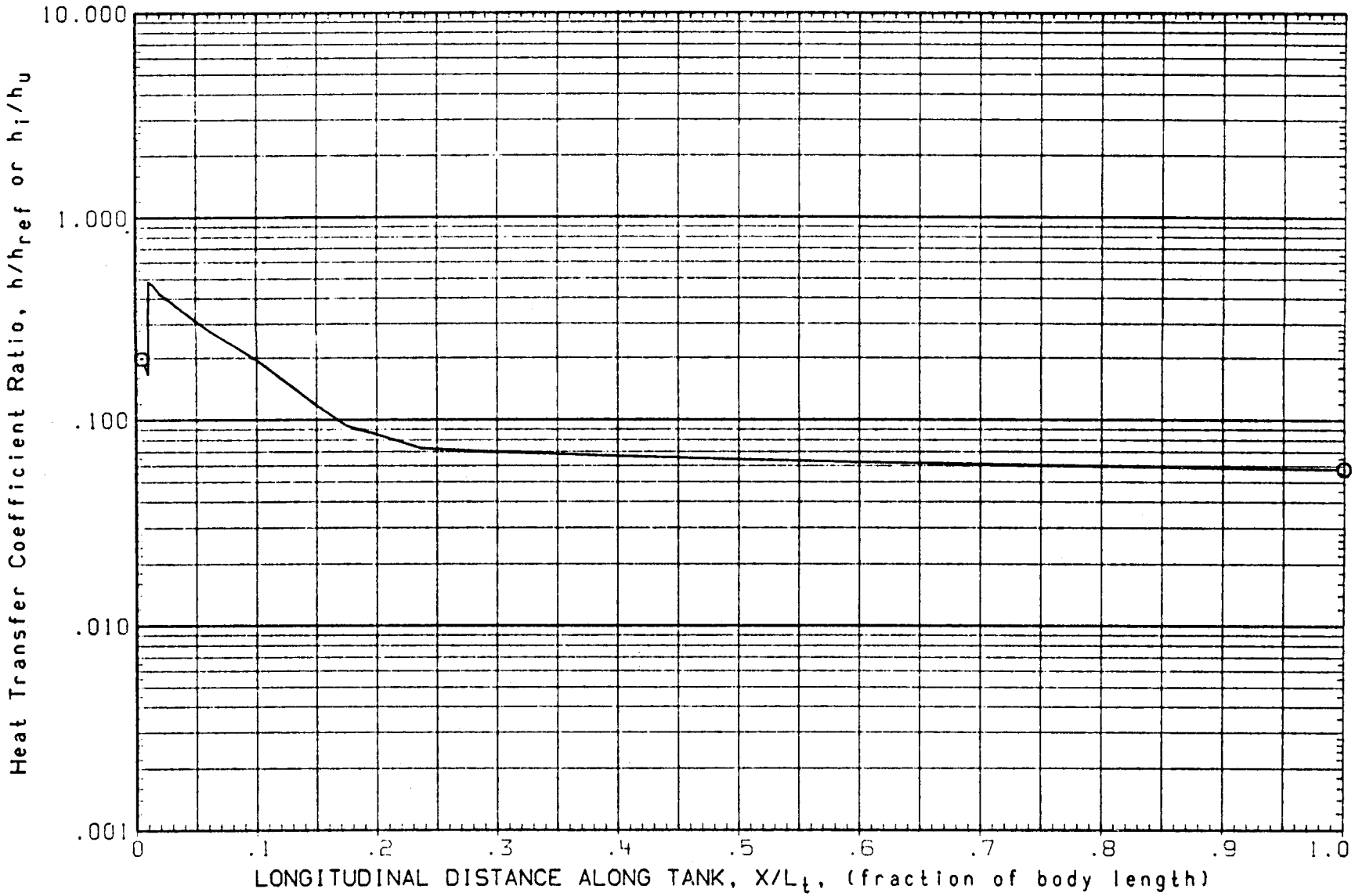

FIG. 4-15 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 39.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT50)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-7.500
(C9NT50)	□	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-7.500
(V4LT50)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-7.500
(X4LT50)	◇	IH85 (W.L. TEST) OTS/ET = V4LT50/C9NT50=	HI/HU	4.020	5.000	-7.500
(Y4LT50)	△	IH85 (W.L. THEORY) OTS/ET = V4LT50/A9NT50=	HI/HU	4.020	5.000	-7.500

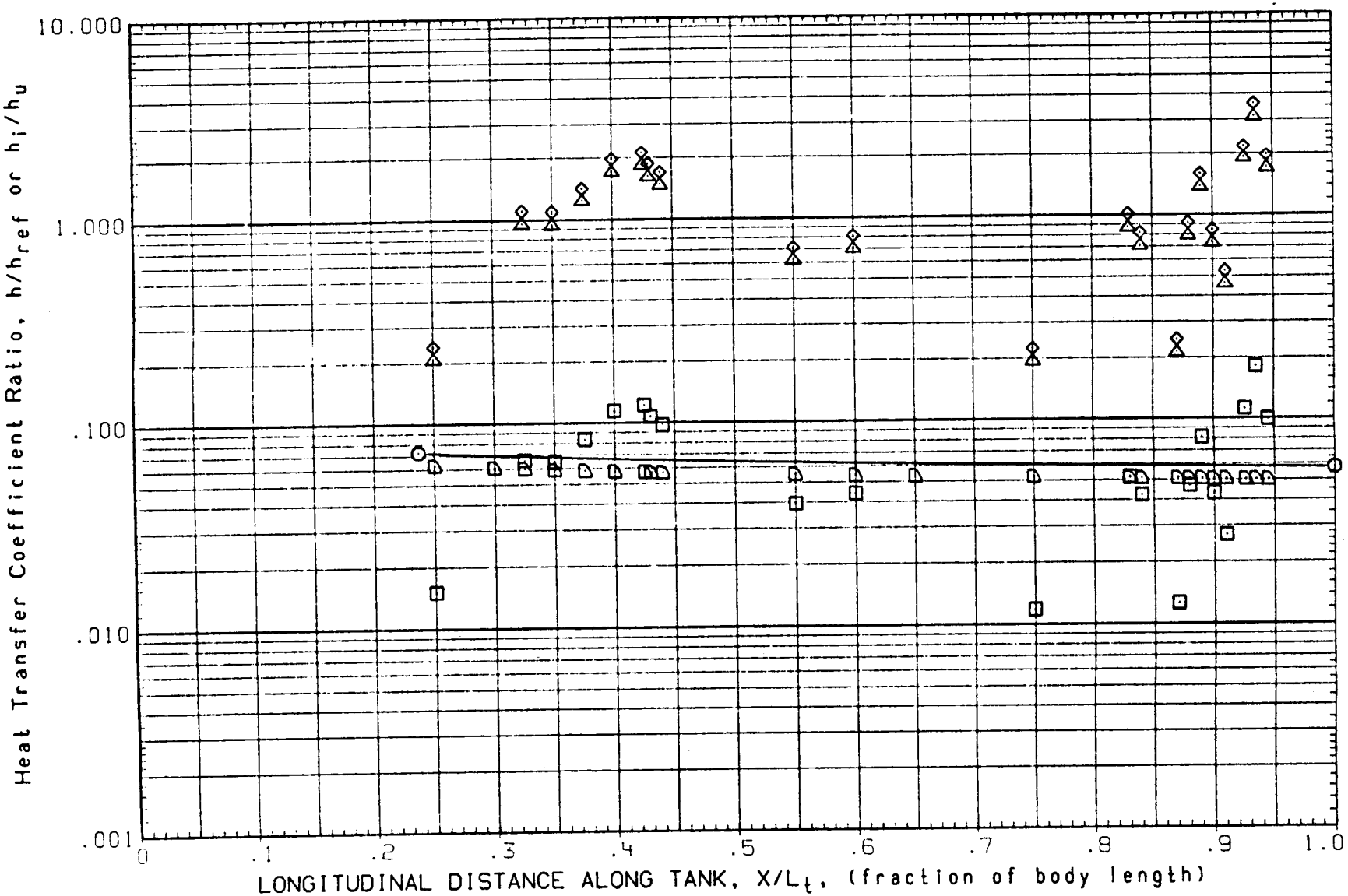

FIG. 4-15 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 45.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT50)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	4.020	5.000	-7.500
(C9NT50)	⬡	DATA NOT AVAILABLE	4.020	5.000	-7.500
(V4LT50)	□	IH85, AEDC V41A-W5, CONFIGURATION O (T) S	4.020	5.000	-7.500
(X4LT50)	◇	DATA NOT AVAILABLE	4.020	5.000	-7.500
(Y4LT50)	△	IH85 (W.L. THEORY) OTS/ET = V4LT50/A9NT50= HI/HU	4.020	5.000	-7.500

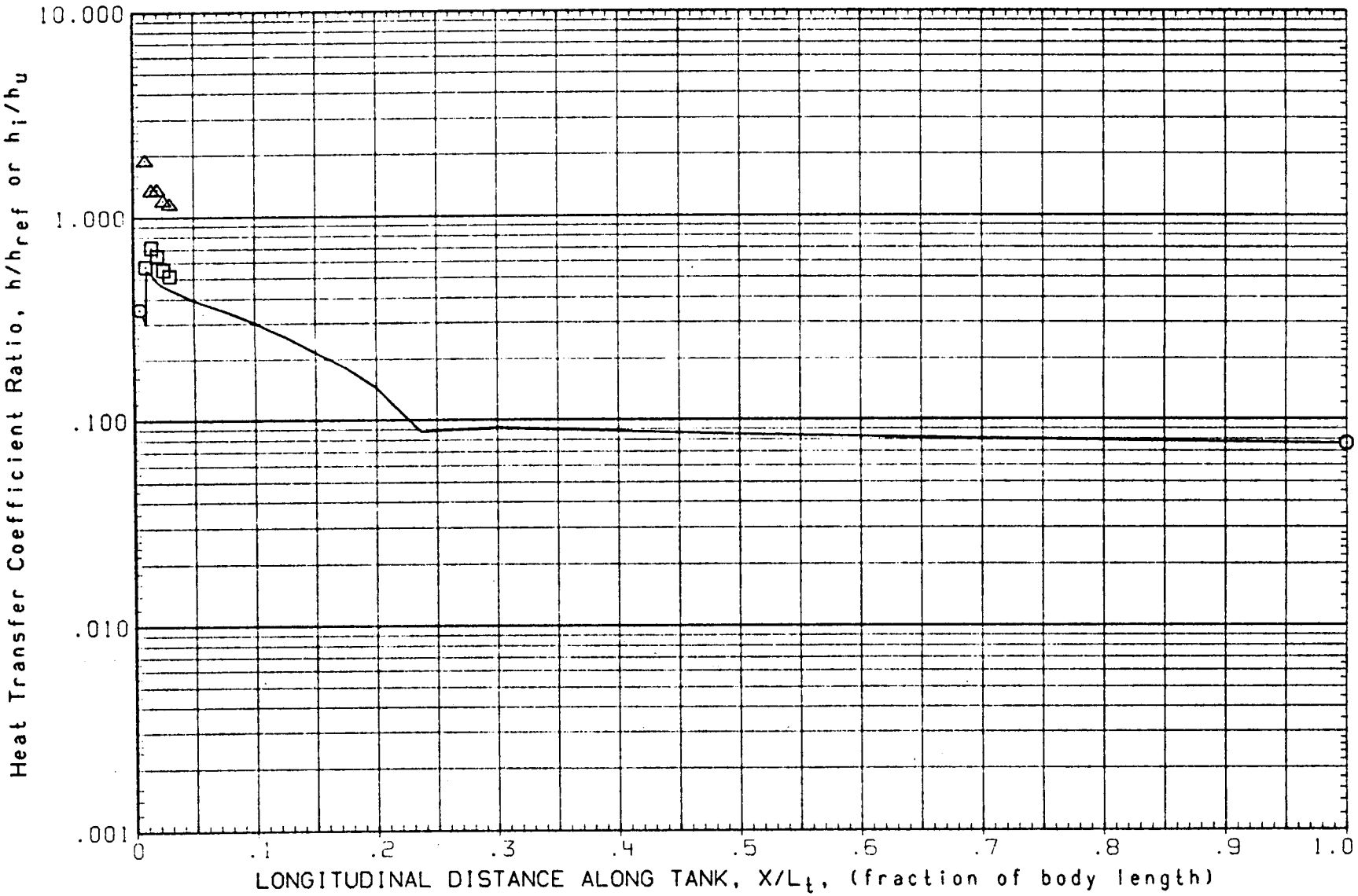

FIG. 4-15 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 180.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT50)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-7.500
(C9NT50)	◇	DATA NOT AVAILABLE		4.020	5.000	-7.500
(Y4LT50)	□	DATA NOT AVAILABLE		4.020	5.000	-7.500
(X4LT50)	◇	DATA NOT AVAILABLE		4.020	5.000	-7.500
(Y4LT50)	△	DATA NOT AVAILABLE		4.020	5.000	-7.500

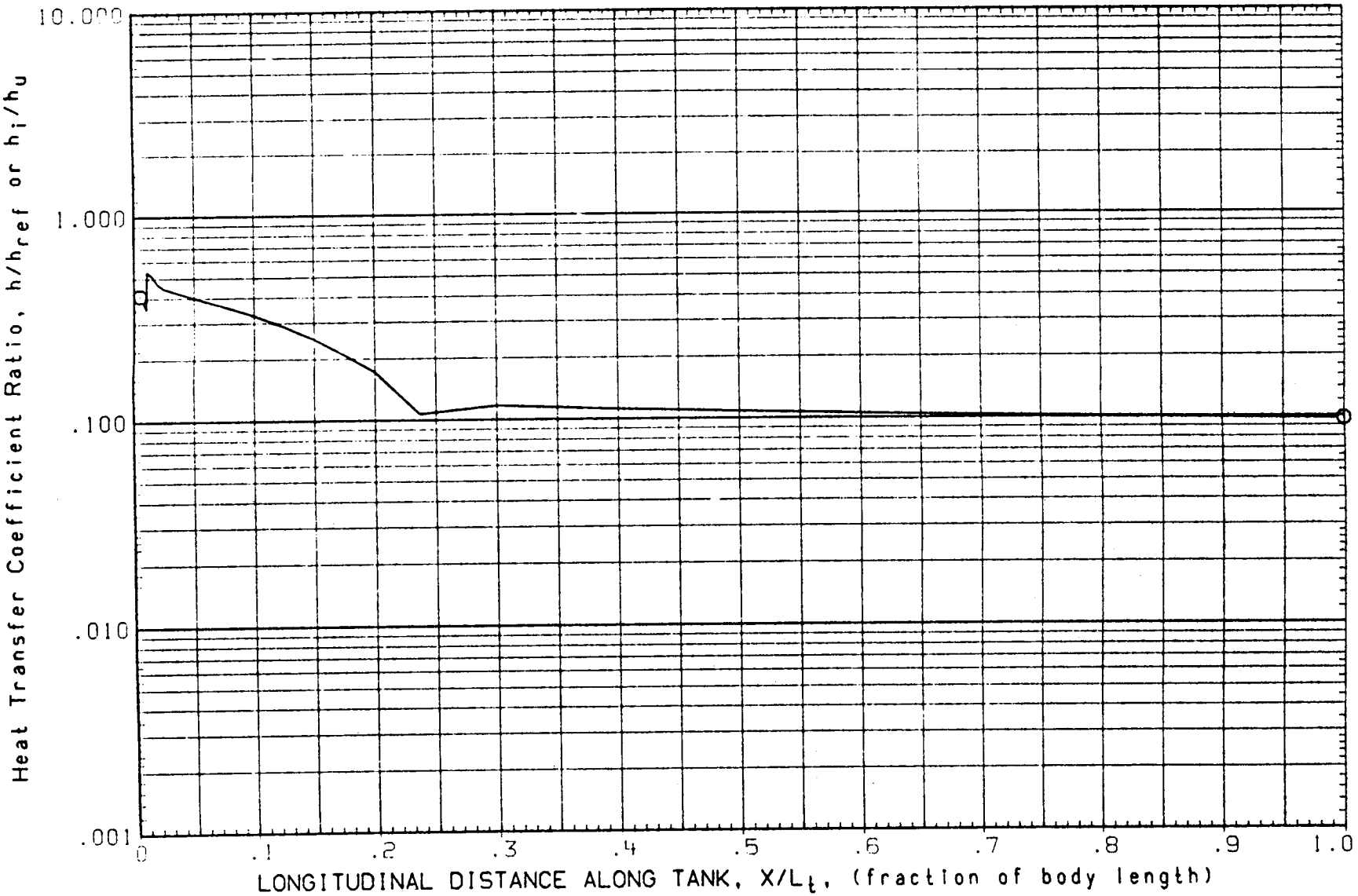

FIG. 4-15 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 235.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT50)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-7.500
(C9NT50)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-7.500
(V4LT50)	□	IH85, AEDC V41A-W5, CONFIGURATION O (T) S		4.020	5.000	-7.500
(X4LT50)	◇	IH85 (W.L. TEST) OTS/ET = V4LT50/C9NT50=	HI/HU	4.020	5.000	-7.500
(Y4LT50)	△	IH85 (W.L. THEORY) OTS/ET = V4LT50/A9NT50=	HI/HU	4.020	5.000	-7.500

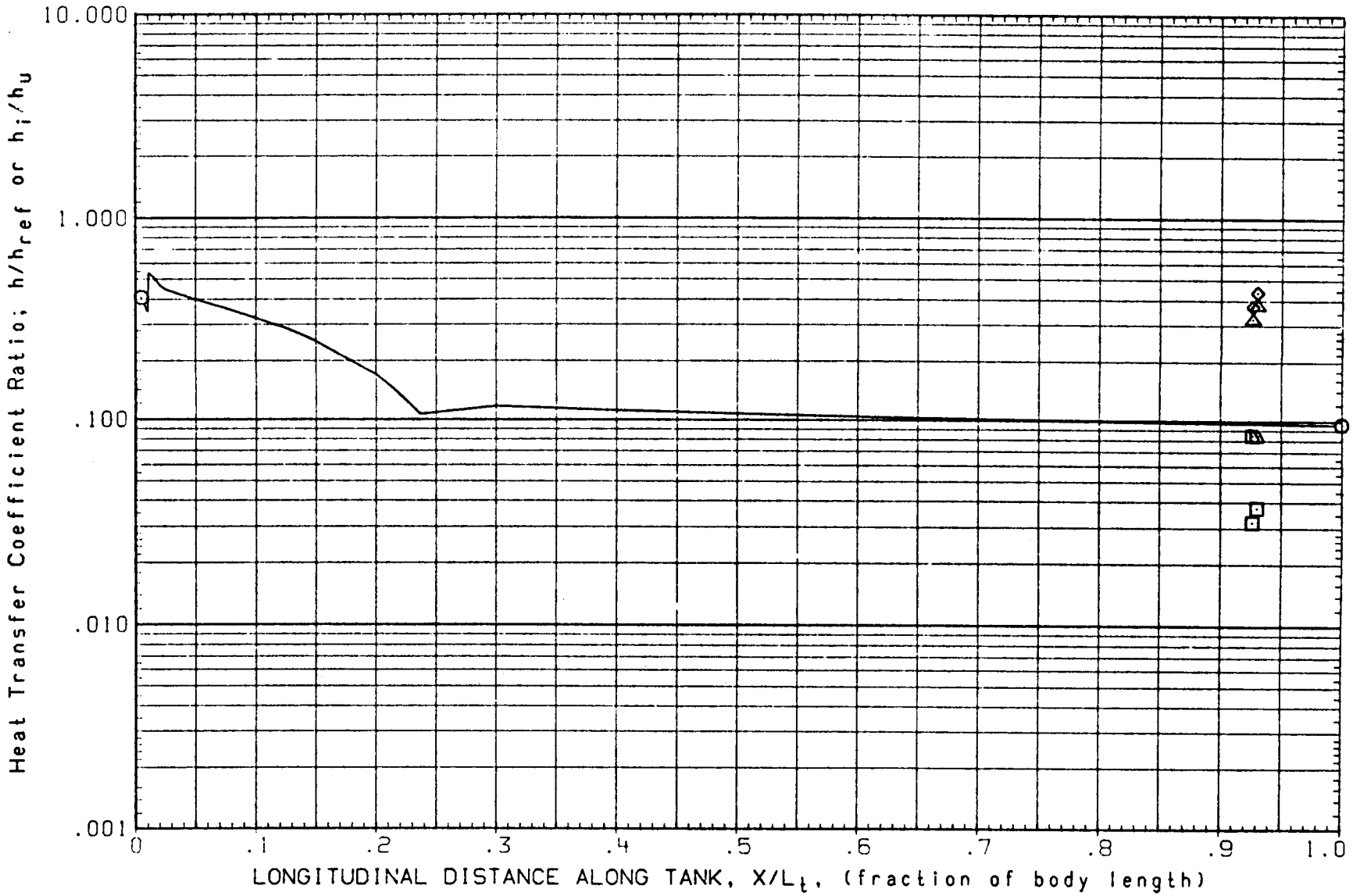

FIG. 4-15 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 247.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT50)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-7.500
(C9NT50)	⬠	DATA NOT AVAILABLE		4.020	5.000	-7.500
(V4LT50)	□	DATA NOT AVAILABLE		4.020	5.000	-7.500
(X4LT50)	◇	DATA NOT AVAILABLE		4.020	5.000	-7.500
(Y4LT50)	△	DATA NOT AVAILABLE		4.020	5.000	-7.500

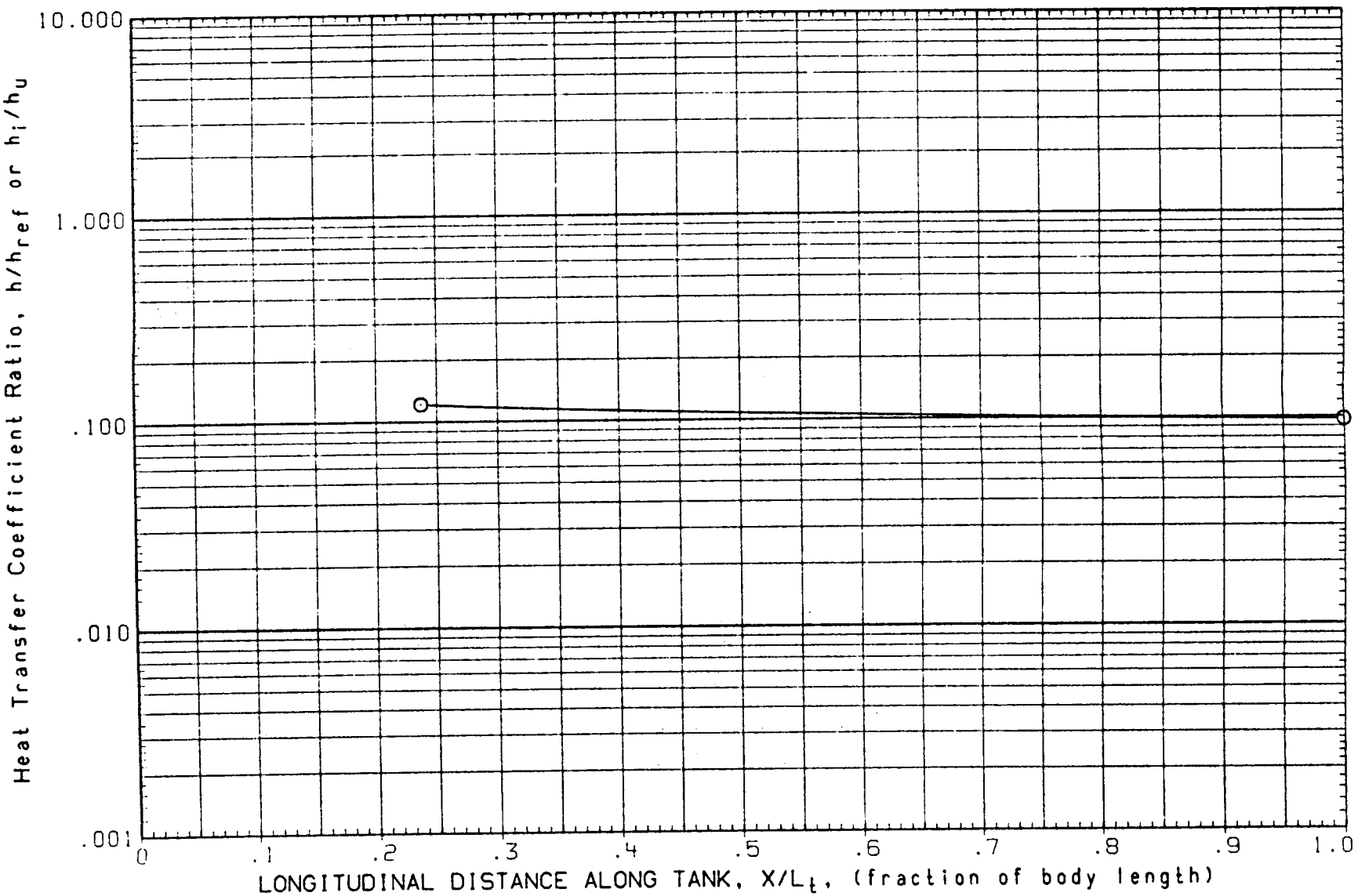

FIG. 4-15 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 247.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT50)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	4.020	5.000	-7.500
(C9NT50)	⌂	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	4.020	5.000	-7.500
(V4LT50)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	5.000	-7.500
(X4LT50)	◇	IH85 (W.L. TEST) OTS/ET = V4LT50/C9NT50= HI/HU	4.020	5.000	-7.500
(Y4LT50)	△	IH85 (W.L. THEORY) OTS/ET = V4LT50/A9NT50= HI/HU	4.020	5.000	-7.500

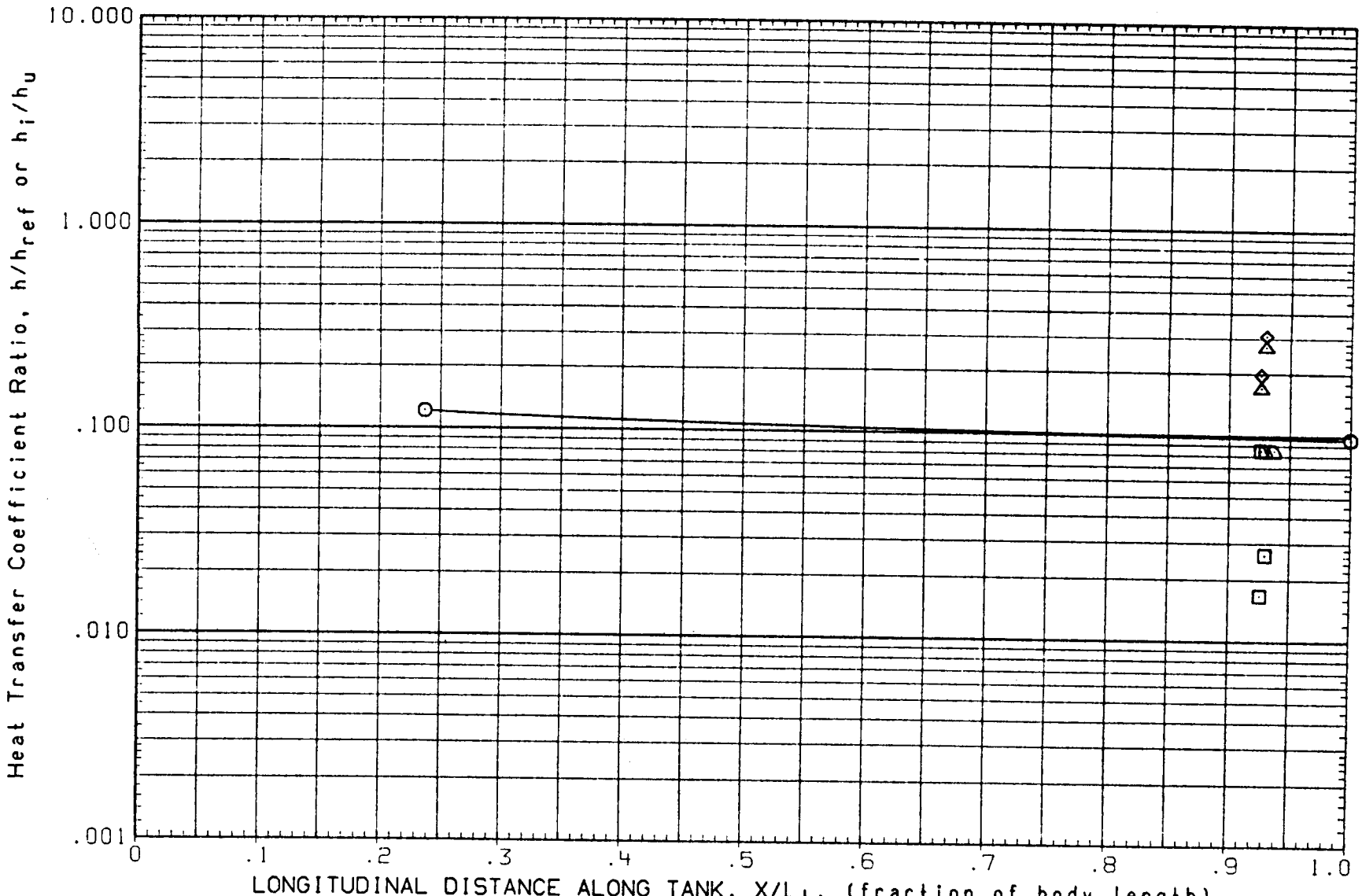

FIG. 4-15 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 250.570

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT50)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	4.020	5.000	-7.500
(C9NT50)	⬠	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	4.020	5.000	-7.500
(V4LT50)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	5.000	-7.500
(X4LT50)	◇	IH85 (W.L. TEST) OTS/ET = V4LT50/C9NT50= HI/HU	4.020	5.000	-7.500
(Y4LT50)	△	IH85 (W.L. THEORY) OTS/ET = V4LT50/A9NT50= HI/HU	4.020	5.000	-7.500

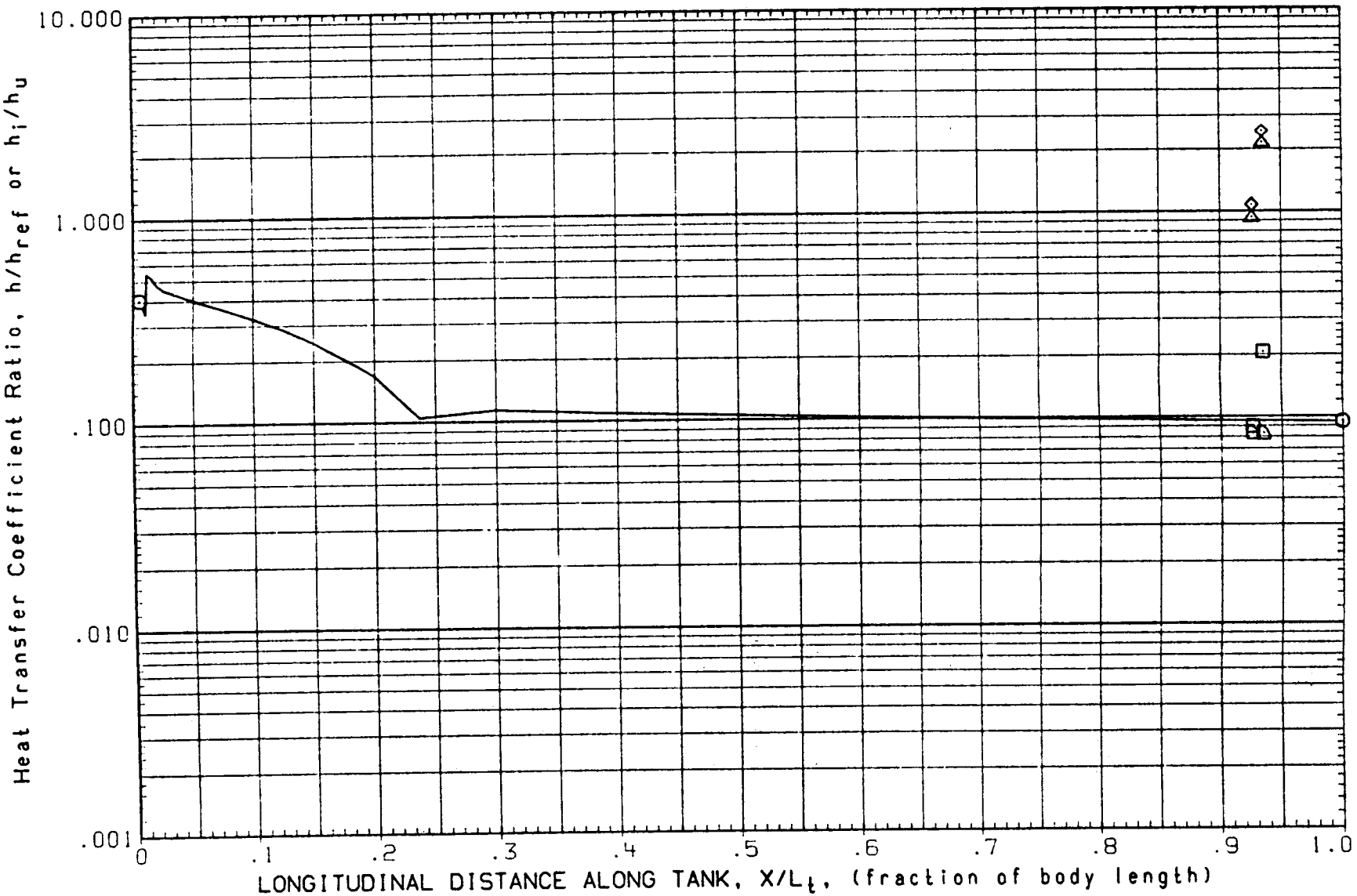

FIG. 4-15 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 258.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT50)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-7.500
(C9NT50)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-7.500
(V4LT50)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-7.500
(X4LT50)	◇	IH85 (W.L. TEST) OTS/ET = V4LT50/C9NT50=	HI/HU	4.020	5.000	-7.500
(Y4LT50)	△	IH85 (W.L. THEORY) OTS/ET = V4LT50/A9NT50=	HI/HU	4.020	5.000	-7.500

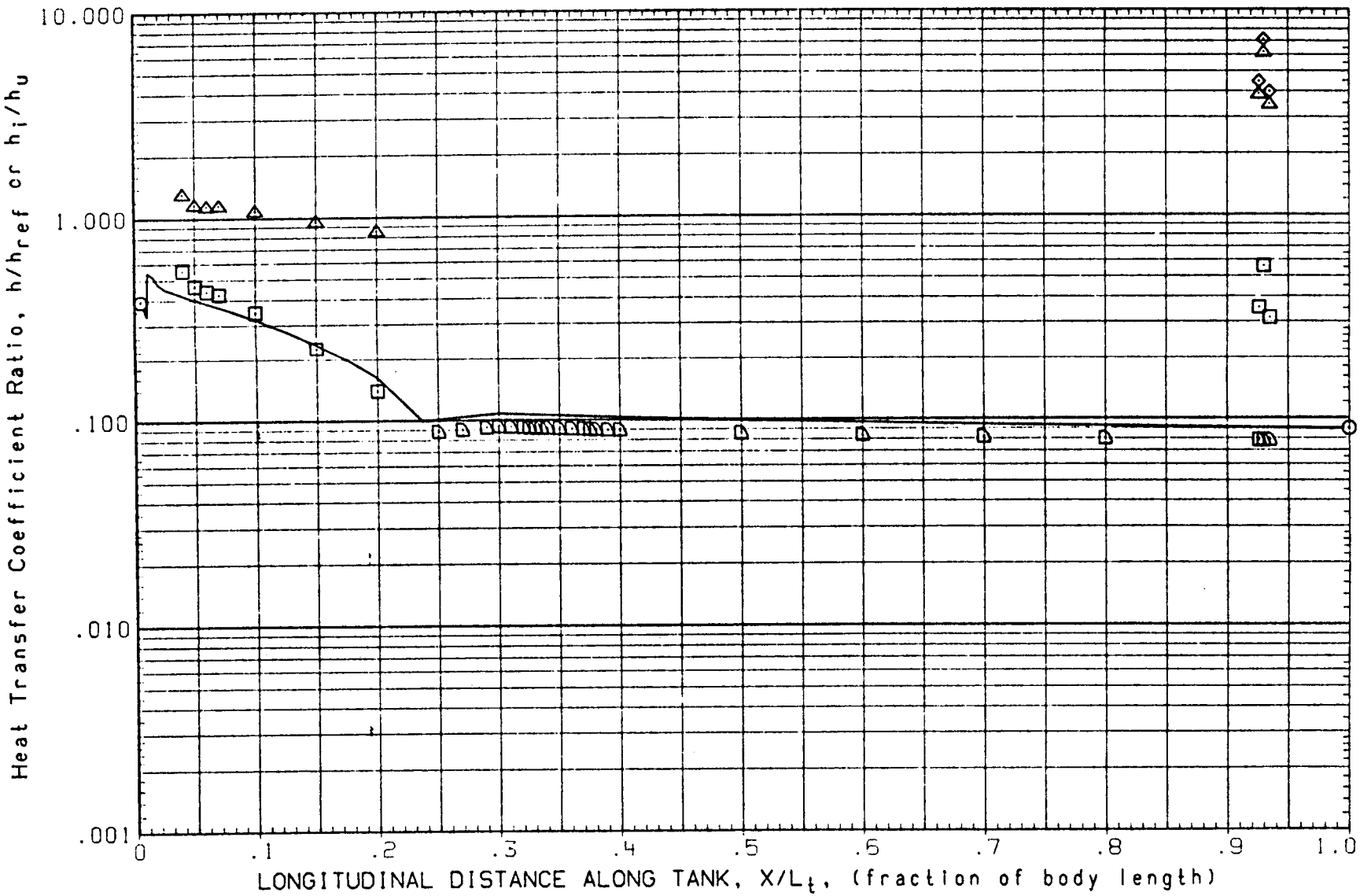

FIG. 4-15 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 270.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT50)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-7.500
(C9NT50)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-7.500
(V4LT50)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-7.500
(X4LT50)	◇	IH85 (W.L. TEST) OTS/ET = V4LT50/C9NT50=	HI/HU	4.020	5.000	-7.500
(Y4LT50)	△	IH85 (W.L. THEORY) OTS/ET = V4LT50/A9NT50=	HI/HU	4.020	5.000	-7.500

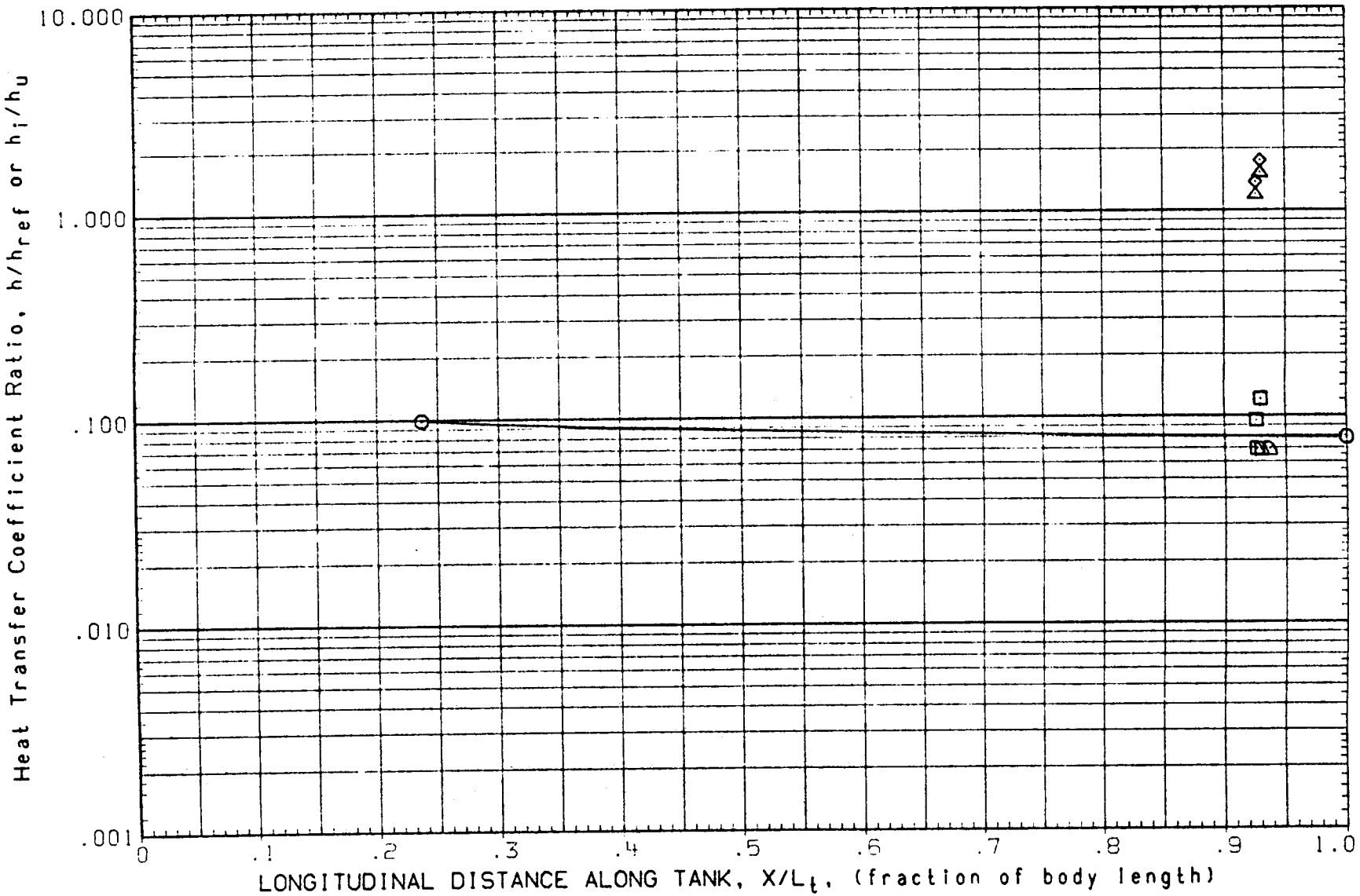

FIG. 4-15 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 FHI = 289.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT50)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-7.500
(C9NT50)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-7.500
(V4LT50)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-7.500
(X4LT50)	◇	IH85 (W.L. TEST) OTS/ET = V4LT50/C9NT50=	HI/HU	4.020	5.000	-7.500
(Y4LT50)	△	IH85 (W.L. THEORY) OTS/ET = V4LT50/A9NT50=	HI/HU	4.020	5.000	-7.500

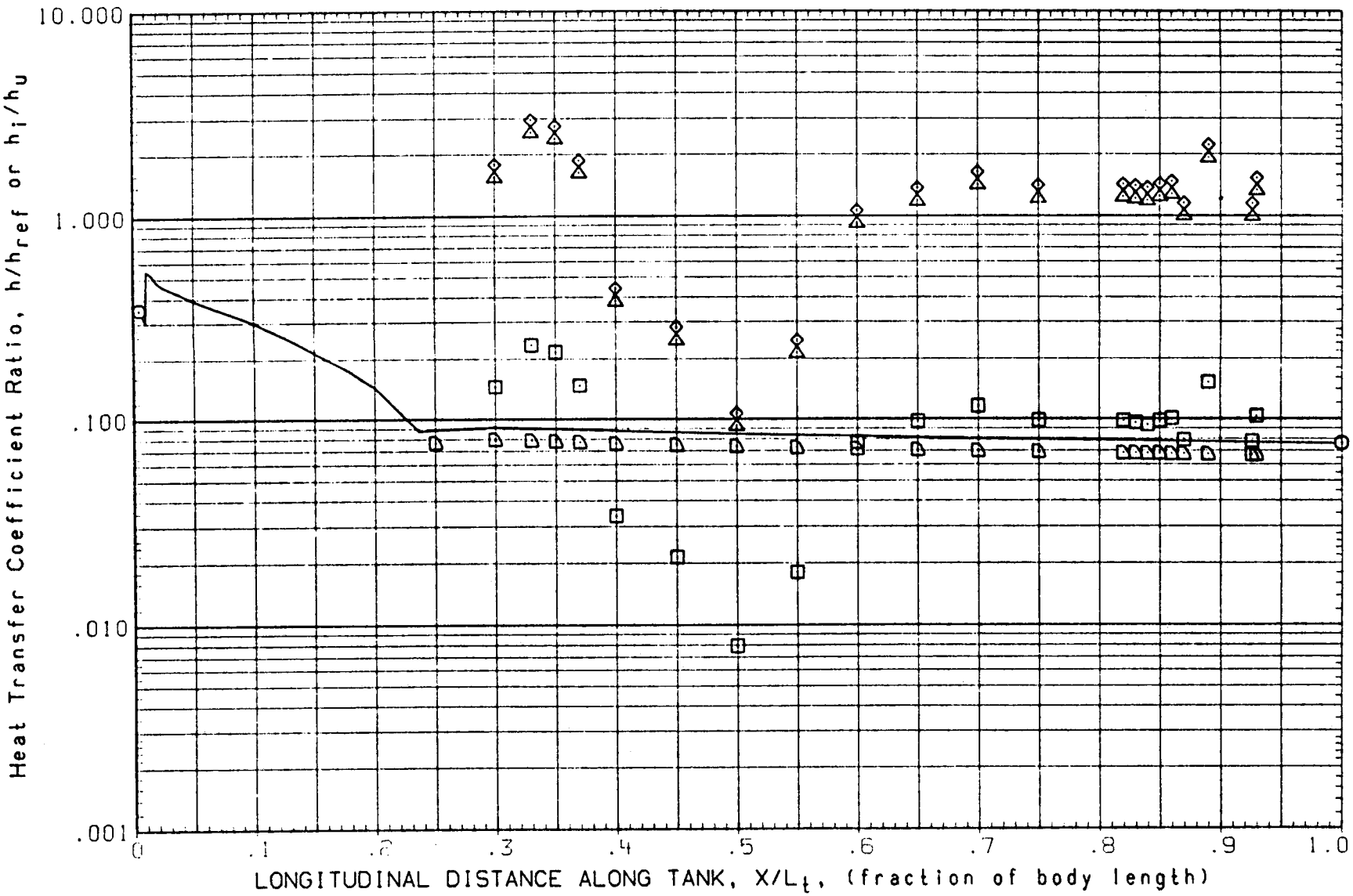

FIG. 4-15 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 292.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT50)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-7.500
(C9NT50)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-7.500
(V4LT50)	□	IH85, AEDC V41A-W5, CONFIGURATION O (T) S		4.020	5.000	-7.500
(X4LT50)	◇	IH85 (W.L. TEST) OTS/ET = V4LT50/C9NT50=	HI/HU	4.020	5.000	-7.500
(Y4LT50)	△	IH85 (W.L. THEORY) OTS/ET = V4LT50/A9NT50=	HI/HU	4.020	5.000	-7.500

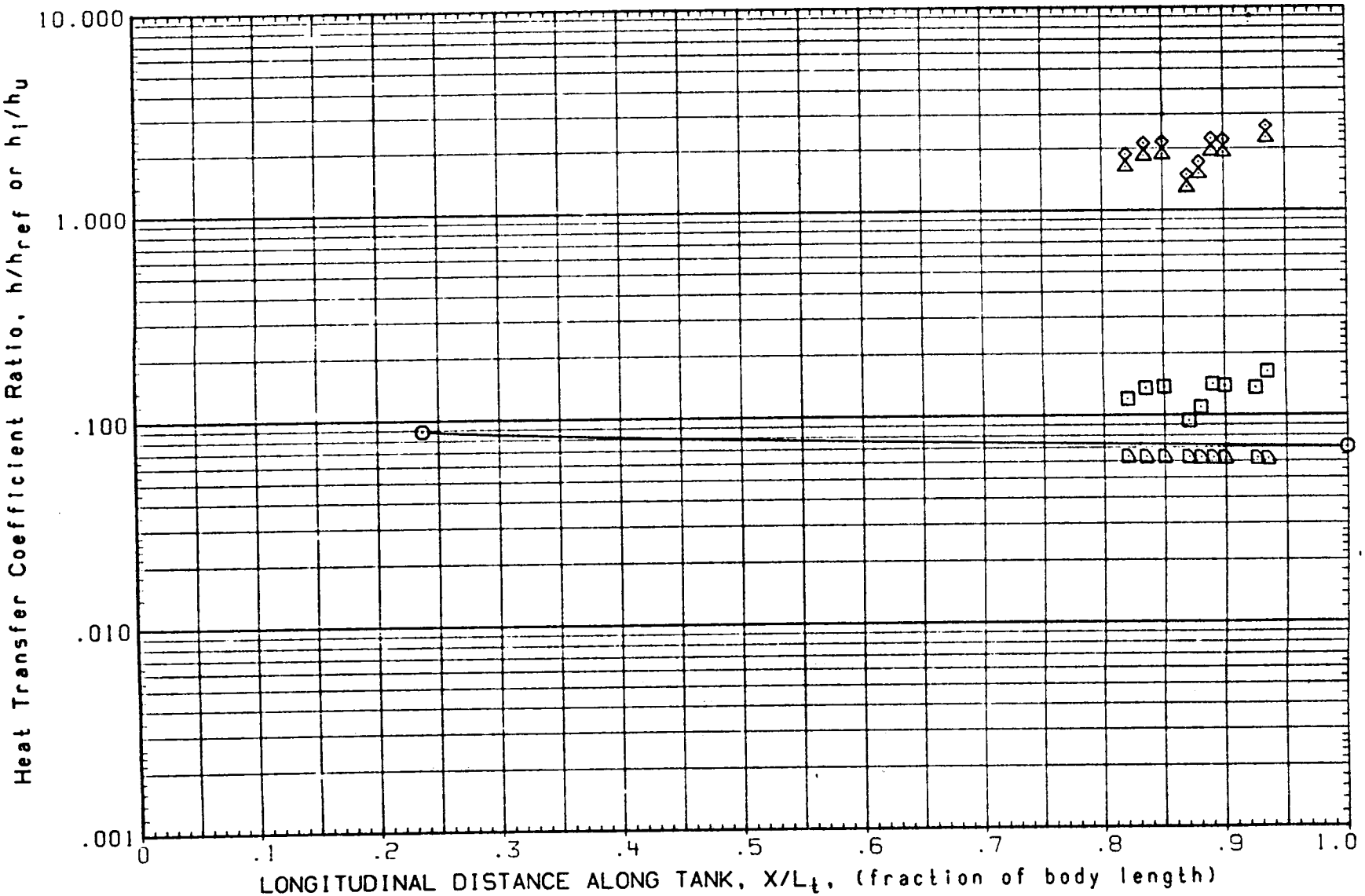

FIG. 4-15 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 301.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT50)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-7.500
(C9NT50)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-7.500
(V4LT50)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-7.500
(X4LT50)	◇	IH85 (W.L. TEST) OTS/ET = V4LT50/C9NT50=	HI/HU	4.020	5.000	-7.500
(Y4LT50)	△	IH85 (W.L. THEORY) OTS/ET = V4LT50/A9NT50=	HI/HU	4.020	5.000	-7.500

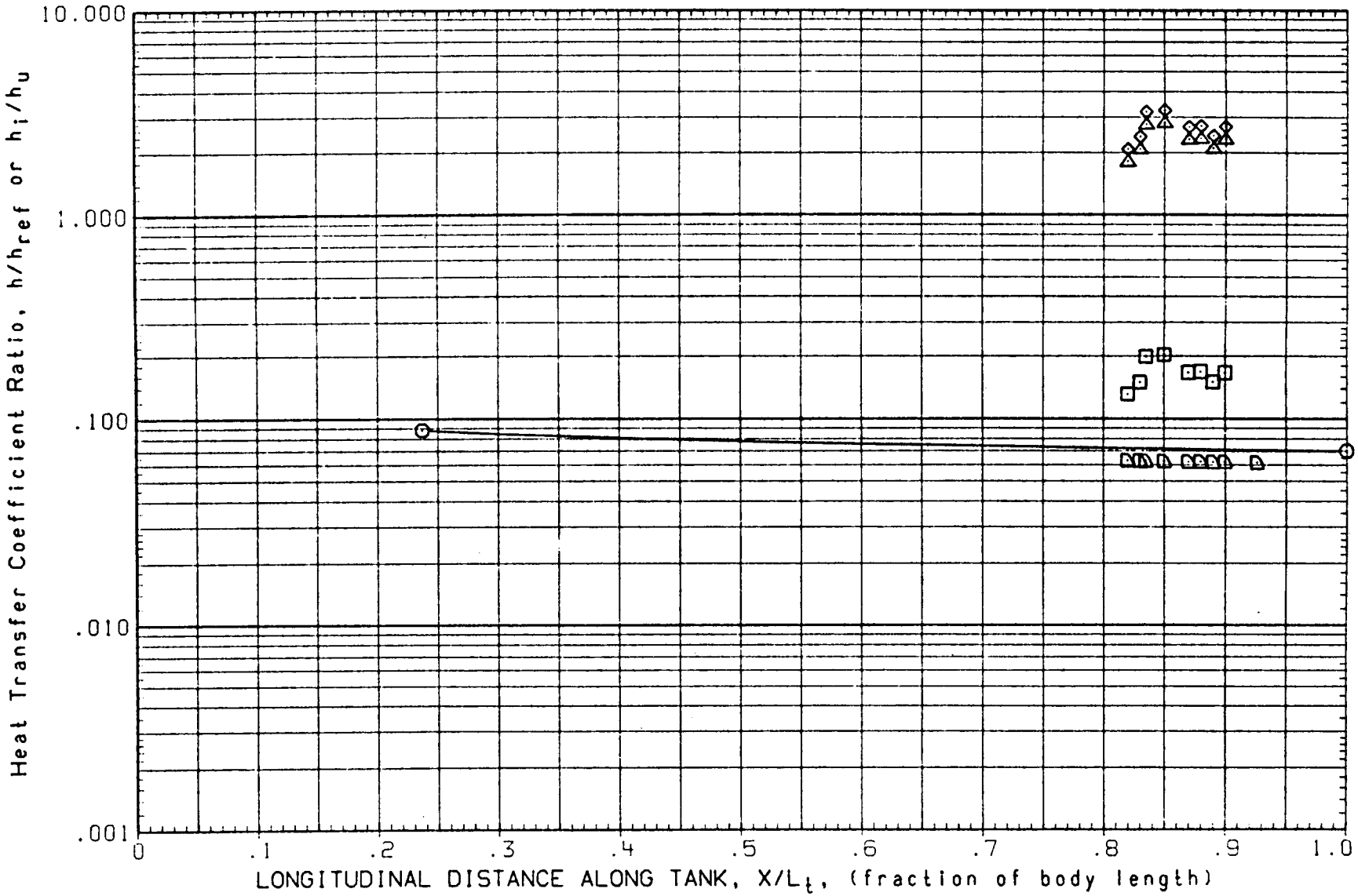

FIG. 4-15 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 305.400

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT50)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-7.500
(C9NT50)	⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-7.500
(V4LT50)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-7.500
(X4LT50)	◇	IH85 (W.L. TEST) OTS/ET = V4LT50/C9NT50=	HI/HU	4.020	5.000	-7.500
(Y4LT50)	△	IH85 (W.L. THEORY) OTS/ET = V4LT50/A9NT50=	HI/HU	4.020	5.000	-7.500

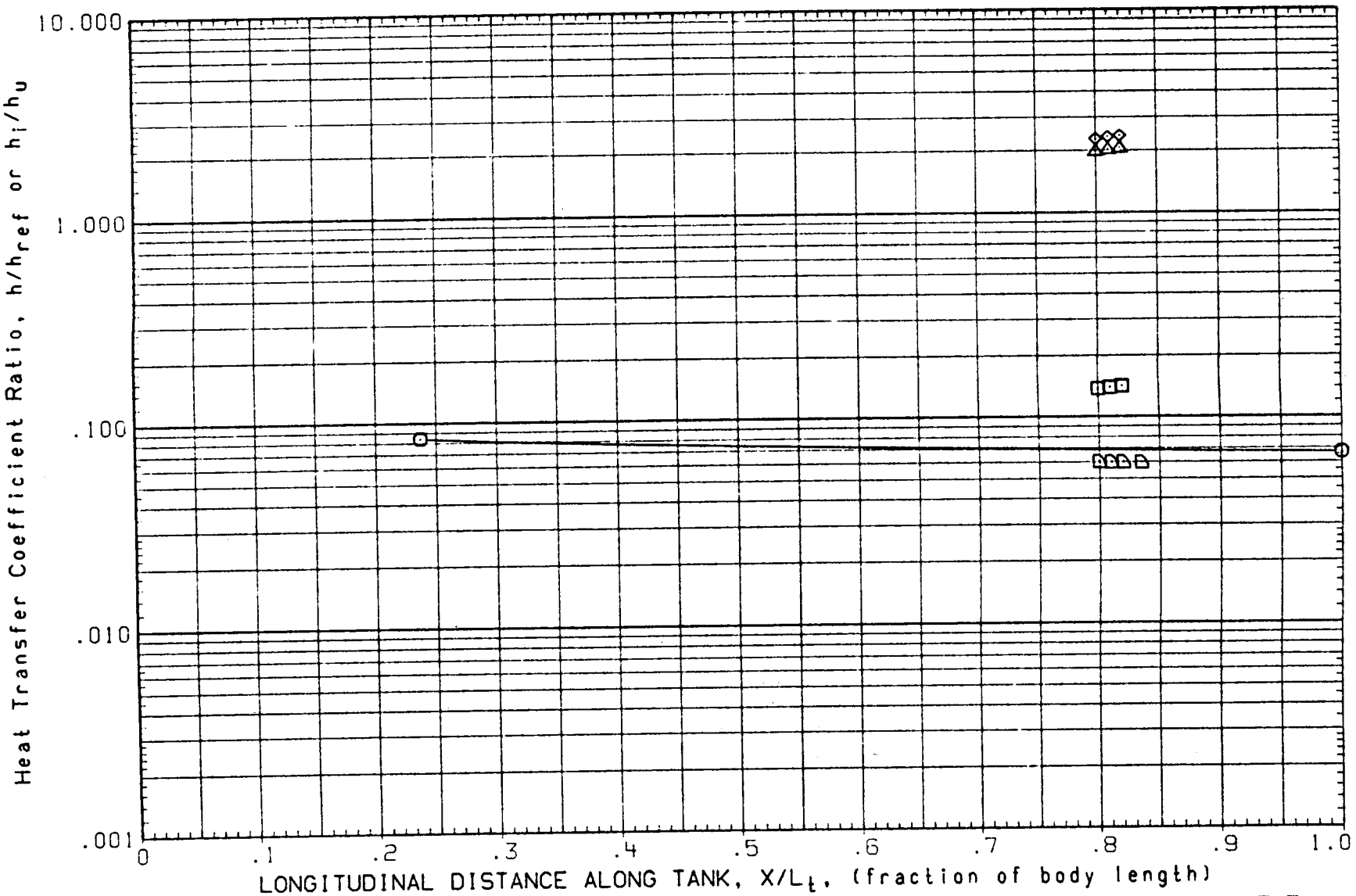

FIG. 4-15 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 309.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT50)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-7.500
(C9NT50)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-7.500
(V4LT50)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-7.500
(X4LT50)	◇	IH85 (W.L. TEST) OTS/ET = V4LT50/C9NT50=	HI/HU	4.020	5.000	-7.500
(Y4LT50)	△	IH85 (W.L. THEORY) OTS/ET = V4LT50/A9NT50=	HI/HU	4.020	5.000	-7.500

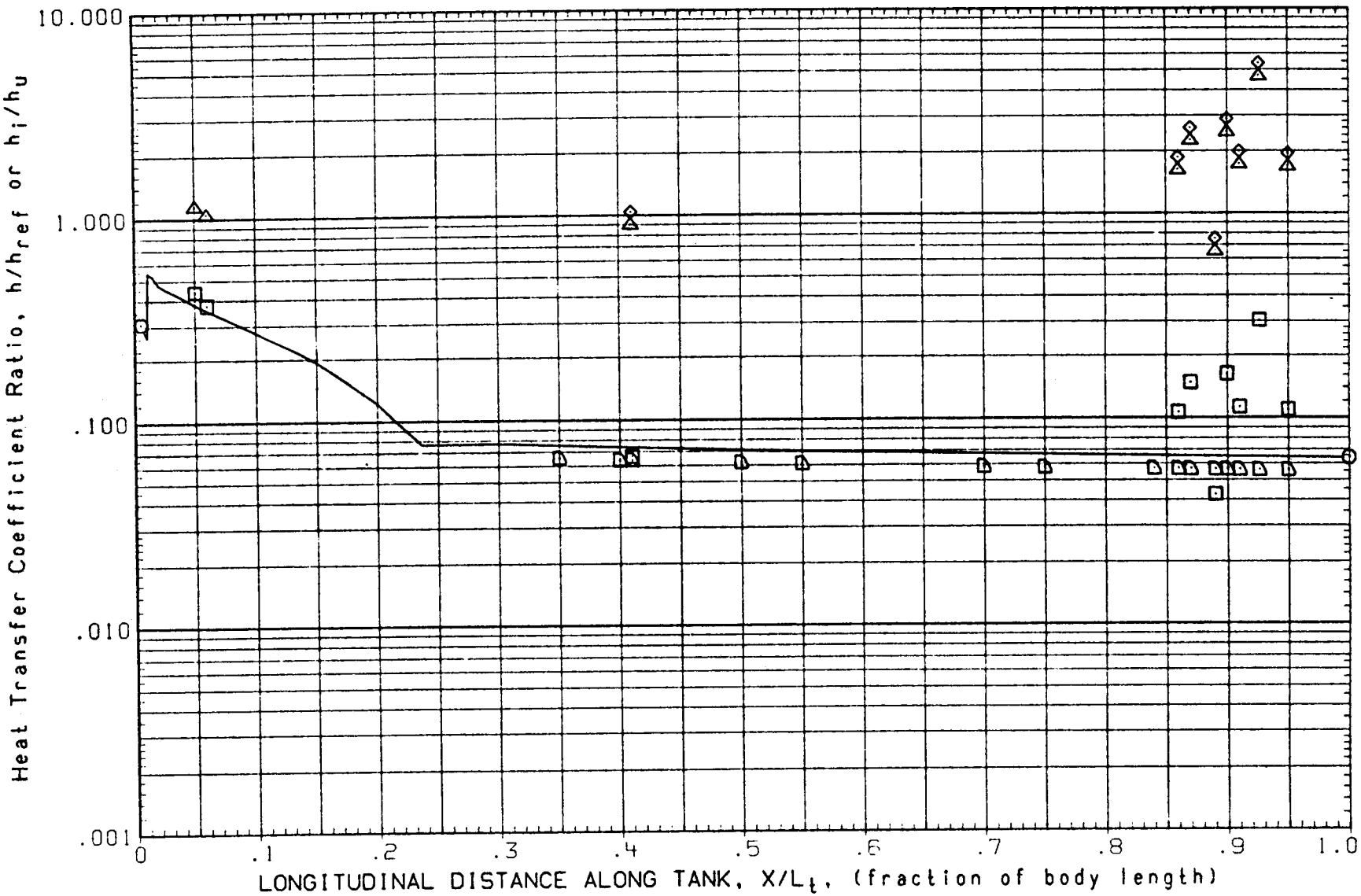

FIG. 4-15 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 315.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT50)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-7.500
(C9NT50)	◐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-7.500
(V4LT50)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-7.500
(X4LT50)	◇	IH85 (W.L. TEST) OTS/ET = V4LT50/C9NT50=	HI/HU	4.020	5.000	-7.500
(Y4LT50)	△	IH85 (W.L. THEORY) OTS/ET = V4LT50/A9NT50=	HI/HU	4.020	5.000	-7.500

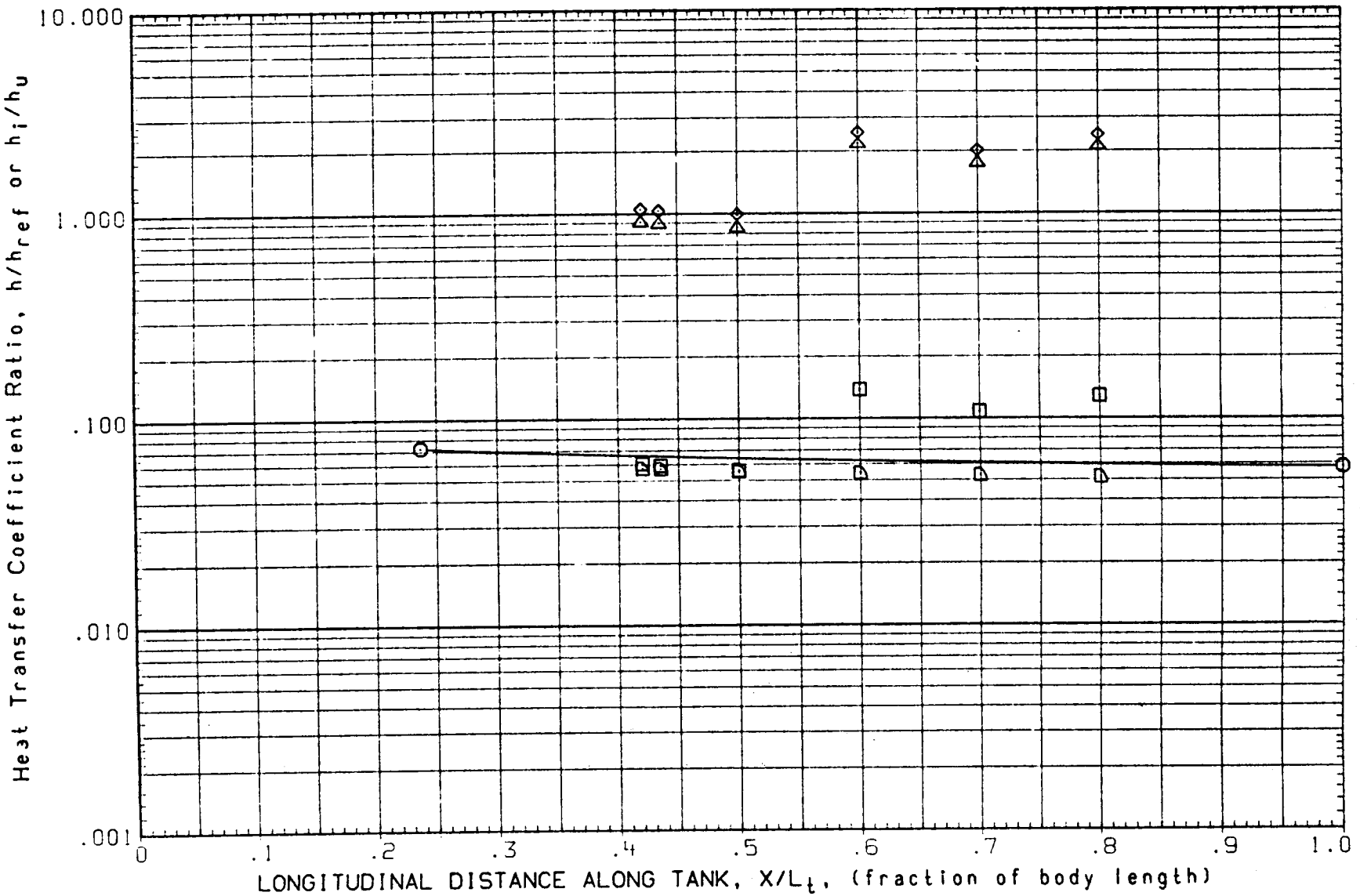

FIG. 4-15 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 322.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT50)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	4.020	5.000	-7.500
(C9NT50)	◻	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	4.020	5.000	-7.500
(V4LT50)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	5.000	-7.500
(X4LT50)	◇	IH85 (W.L. TEST) OTS/ET = V4LT50/C9NT50= HI/HU	4.020	5.000	-7.500
(Y4LT50)	△	IH85 (W.L. THEORY) OTS/ET = V4LT50/A9NT50= HI/HU	4.020	5.000	-7.500

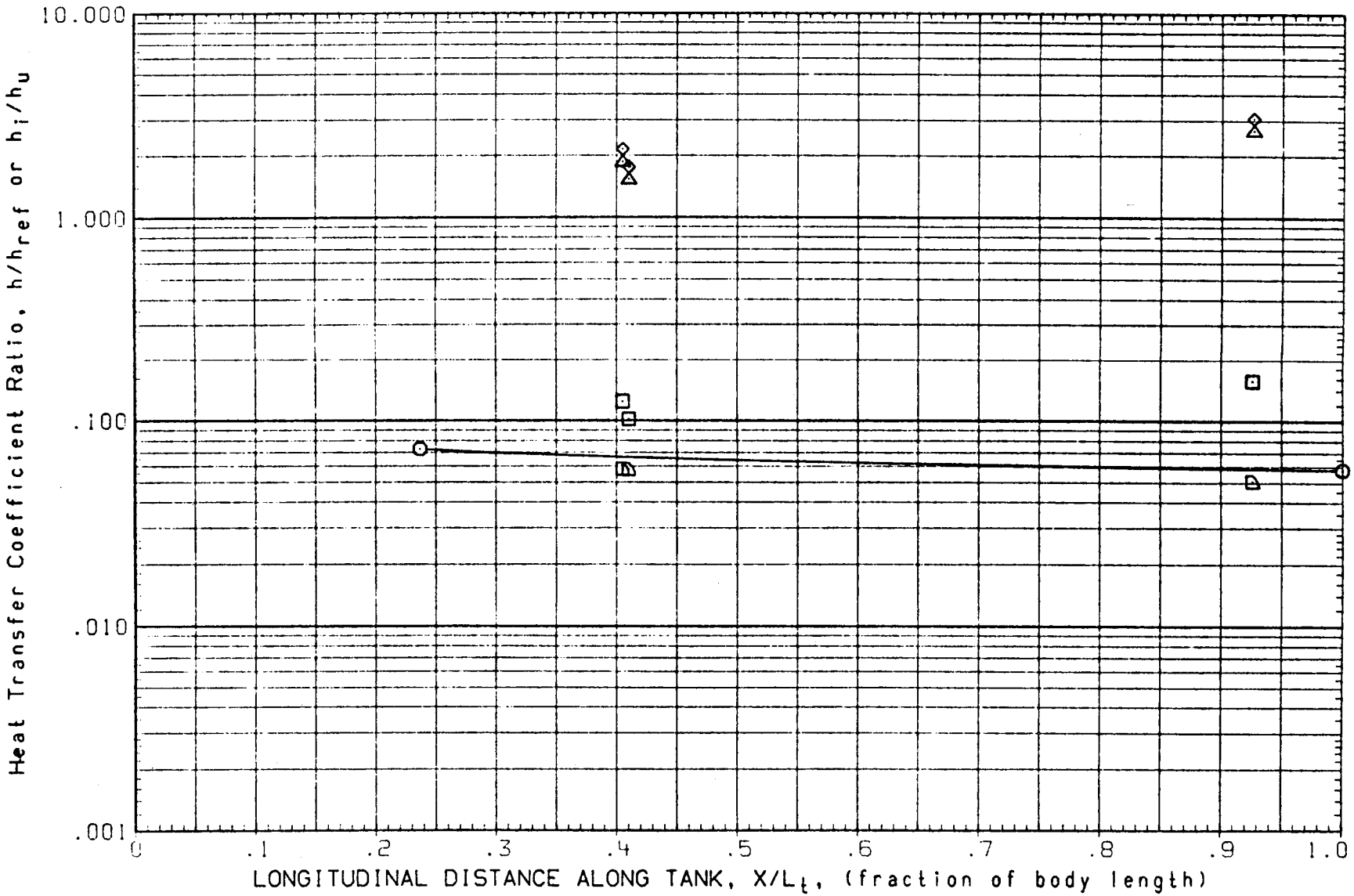

FIG. 4-15 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 324.450

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT50)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-7.500
(C9NT50)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-7.500
(V4LT50)	□	IHR5, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-7.500
(X4LT50)	◇	IHR5 (W.L. TEST) OTS/ET = V4LT50/C9NT50=	HI/HU	4.020	5.000	-7.500
(Y4LT50)	△	IHR5 (W.L. THEORY) OTS/ET = V4LT50/A9NT50=	HI/HU	4.020	5.000	-7.500

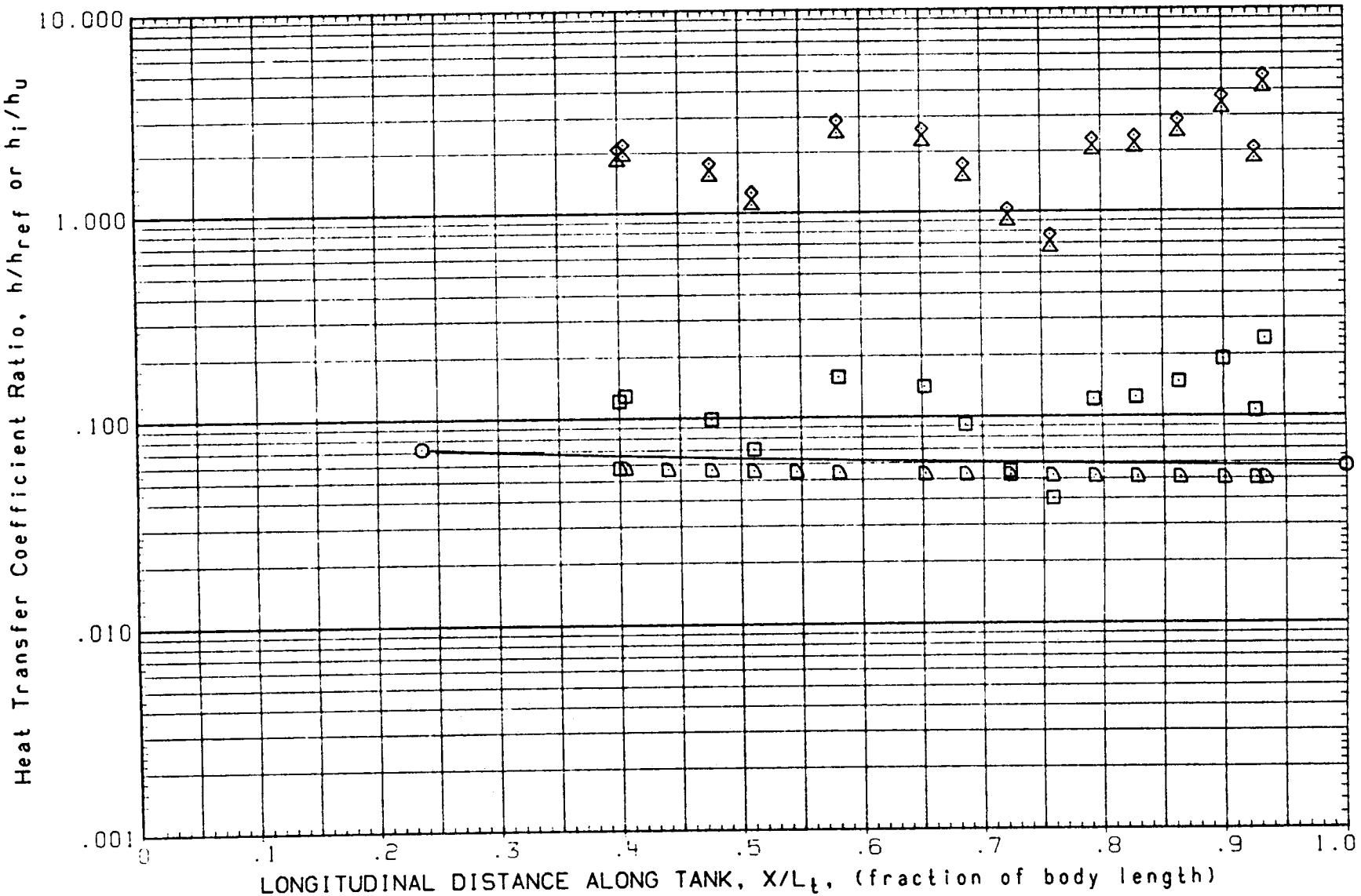

FIG. 4-15 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 326.850

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT50)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-7.500
(C9NT50)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-7.500
(V4LT50)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-7.500
(X4LT50)	◇	IH85 (W.L. TEST) OTS/ET = V4LT50/C9NT50=	HI/HU	4.020	5.000	-7.500
(Y4LT50)	△	IH85 (W.L. THEORY) OTS/ET = V4LT50/A9NT50=	HI/HU	4.020	5.000	-7.500

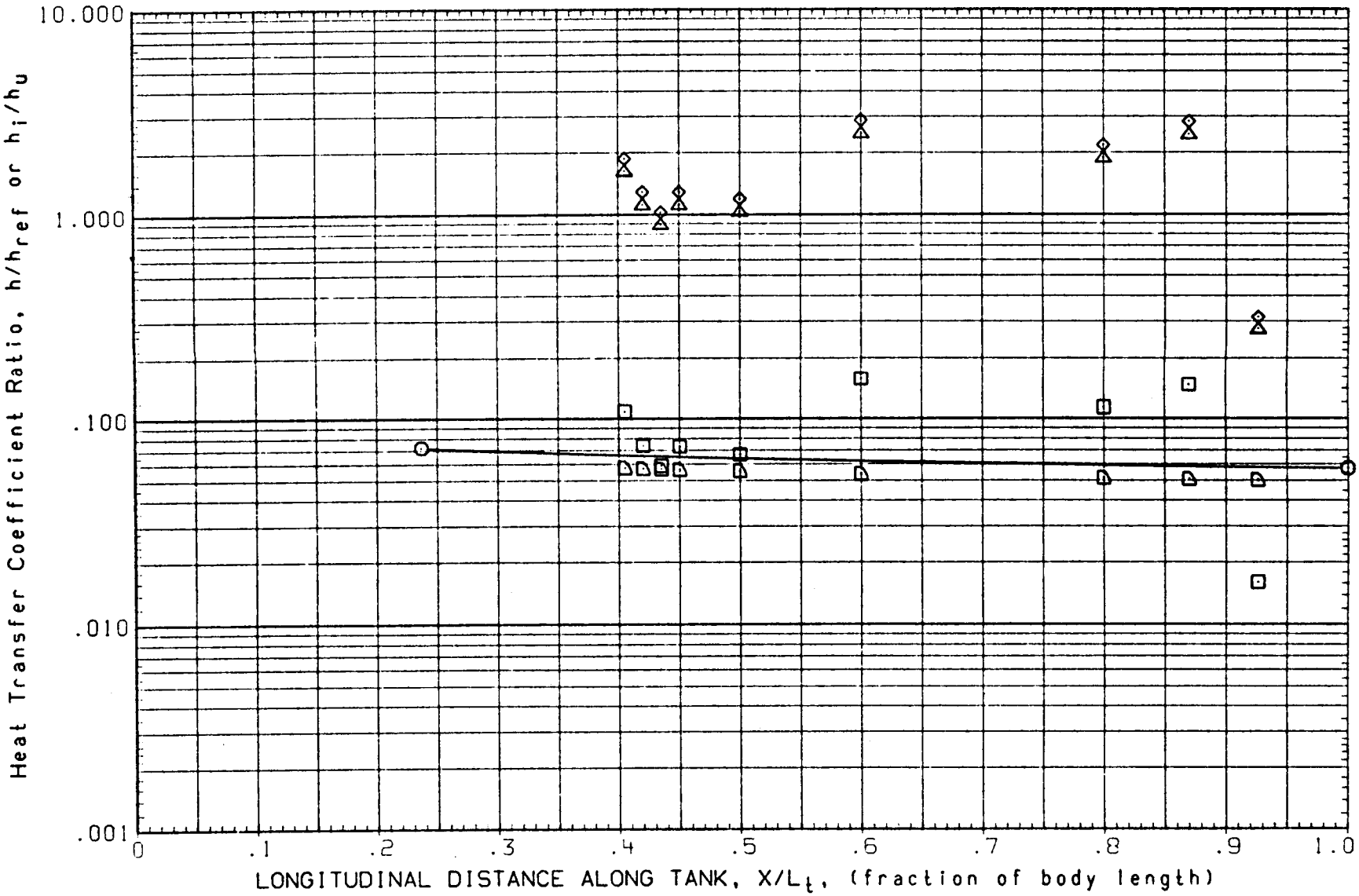

FIG. 4-15 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 330.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT50)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-7.500
(C9NT50)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-7.500
(V4LT50)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-7.500
(X4LT50)	◇	IH85 (W.L. TEST) OTS/ET = V4LT50/C9NT50=	HI/HU	4.020	5.000	-7.500
(Y4LT50)	△	IH85 (W.L. THEORY) OTS/ET = V4LT50/A9NT50=	HI/HU	4.020	5.000	-7.500

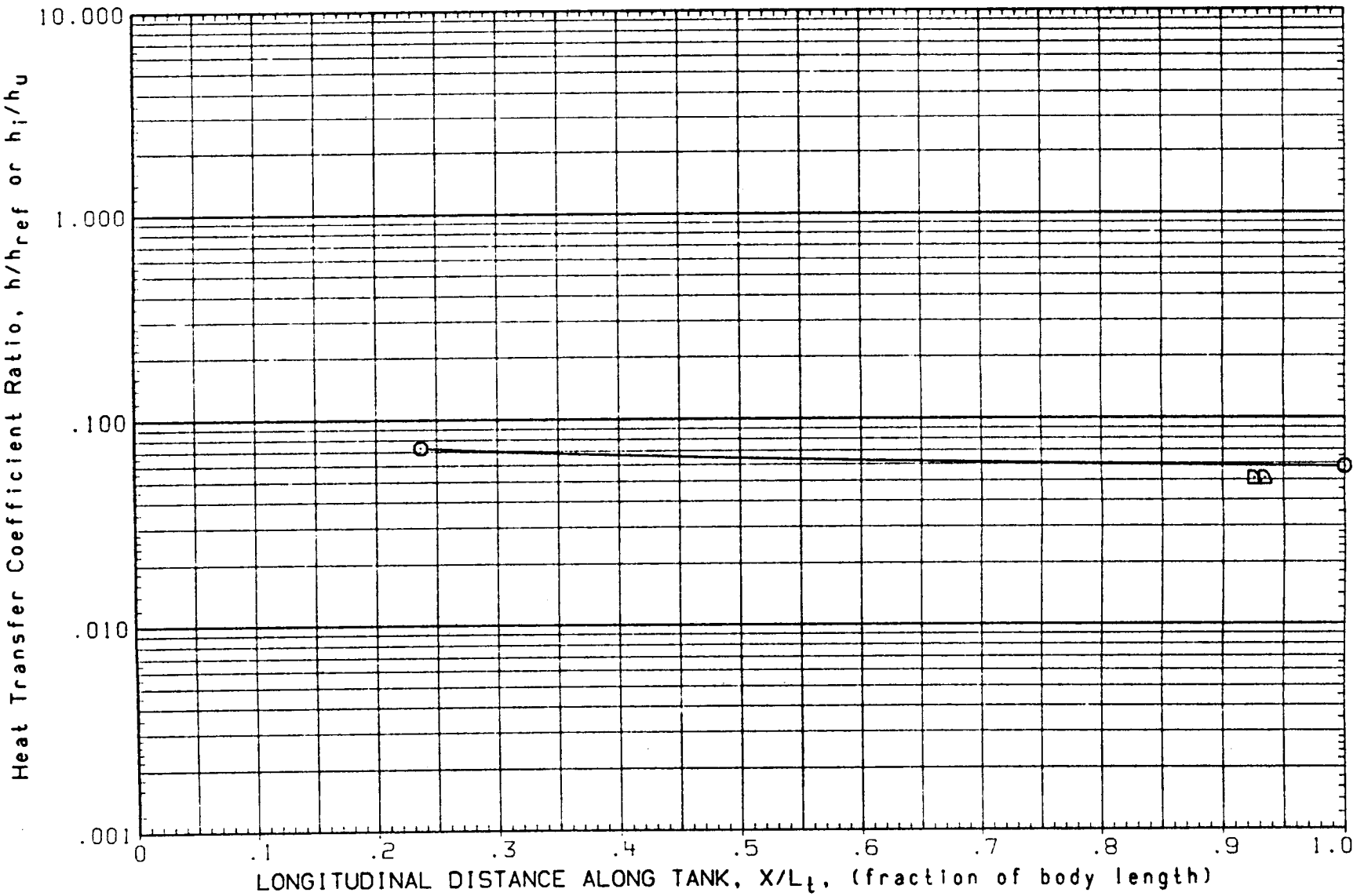

FIG. 4-15 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 334.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT50)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-7.500
(C9NT50)	D	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-7.500
(V4LT50)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-7.500
(X4LT50)	◇	IH85 (W.L. TEST) OTS/ET = V4LT50/C9NT50= HI/HU		4.020	5.000	-7.500
(Y4LT50)	△	IH85 (W.L. THEORY) OTS/ET = V4LT50/A9NT50= HI/HU		4.020	5.000	-7.500

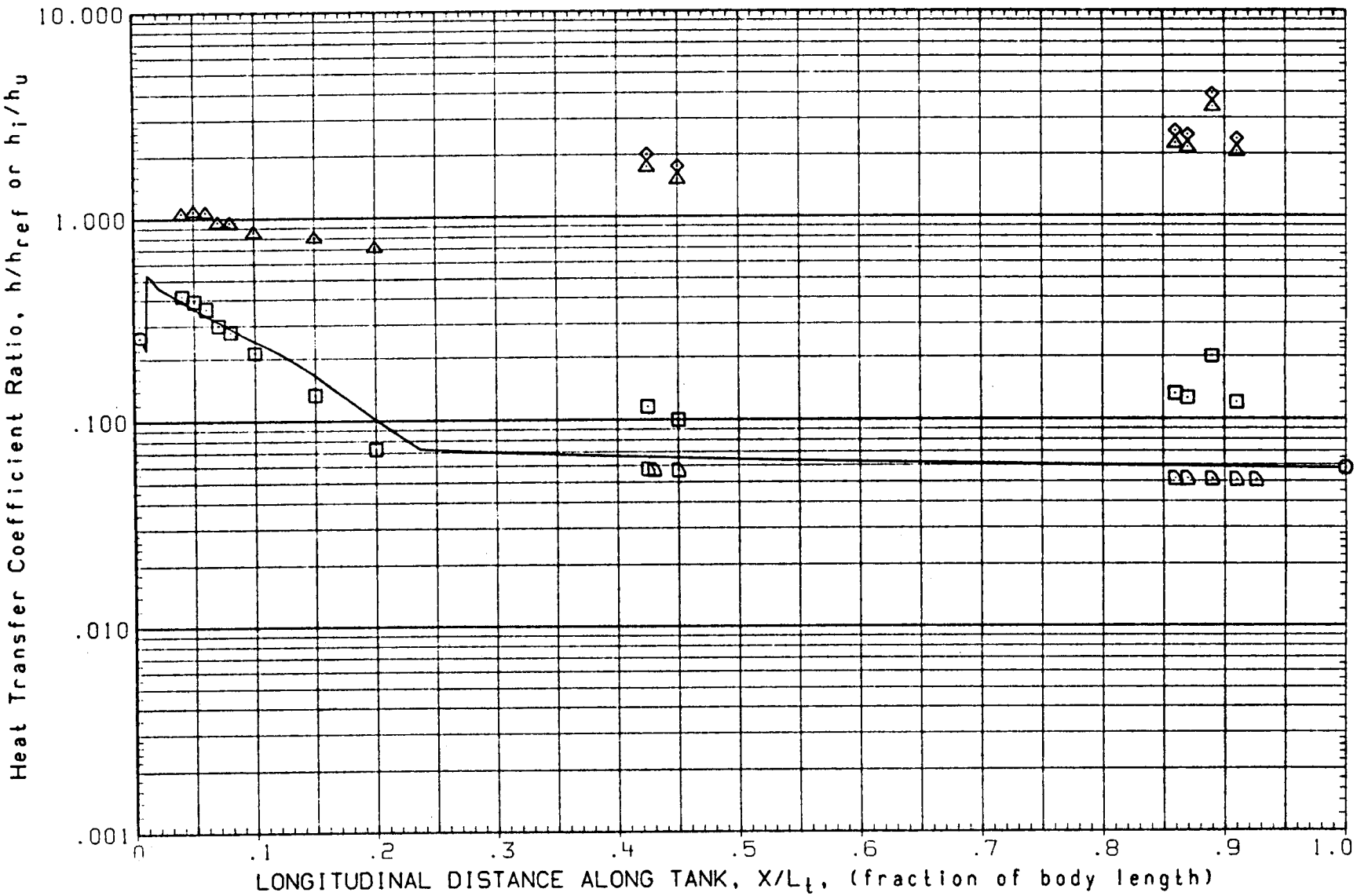

FIG. 4-15 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 337.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT50)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-7.500
(C9NT50)	⬠	TANK ALONE CREATED DATA (.87 • THEORY)	HU/HREF	4.020	5.000	-7.500
(V4LT50)	□	DATA NOT AVAILABLE		4.020	5.000	-7.500
(X4LT50)	◇	DATA NOT AVAILABLE		4.020	5.000	-7.500
(Y4LT50)	△	DATA NOT AVAILABLE		4.020	5.000	-7.500

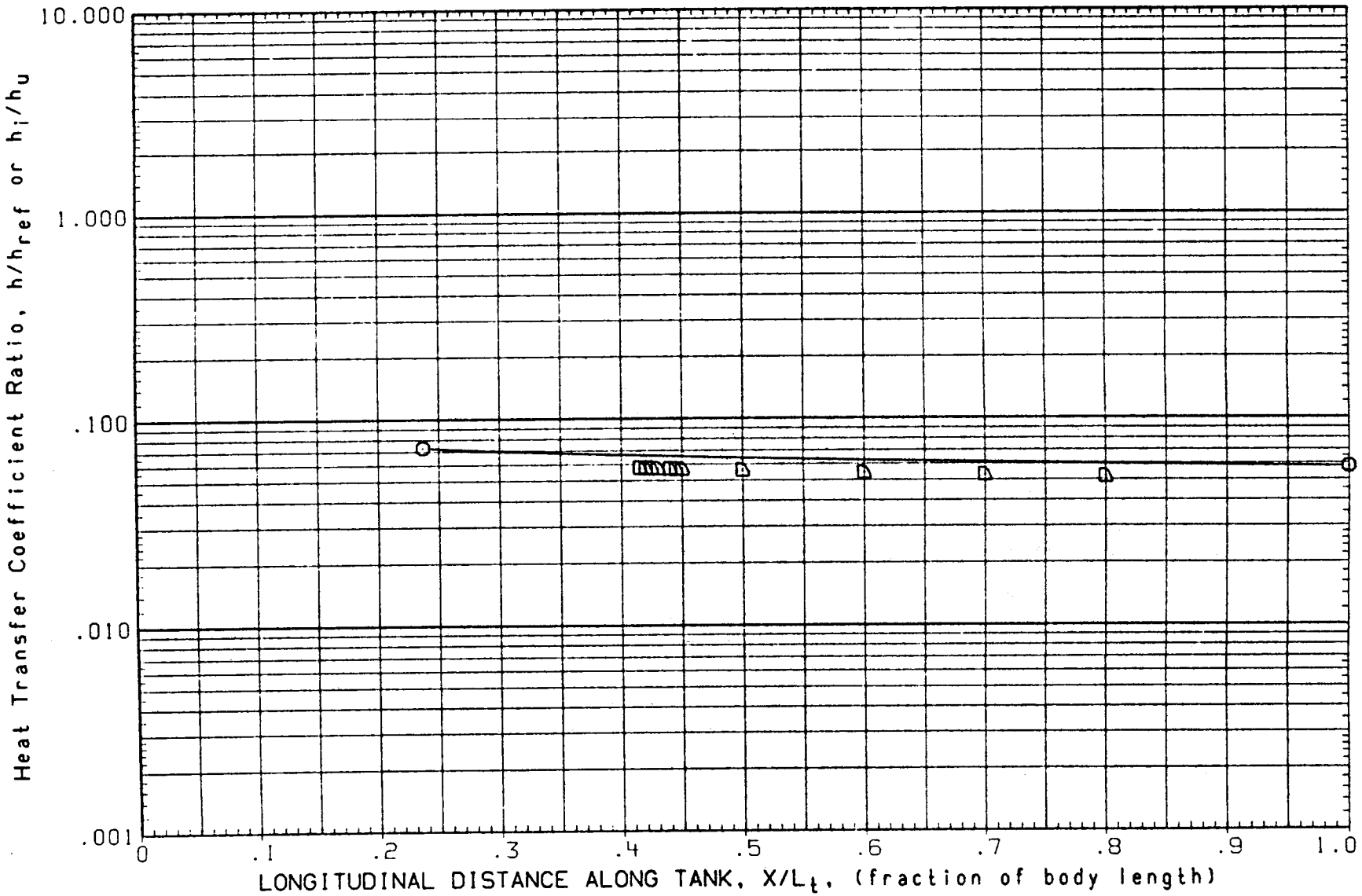

FIG. 4-15 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 343.120

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT50)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-7.500
(C9NT50)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-7.500
(V4LT50)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-7.500
(X4LT50)	◇	IH85 (W.L. TEST) OTS/ET = V4LT50/C9NT50=	HI/HU	4.020	5.000	-7.500
(Y4LT50)	△	IH85 (W.L. THEORY) OTS/ET = V4LT50/A9NT50=	HI/HU	4.020	5.000	-7.500

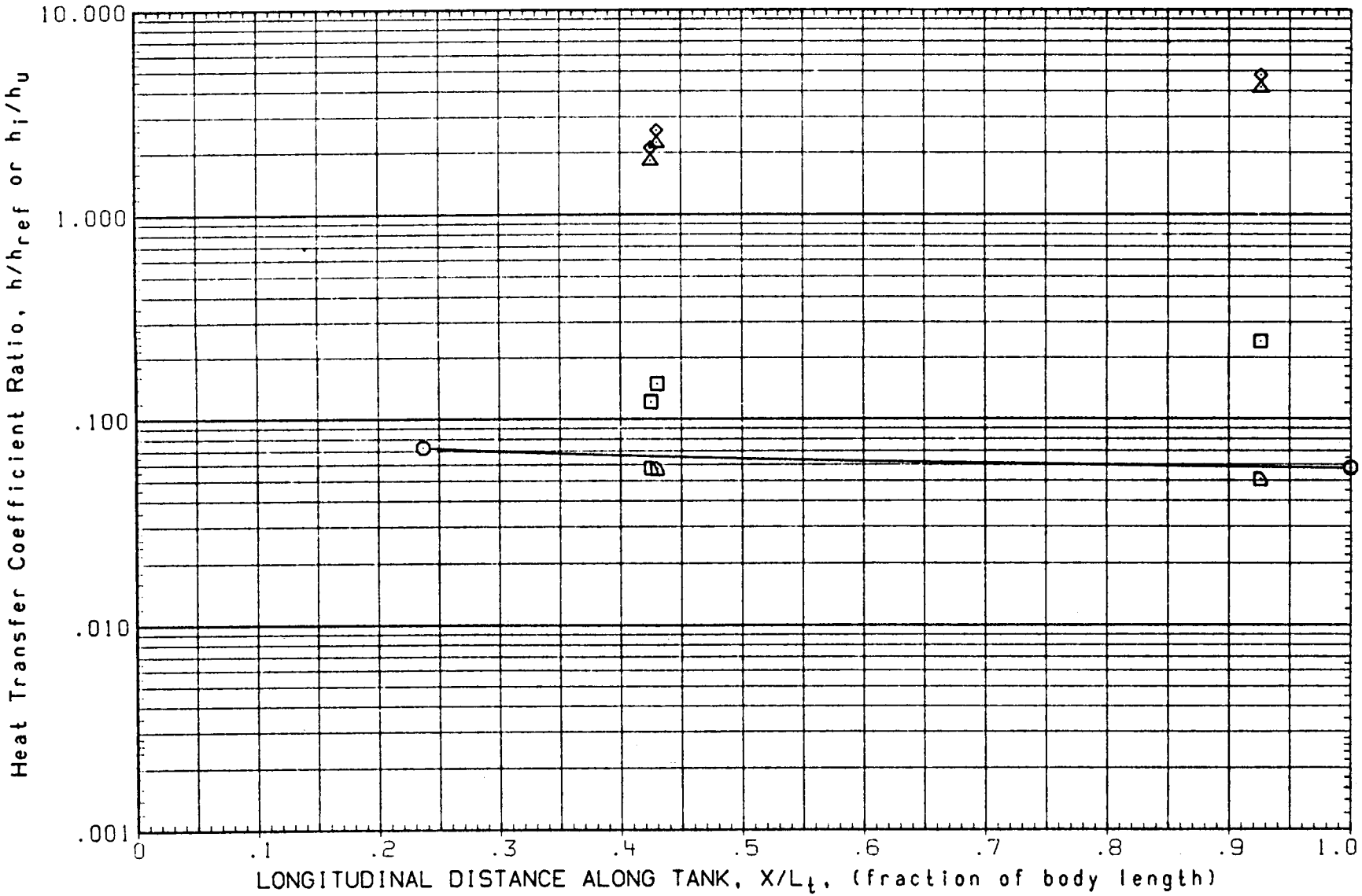

FIG. 4-15 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 345.560

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT50)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-7.500
(C9NT50)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-7.500
(V4LT50)	□	IH95, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-7.500
(X4LT50)	◇	IH65 (W.L. TEST) OTS/ET = V4LT50/C9NT50=	HI/HU	4.020	5.000	-7.500
(Y4LT50)	△	IH65 (W.L. THEORY) OTS/ET = V4LT50/A9NT50=	HI/HU	4.020	5.000	-7.500

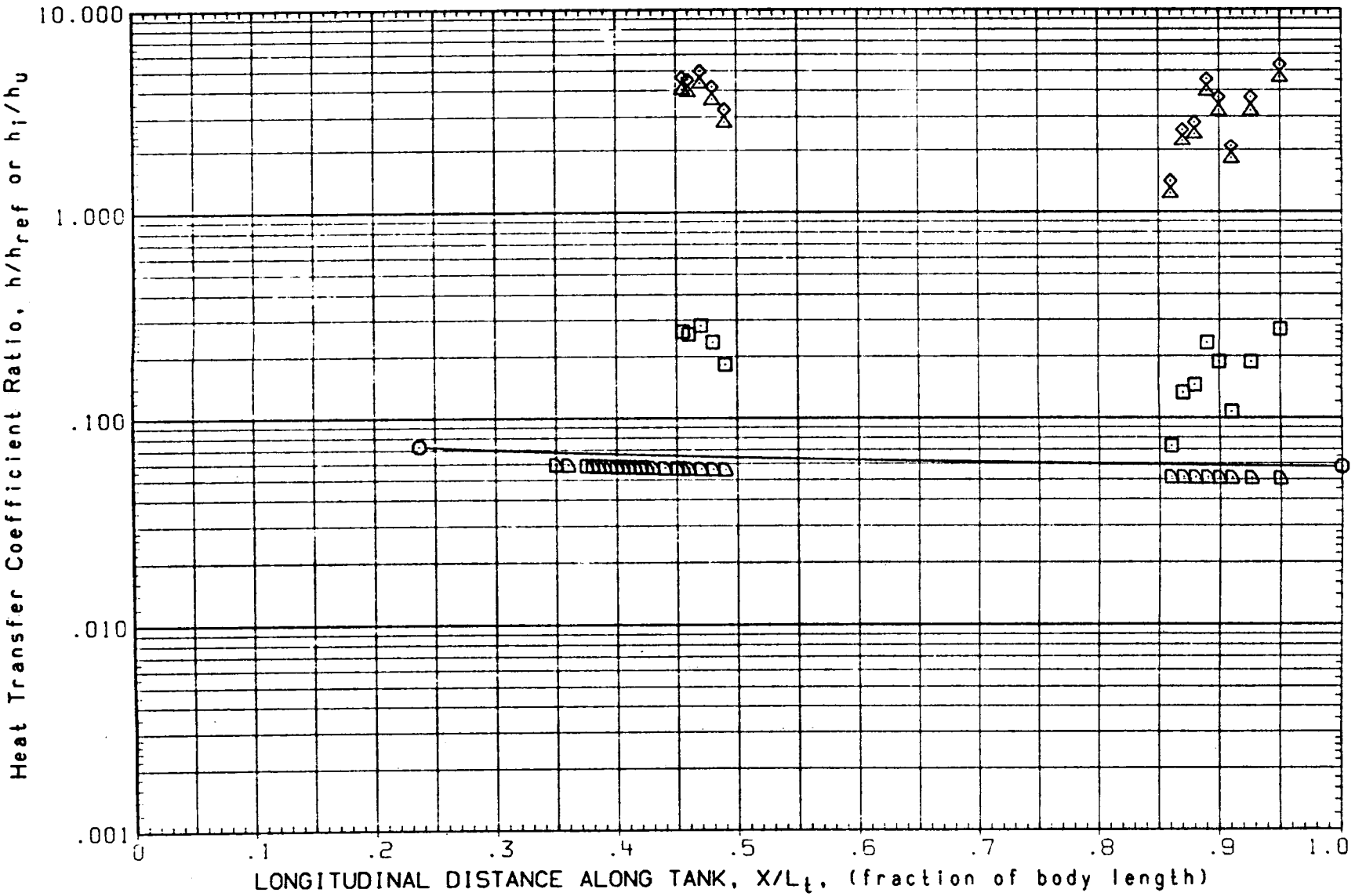

FIG. 4-15 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 348.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT50)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-7.500
(C9NT50)	⊿	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-7.500
(V4LT50)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-7.500
(X4LT50)	◇	IH85 (W.L. TEST) OTS/ET = V4LT50/C9NT50=	HI/HU	4.020	5.000	-7.500
(Y4LT50)	△	IH85 (W.L. THEORY) OTS/ET = V4LT50/A9NT50=	HI/HU	4.020	5.000	-7.500

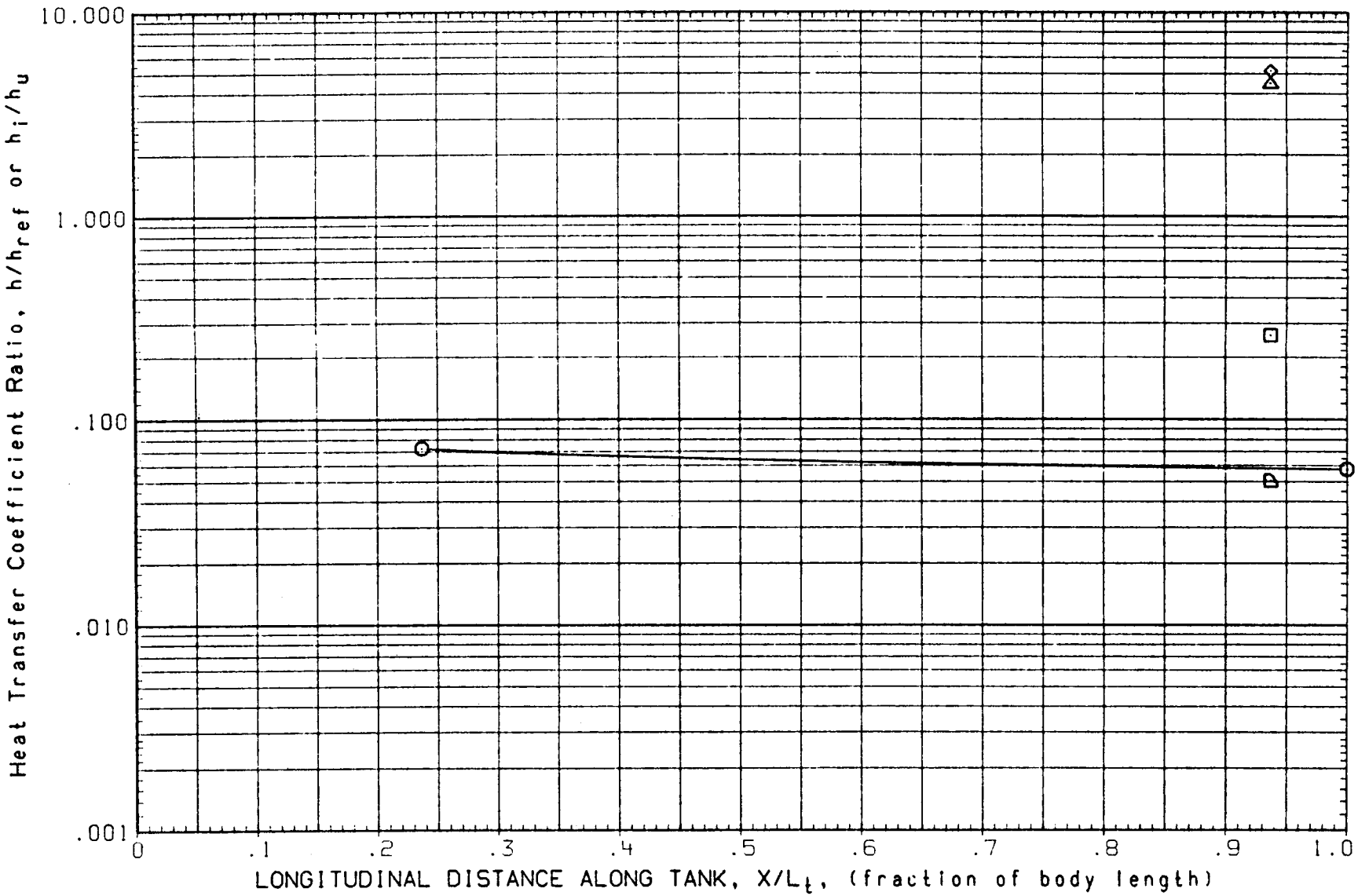

FIG. 4-15 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 352.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT50)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-7.500
(C9NT50)	⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-7.500
(V4LT50)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-7.500
(X4LT50)	◇	IH85 (W.L. TEST) OTS/ET = V4LT50/C9NT50=	HI/HU	4.020	5.000	-7.500
(Y4LT50)	△	IH85 (W.L. THEORY) OTS/ET = V4LT50/A9NT50=	HI/HU	4.020	5.000	-7.500

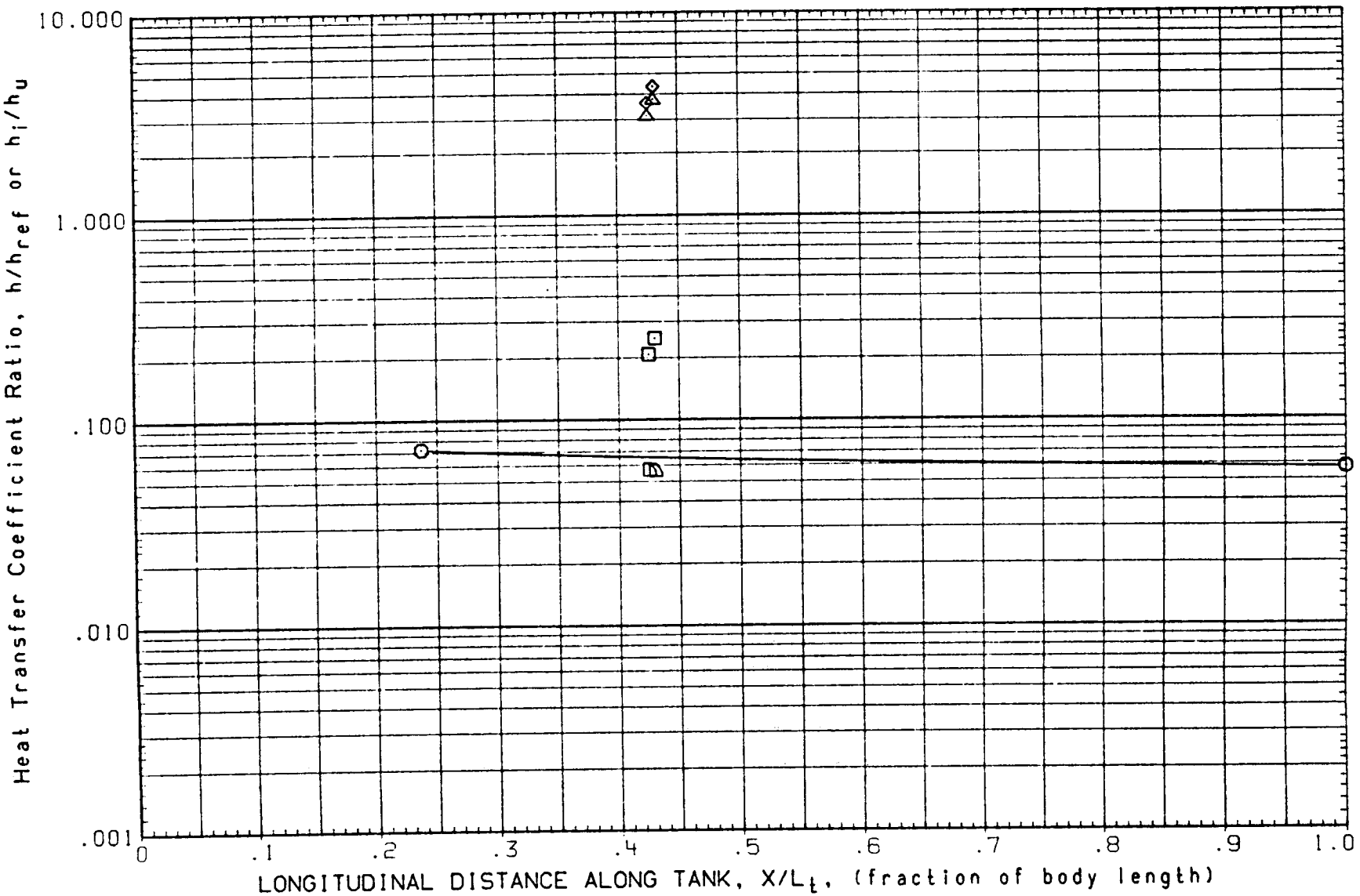

FIG. 4-15 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 354.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT50)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-7.500
(C9NT50)	⬠	DATA NOT AVAILABLE		4.020	5.000	-7.500
(V4LT50)	□	DATA NOT AVAILABLE		4.020	5.000	-7.500
(X4LT50)	◇	DATA NOT AVAILABLE		4.020	5.000	-7.500
(Y4LT50)	△	DATA NOT AVAILABLE		4.020	5.000	-7.500

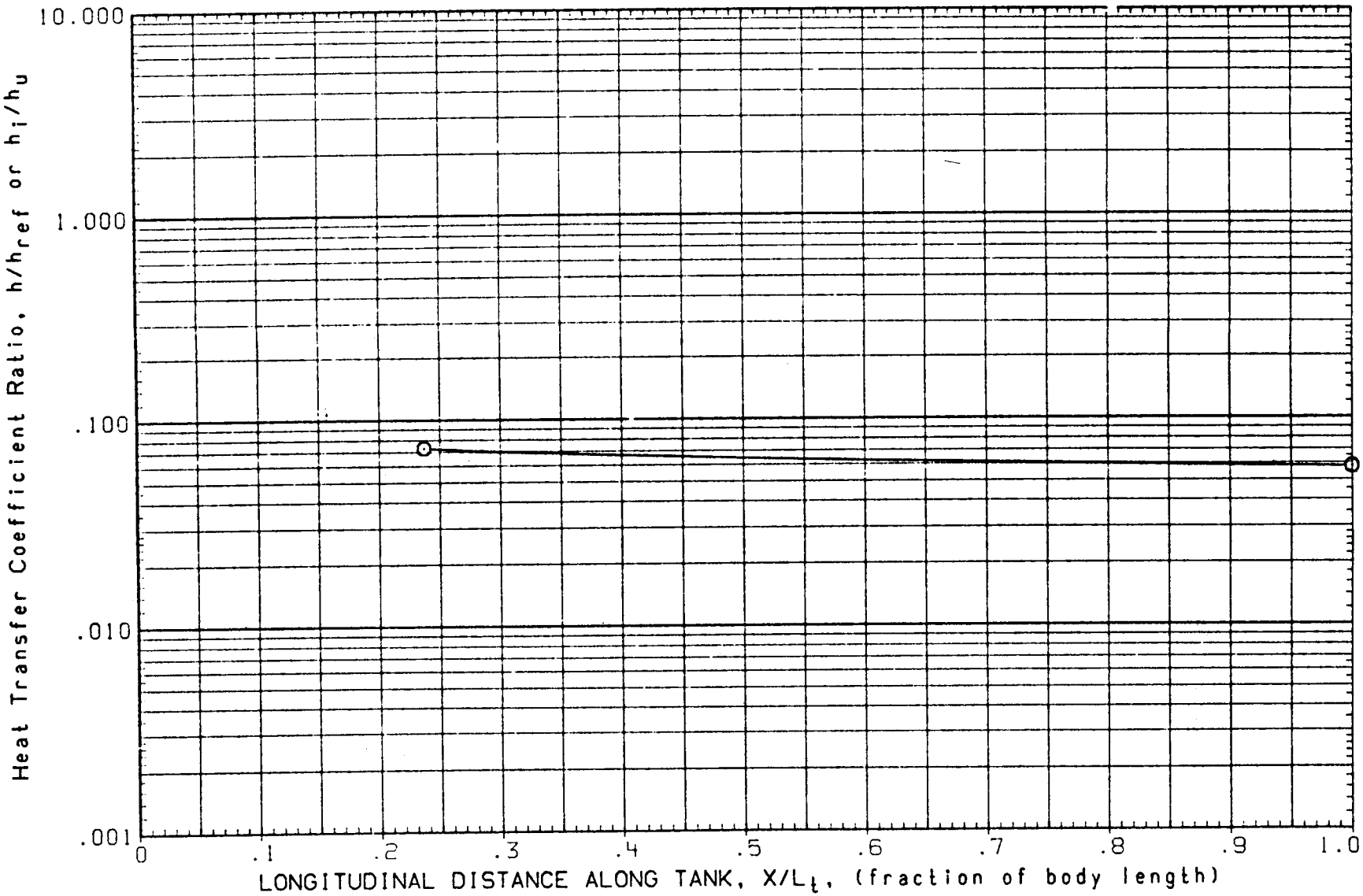

FIG. 4-15 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 355.160

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT50)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-7.500
(C9NT50)	⌂	DATA NOT AVAILABLE		4.020	5.000	-7.500
(V4LT50)	□	DATA NOT AVAILABLE		4.020	5.000	-7.500
(X4LT50)	◇	DATA NOT AVAILABLE		4.020	5.000	-7.500
(Y4LT50)	△	DATA NOT AVAILABLE		4.020	5.000	-7.500

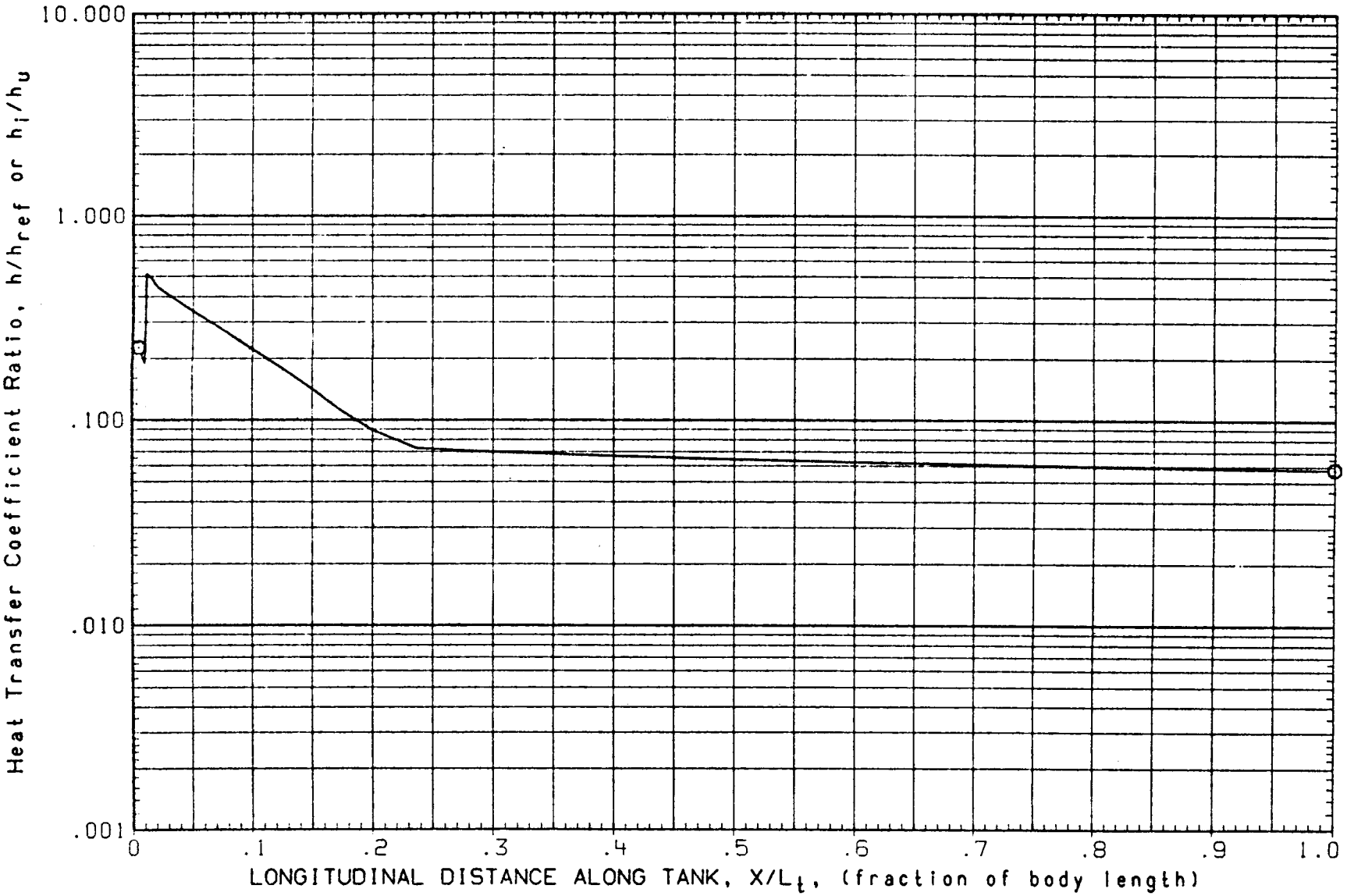

FIG. 4-15 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 360.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT52)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-4.500
(C9NT52)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-4.500
(V4LT52)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-4.500
(X4LT52)	◇	IH85 (W.L. TEST) OTS/ET = V4LT52/C9NT52=	HI/HU	4.020	5.000	-4.500
(Y4LT52)	△	IH85 (W.L. THEORY) OTS/ET = V4LT52/A9NT52=	HI/HU	4.020	5.000	-4.500

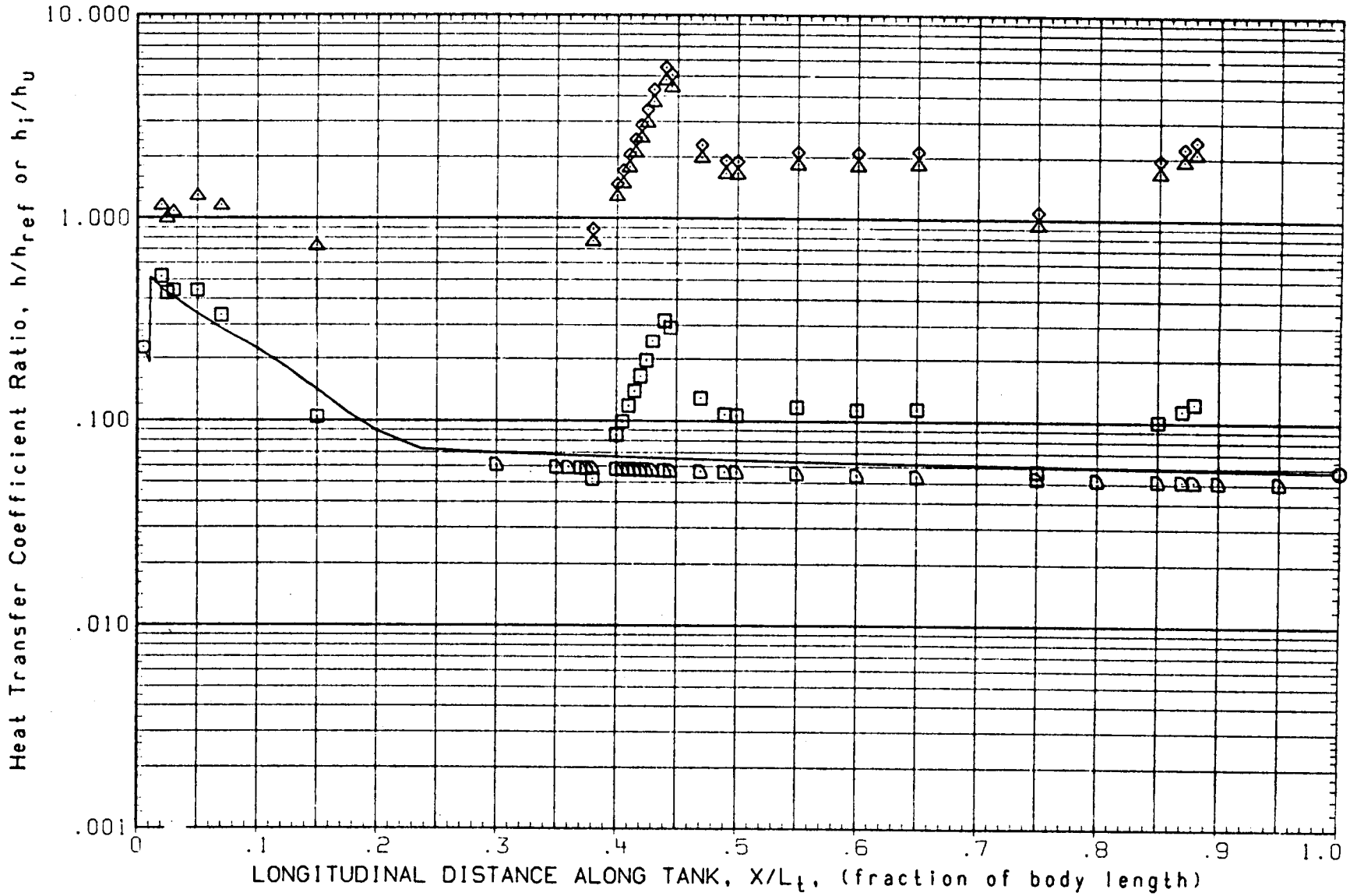

FIG. 4-16 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -4.5
0 < X/L_T < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = .000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT52)	○	DATA NOT AVAILABLE	4.020	5.000	-4.500
(C9NT52)	⬠	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	4.020	5.000	-4.500
(V4LT52)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	5.000	-4.500
(X4LT52)	◇	IH85 (W.L. TEST) OTS/ET = V4LT52/C9NT52= HI/HU	4.020	5.000	-4.500
(Y4LT52)	△	IH85 (W.L. THEORY) OTS/ET = V4LT52/A9NT52= HI/HU	4.020	5.000	-4.500

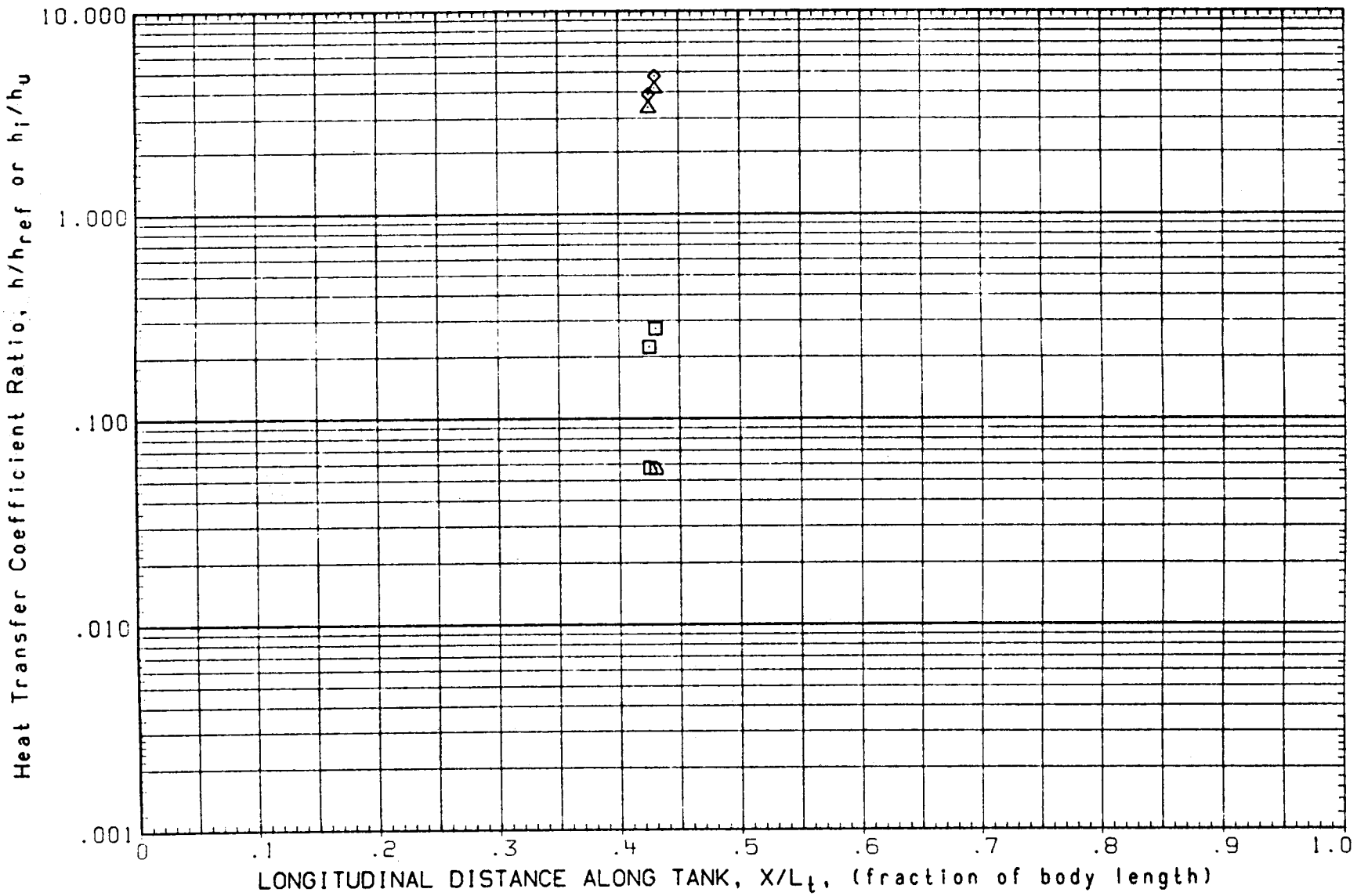

FIG. 4-16 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 5.625

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT52)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-4.500
(C9NT52)	⬠	DATA NOT AVAILABLE		4.020	5.000	-4.500
(V4LT52)	□	DATA NOT AVAILABLE		4.020	5.000	-4.500
(X4LT52)	◇	DATA NOT AVAILABLE		4.020	5.000	-4.500
(Y4LT52)	△	DATA NOT AVAILABLE		4.020	5.000	-4.500

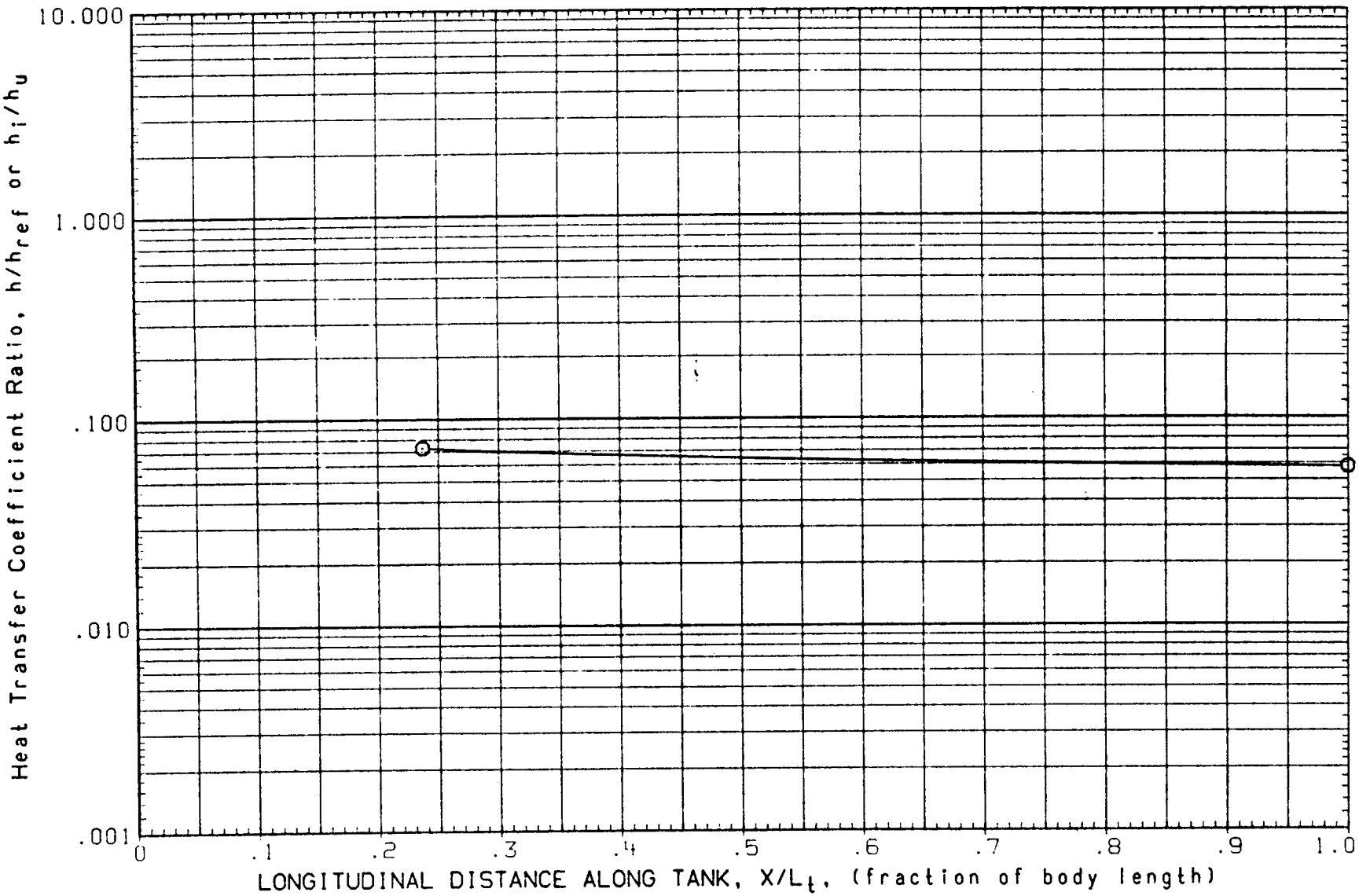

FIG. 4-16 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 5.630

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT52)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-4.500
(C9NT52)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-4.500
(V4LT52)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-4.500
(X4LT52)	◇	IH85 (W.L. TEST) OTS/ET = V4LT52/C9NT52=	HI/HU	4.020	5.000	-4.500
(Y4LT52)	△	IH85 (W.L. THEORY) OTS/ET = V4LT52/A9NT52=	HI/HU	4.020	5.000	-4.500

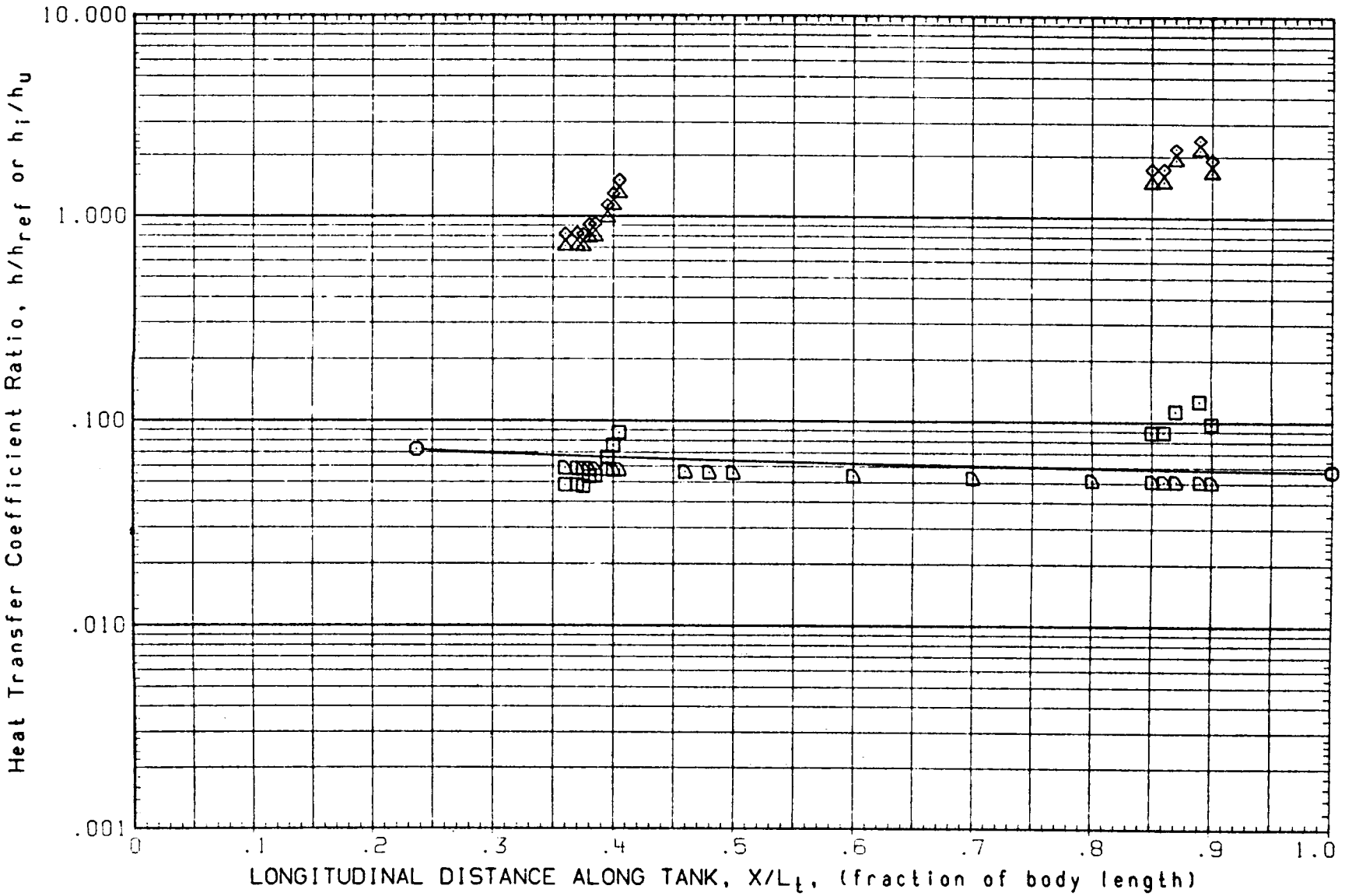

FIG. 4-16 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 11.250

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT52)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-4.500
(C9NT52)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-4.500
(V4LT52)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-4.500
(X4LT52)	◇	IH85 (W.L. TEST) OTS/ET = V4LT52/C9NT52= HI/HU		4.020	5.000	-4.500
(Y4LT52)	△	IH85 (W.L. THEORY) OTS/ET = V4LT52/A9NT52= HI/HU		4.020	5.000	-4.500

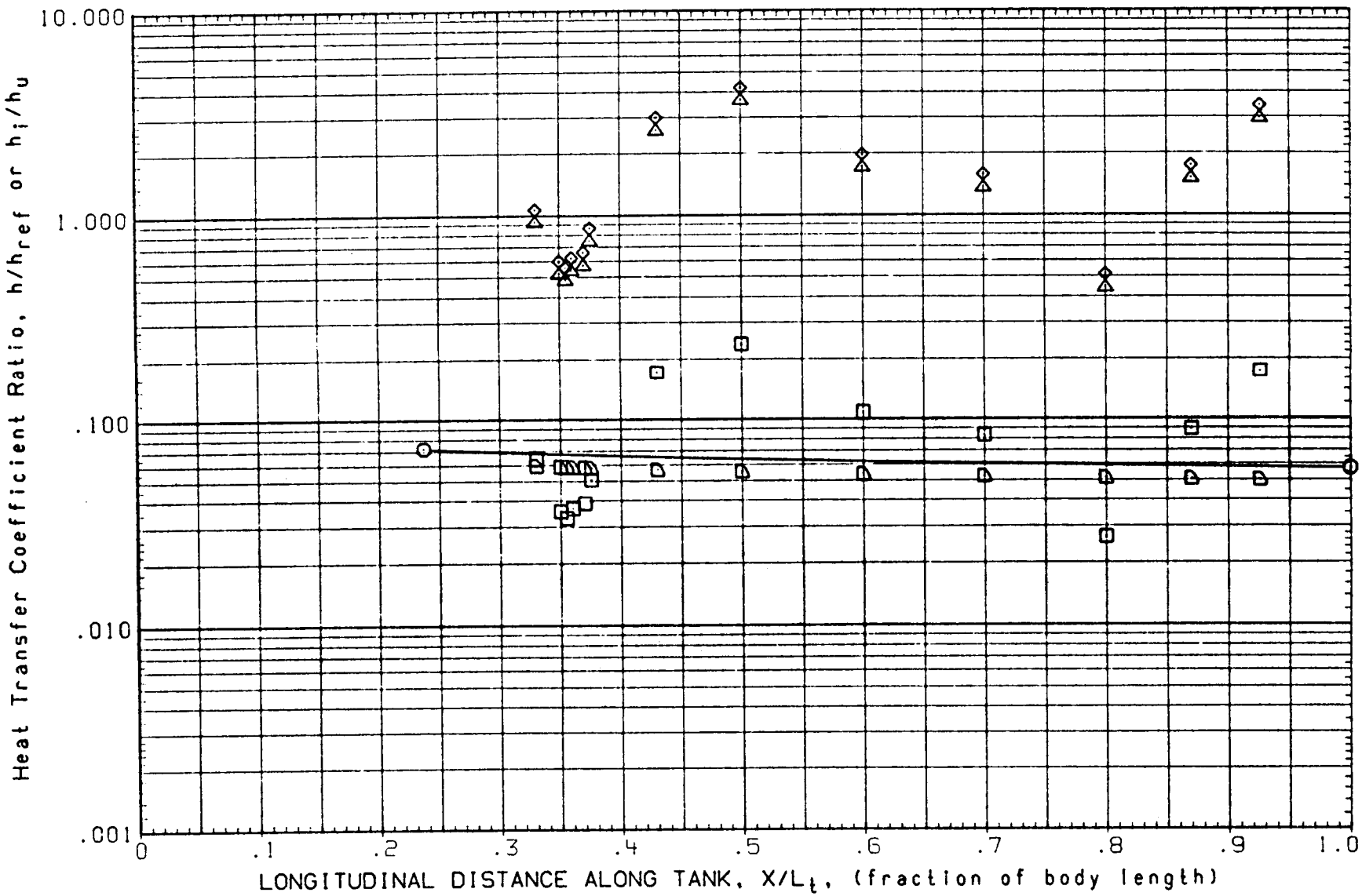

FIG. 4-16 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 17.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT52)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-4.500
(C9NT52)	D	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-4.500
(V4LT52)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-4.500
(X4LT52)	◇	IH85 (W.L. TEST) OTS/ET = V4LT52/C9NT52=	HI/HU	4.020	5.000	-4.500
(Y4LT52)	△	IH85 (W.L. THEORY) OTS/ET = V4LT52/A9NT52=	HI/HU	4.020	5.000	-4.500

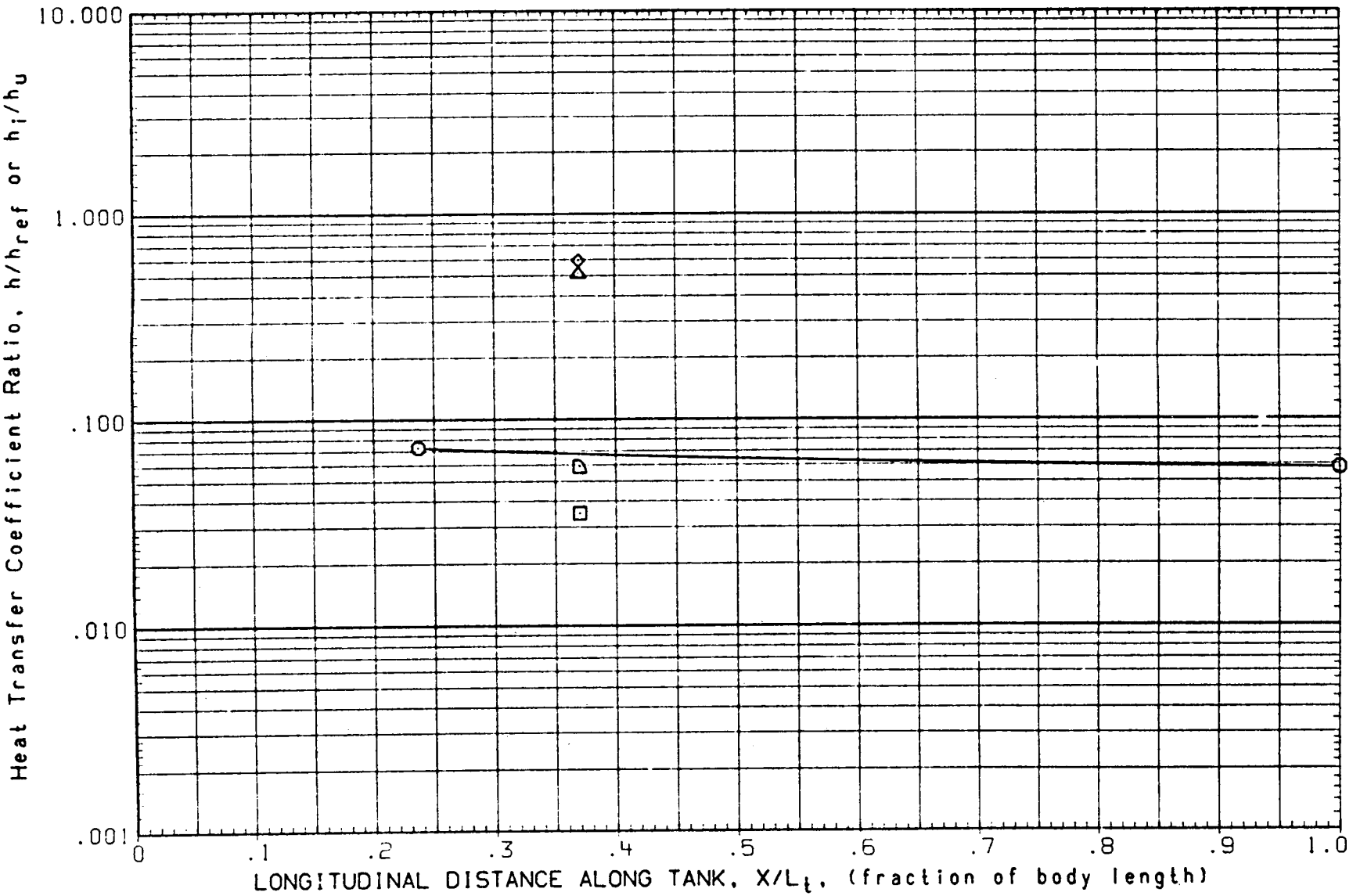

FIG. 4-16 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 20.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT52)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-4.500
(C9NT52)	⊿	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-4.500
(V4LT52)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-4.500
(X4LT52)	◇	IH85 (W.L. TEST) OTS/ET = V4LT52/C9NT52=	HI/HU	4.020	5.000	-4.500
(Y4LT52)	△	IH85 (W.L. THEORY) OTS/ET = V4LT52/A9NT52=	HI/HU	4.020	5.000	-4.500

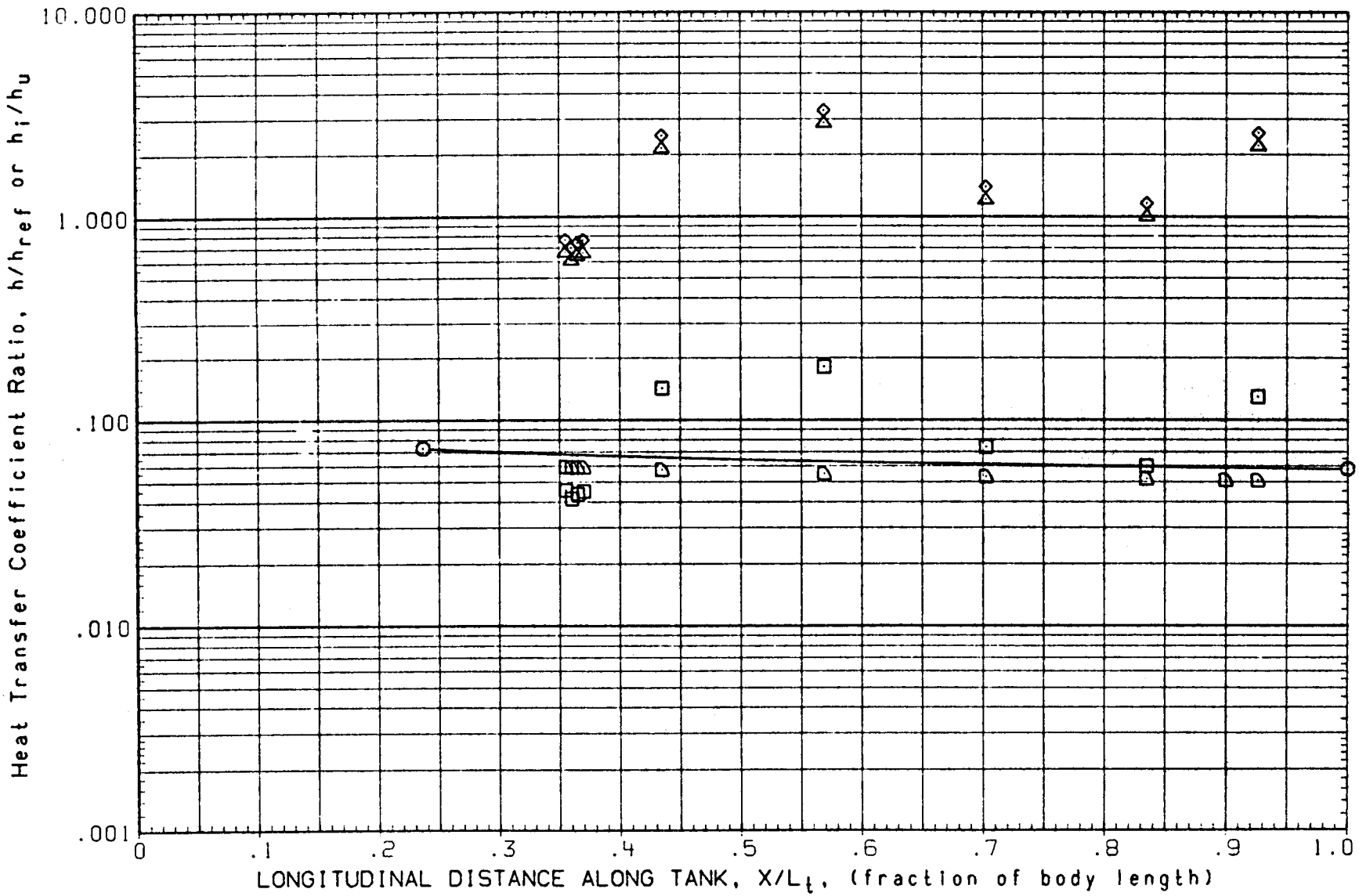

FIG. 4-16 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 23.070

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT52)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-4.500
(C9NT52)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-4.500
(V4LT52)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-4.500
(X4LT52)	◇	IH85 (W.L. TEST) OTS/ET = V4LT52/C9NT52=	HI/HU	4.020	5.000	-4.500
(Y4LT52)	△	IH85 (W.L. THEORY) OTS/ET = V4LT52/A9NT52=	HI/HU	4.020	5.000	-4.500

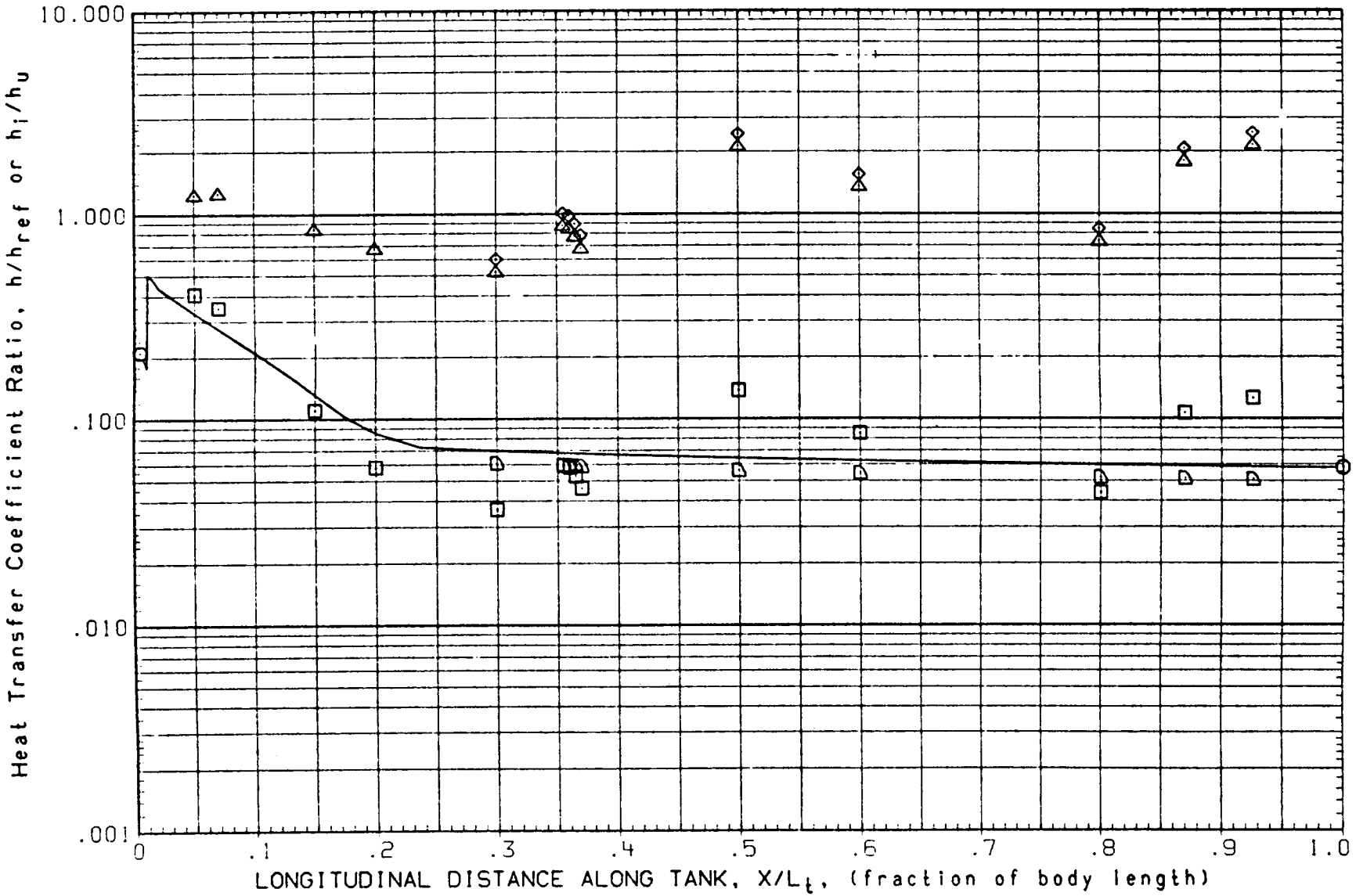

FIG. 4-16 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 29.800

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT52)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-4.500
(C9NT52)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-4.500
(V4LT52)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-4.500
(X4LT52)	◇	IH85 (W.L. TEST) OTS/ET = V4LT52/C9NT52=	HI/HU	4.020	5.000	-4.500
(Y4LT52)	△	IH85 (W.L. THEORY) OTS/ET = V4LT52/A9NT52=	HI/HU	4.020	5.000	-4.500

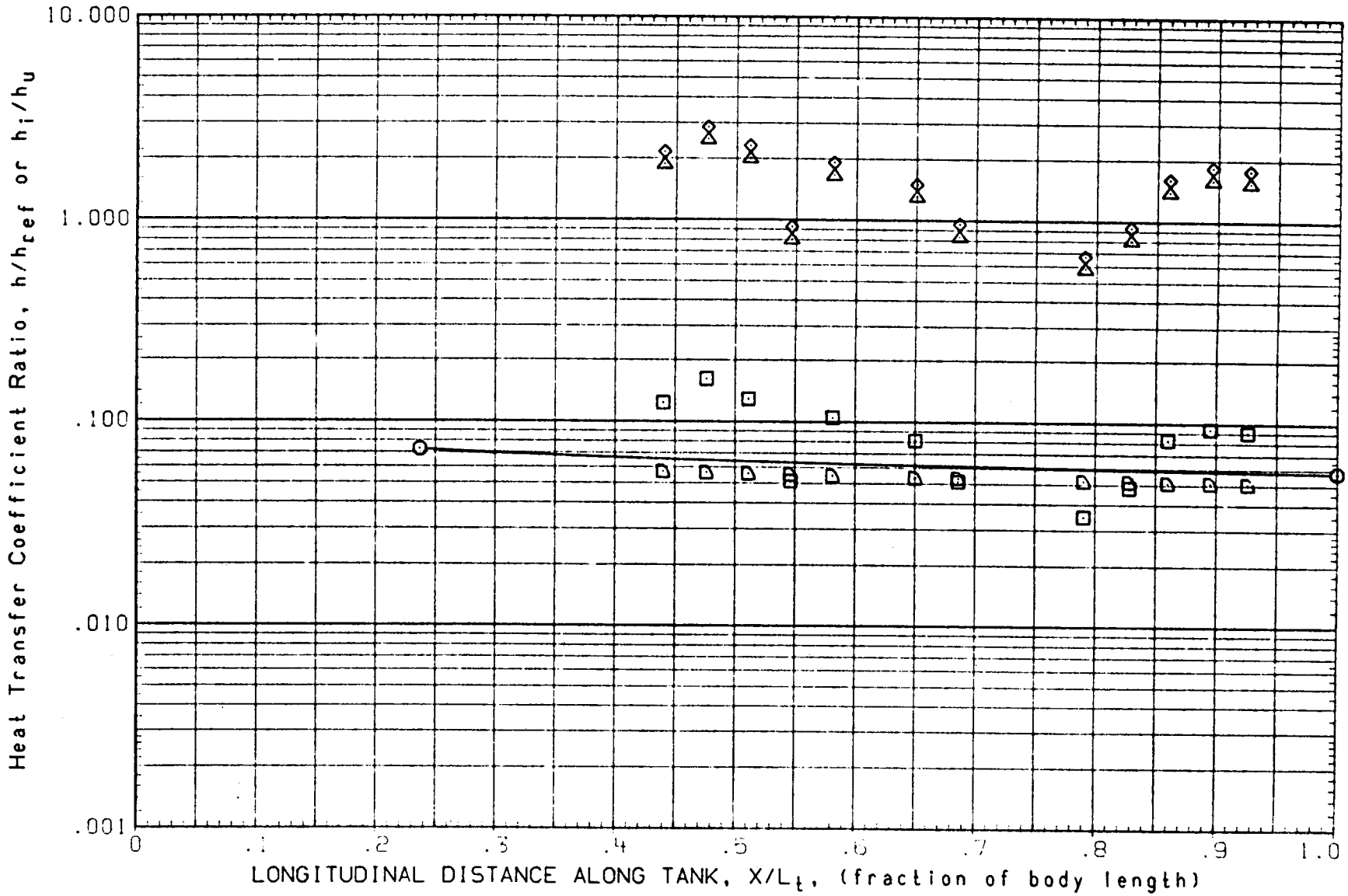

FIG. 4-16 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA 5.000 PHI = 21.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT52)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-4.500
(C9NT52)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-4.500
(V4LT52)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) 5		4.020	5.000	-4.500
(X4LT52)	◇	IH85 (W.L. TEST) OTS/ET = V4LT52/C9NT52=	HI/HU	4.020	5.000	-4.500
(Y4LT52)	△	IH85 (W.L. THEORY) OTS/ET = V4LT52/A9NT52=	HI/HU	4.020	5.000	-4.500

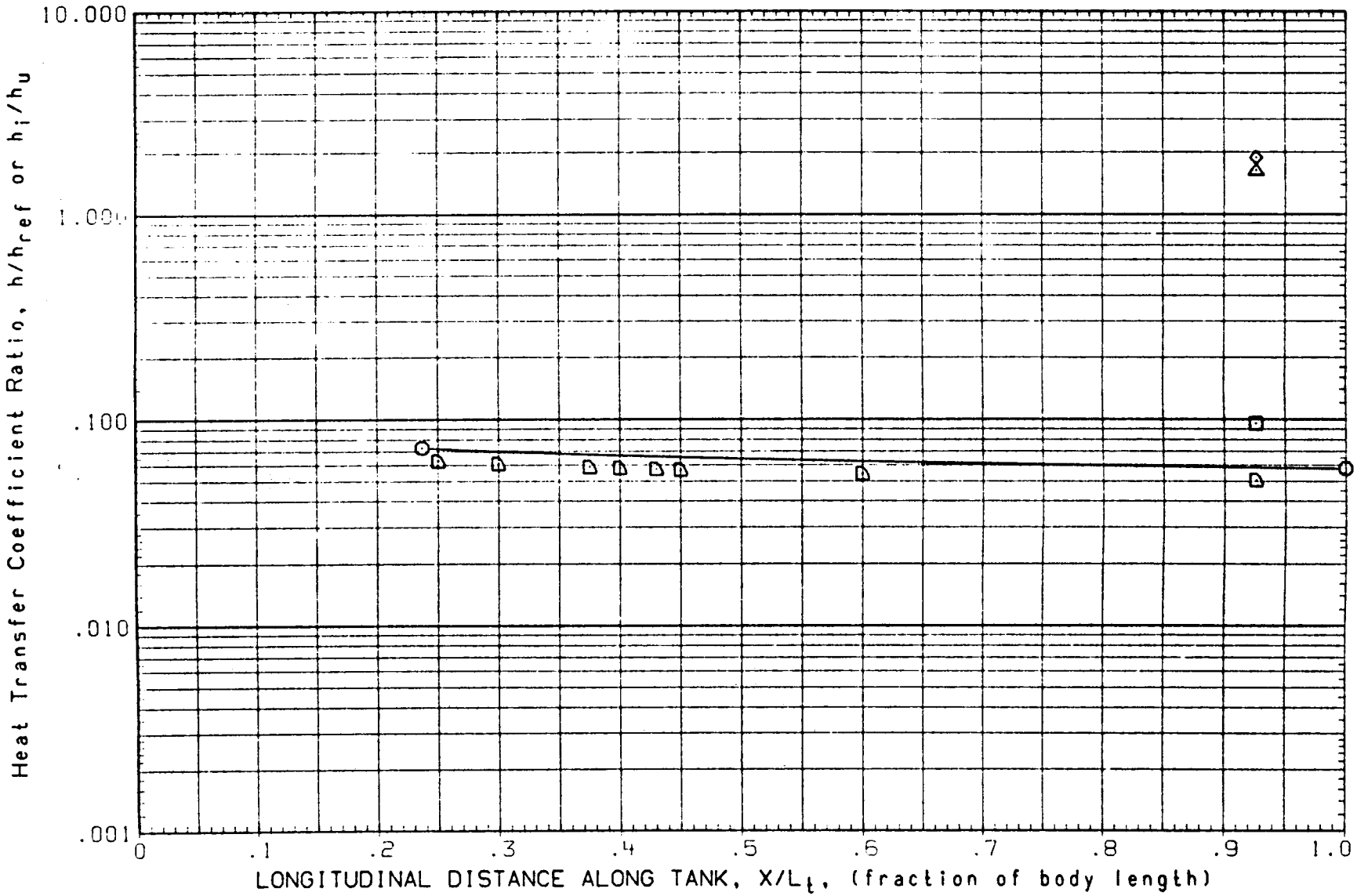

FIG. 4-16 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 33.750

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT52)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-4.500
(C9NT52)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-4.500
(V4LT52)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-4.500
(X4LT52)	◇	IH85 (W.L. TEST) OTS/ET = V4LT52/C9NT52= HI/HU		4.020	5.000	-4.500
(Y4LT52)	△	IH85 (W.L. THEORY) OTS/ET = V4LT52/A9NT52= HI/HU		4.020	5.000	-4.500

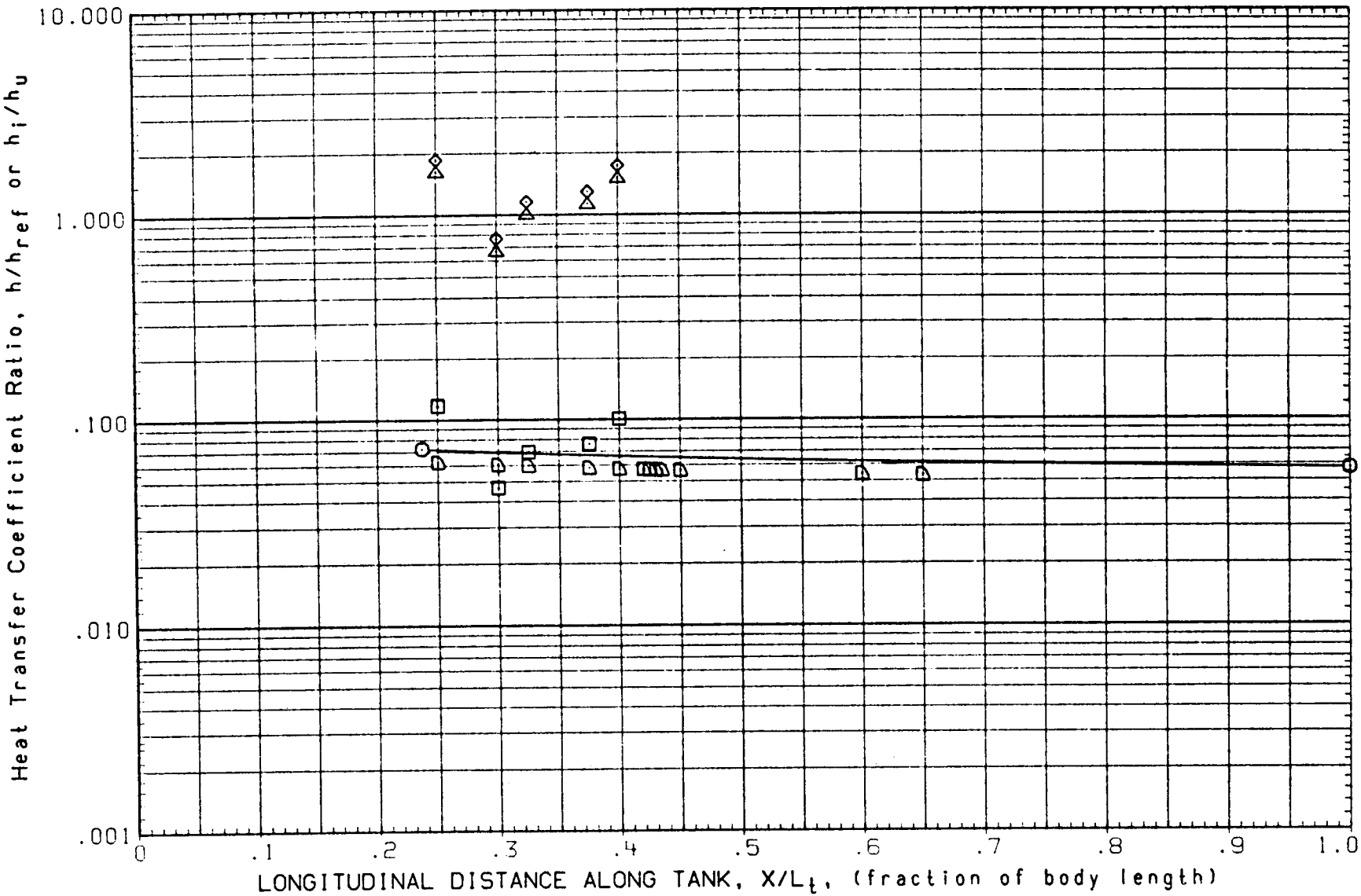

FIG. 4-16 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 36.320

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT52)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-4.500
(C9NT52)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-4.500
(V4LT52)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-4.500
(X4LT52)	◇	IH85 (W.L. TEST) OTS/ET = V4LT52/C9NT52=	HI/HU	4.020	5.000	-4.500
(Y4LT52)	△	IH85 (W.L. THEORY) OTS/ET = V4LT52/A9NT52=	HI/HU	4.020	5.000	-4.500

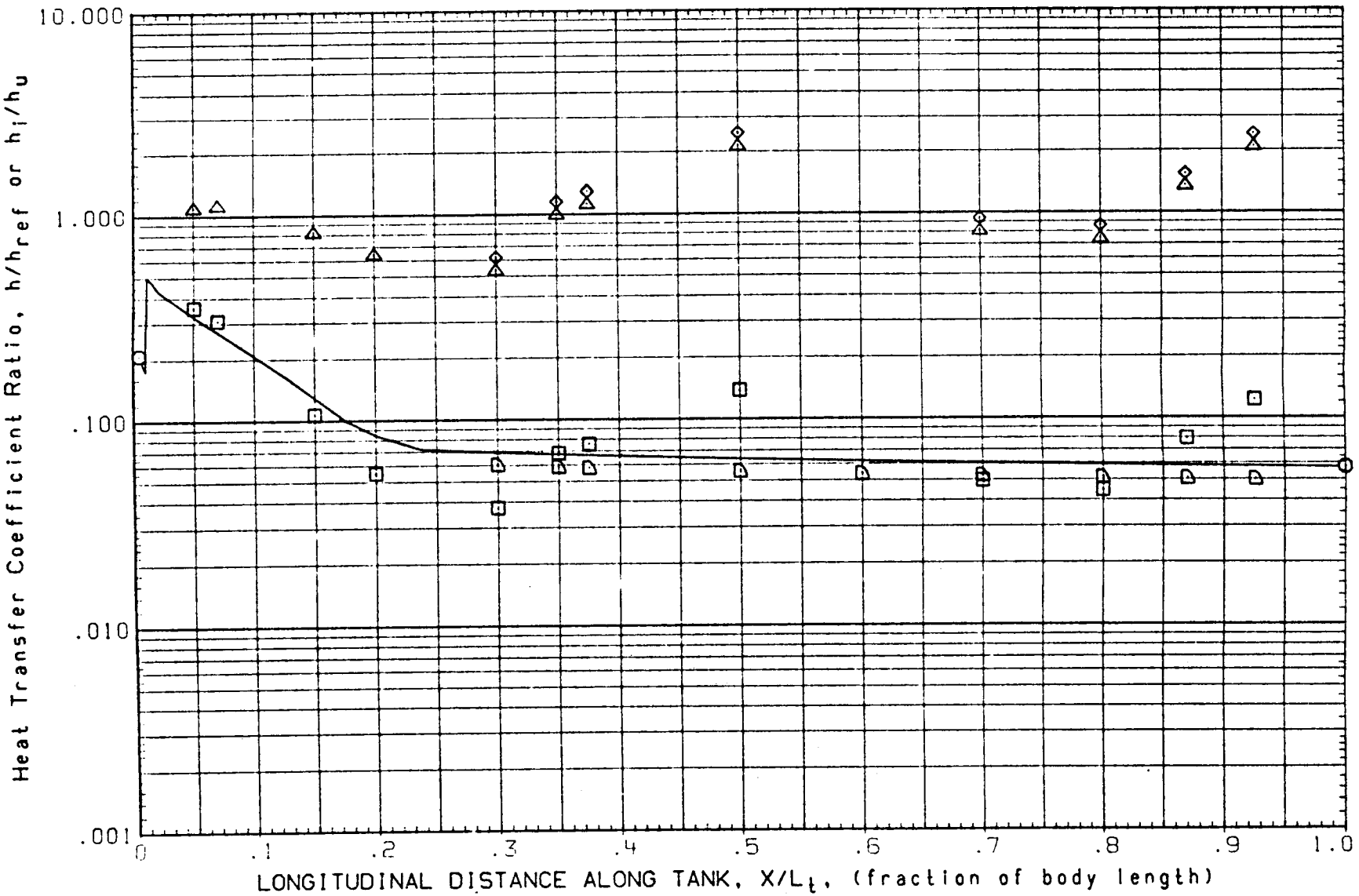

FIG. 4-16 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 37.700

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT52)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-4.500
(C9NT52)	⬠	DATA NOT AVAILABLE		4.020	5.000	-4.500
(Y4LT52)	□	DATA NOT AVAILABLE		4.020	5.000	-4.500
(X4LT52)	◇	DATA NOT AVAILABLE		4.020	5.000	-4.500
(Y4LT52)	△	DATA NOT AVAILABLE		4.020	5.000	-4.500

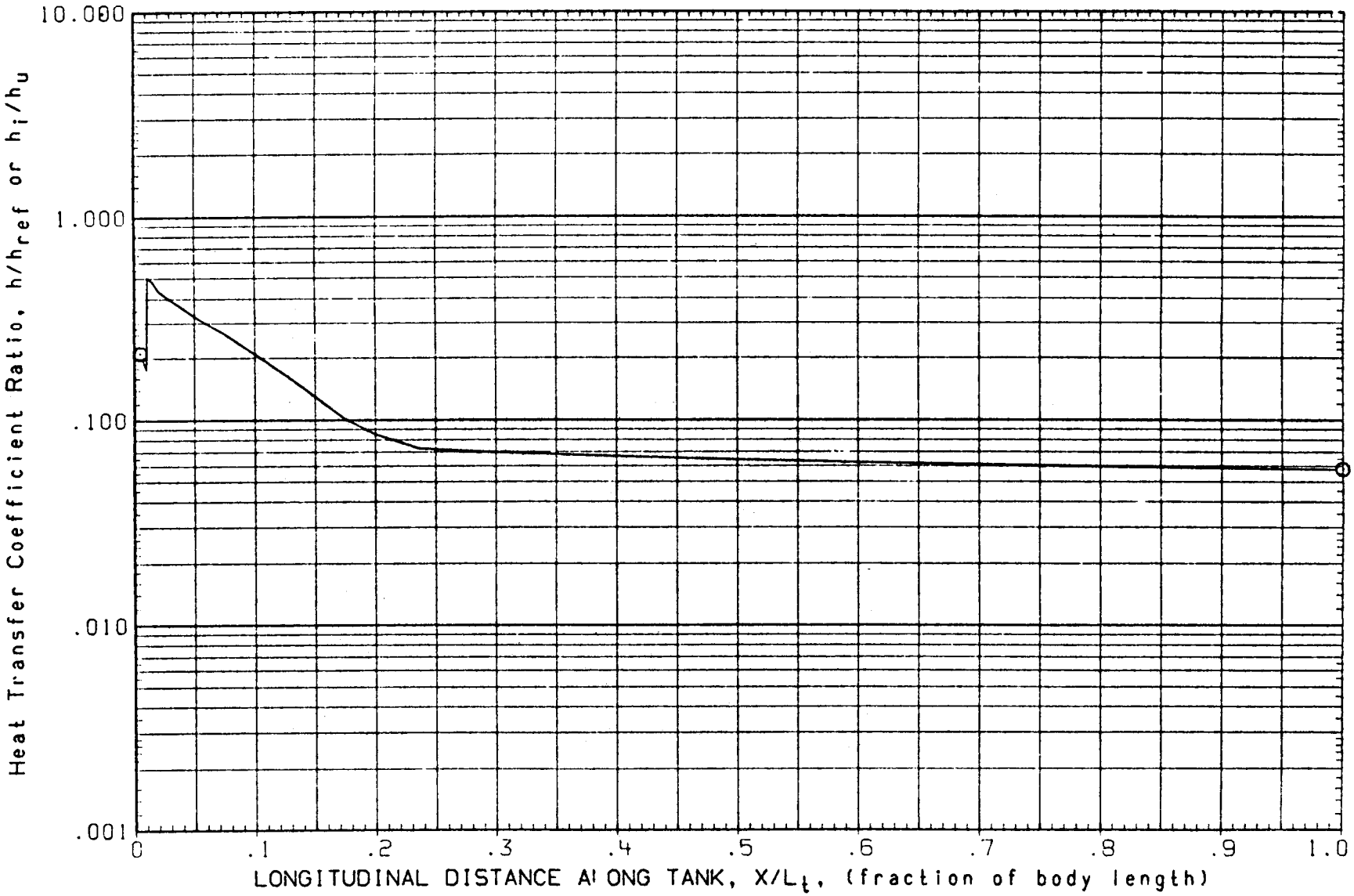

FIG. 4-16 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 30.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT52)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-4.500
(C9NT52)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-4.500
(V4LT52)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-4.500
(X4LT52)	◇	IH85 (W.L. TEST) OTS/ET = V4LT52/C9NT52=	HI/HU	4.020	5.000	-4.500
(Y4LT52)	△	IH85 (W.L. THEORY) OTS/ET = V4LT52/A9NT52=	HI/HU	4.020	5.000	-4.500

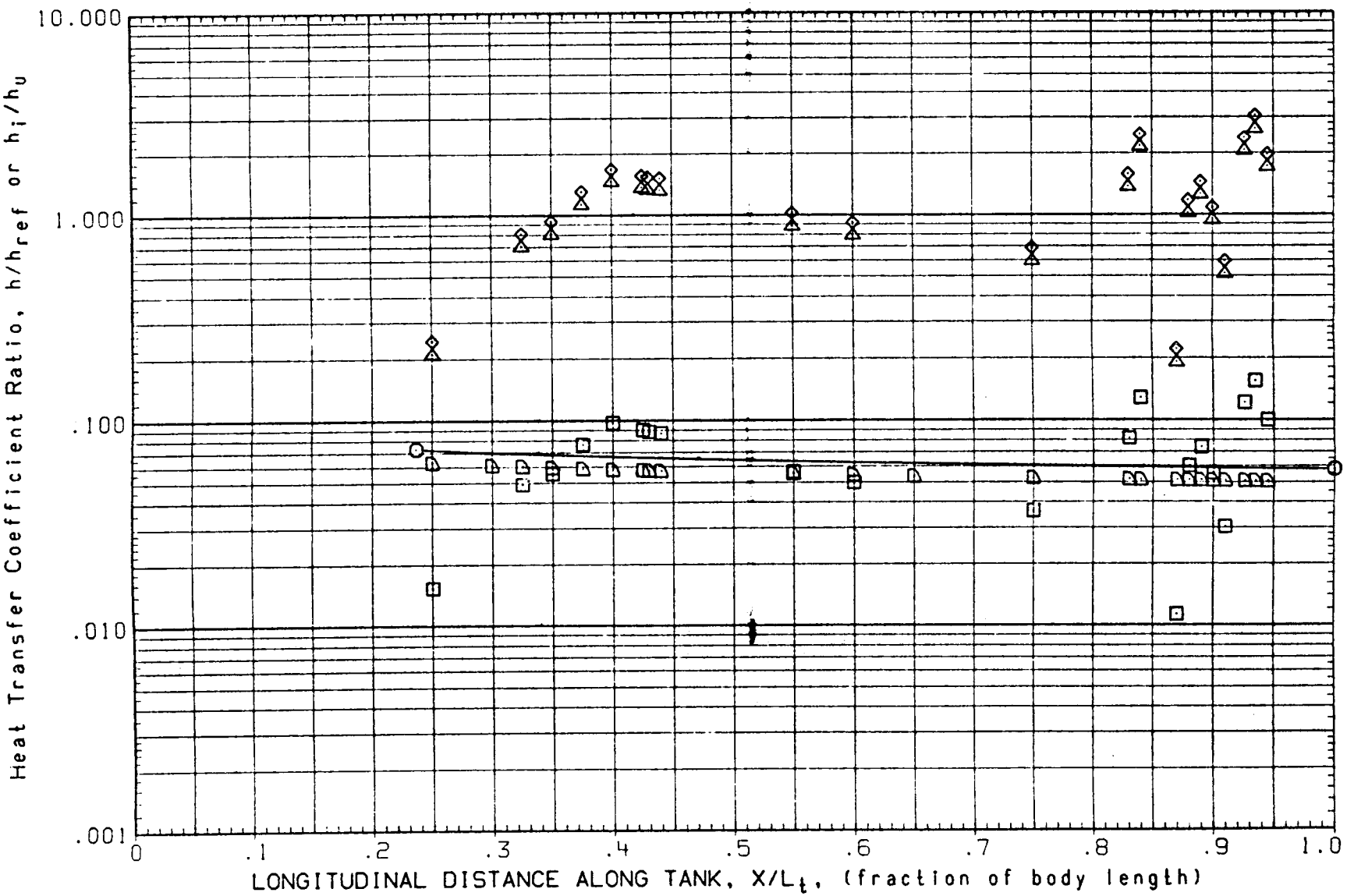

FIG. 4-16 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 45.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT52)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-4.500
(C9NT52)	⬠	DATA NOT AVAILABLE		4.020	5.000	-4.500
(V4LT52)	□	IH85, AEDC V41A-W5, CONFIGURATION O (T) S		4.020	5.000	-4.500
(X4LT52)	◇	DATA NOT AVAILABLE		4.020	5.000	-4.500
(Y4LT52)	△	IH85 (W.L. THEORY) OTS/ET = V4LT52/A9NT52= HI/HU		4.020	5.000	-4.500

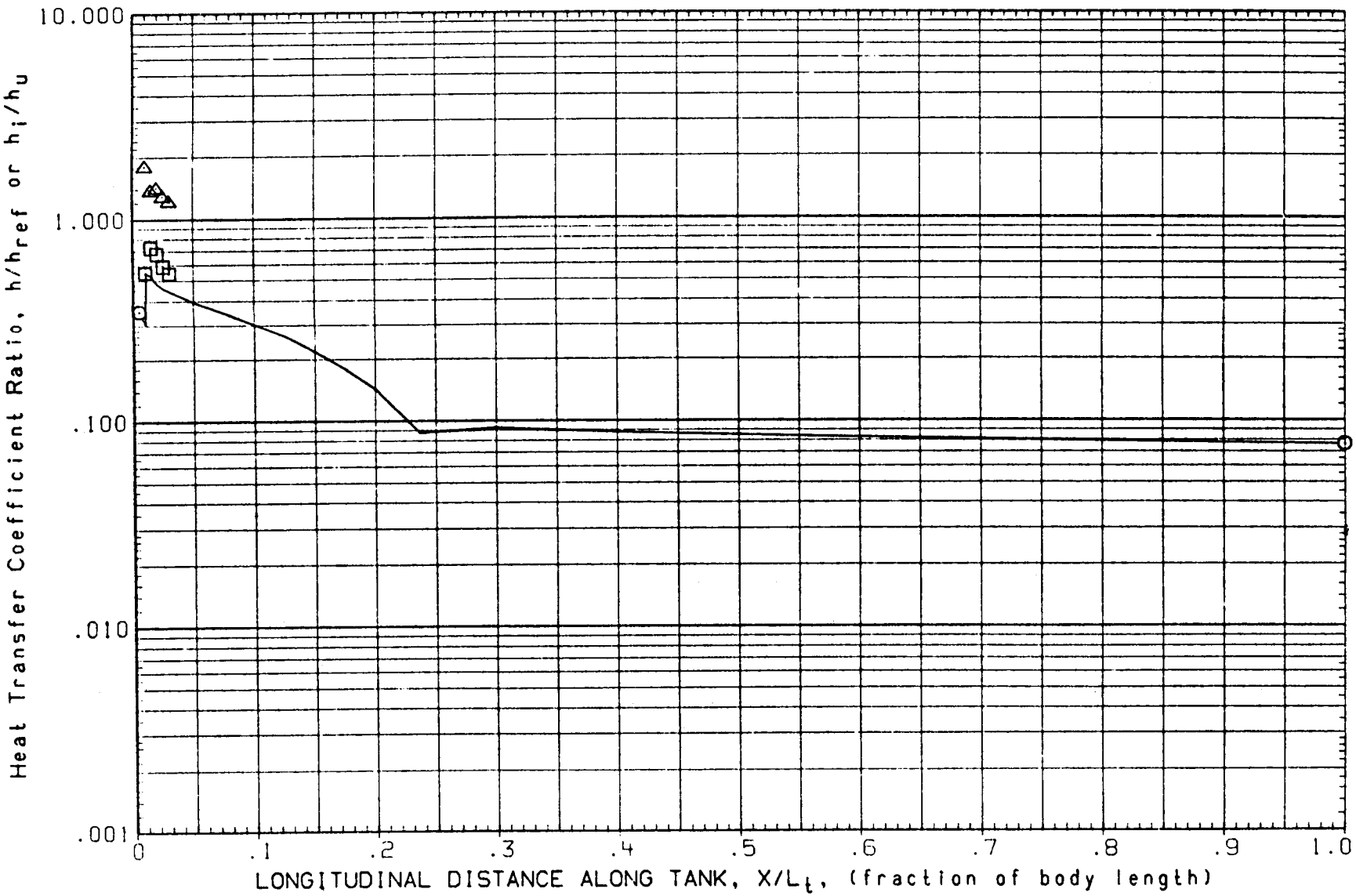

FIG. 4-16 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 180.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT52)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-4.500
(C9NT52)	◗	DATA NOT AVAILABLE		4.020	5.000	-4.500
(V4LT52)	□	DATA NOT AVAILABLE		4.020	5.000	-4.500
(X4LT52)	◇	DATA NOT AVAILABLE		4.020	5.000	-4.500
(Y4LT52)	△	DATA NOT AVAILABLE		4.020	5.000	-4.500

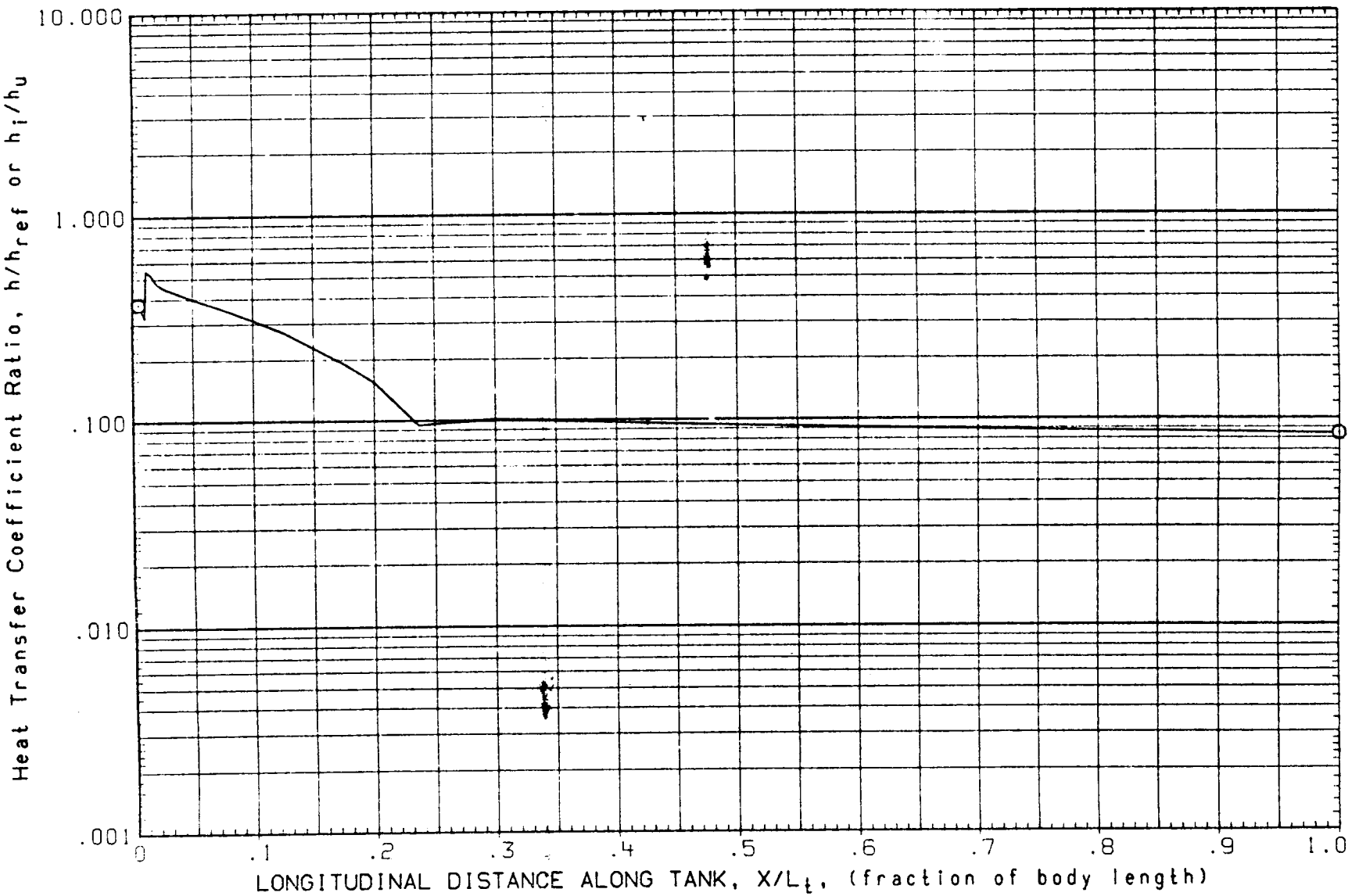

FIG. 4-16 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 235.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT52)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-4.500
(C9NT52)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-4.500
(V4LT52)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-4.500
(X4LT52)	◇	IH85 (W.L. TEST) OTS/ET = V4LT52/C9NT52= HI/HU		4.020	5.000	-4.500
(Y4LT52)	△	IH85 (W.L. THEORY) OTS/ET = V4LT52/A9NT52= HI/HU		4.020	5.000	-4.500

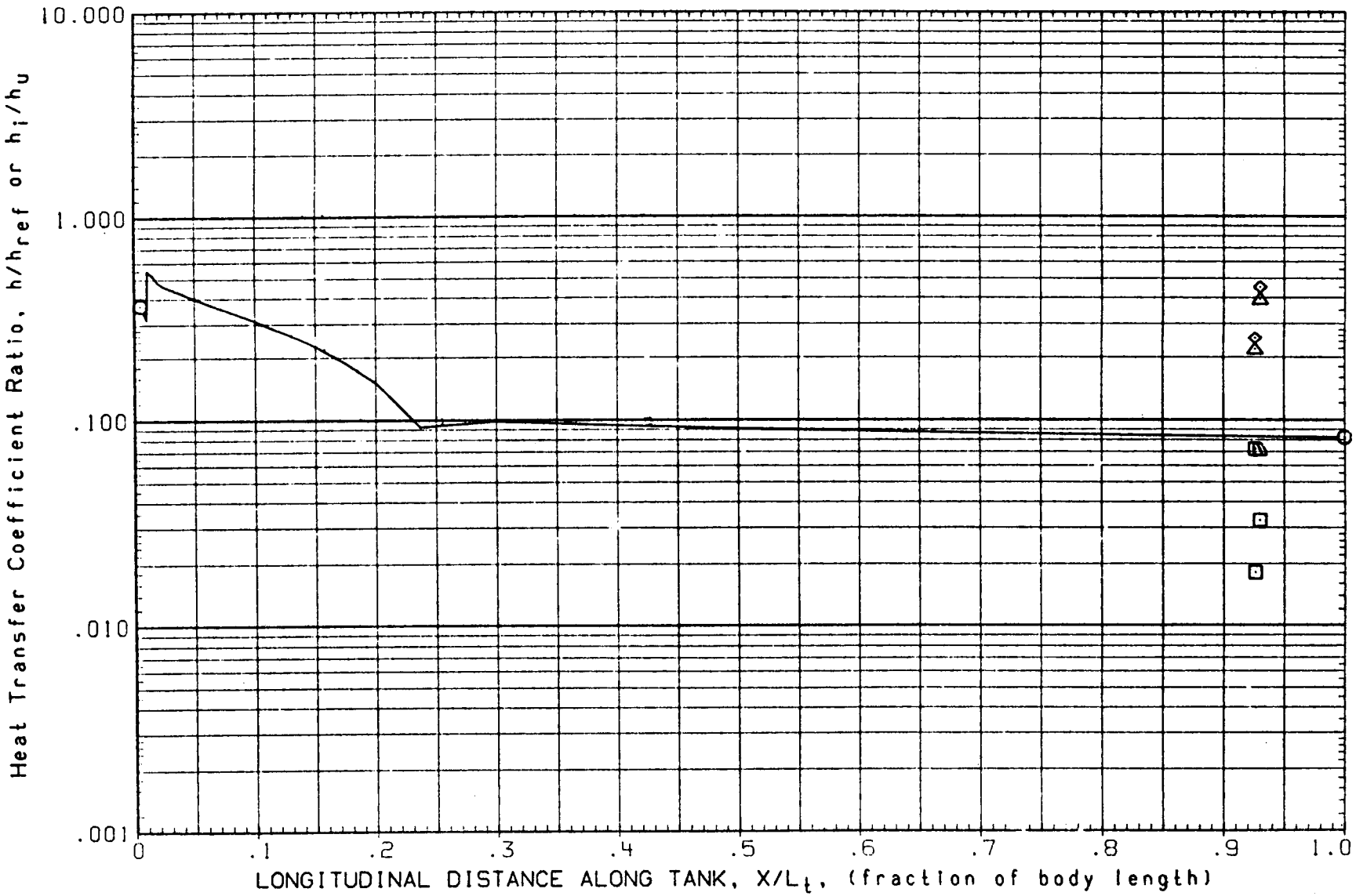

FIG. 4-16 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 247.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT52)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-4.500
(C9NT52)	⬠	DATA NOT AVAILABLE		4.020	5.000	-4.500
(V4LT52)	□	DATA NOT AVAILABLE		4.020	5.000	-4.500
(X4LT52)	◇	DATA NOT AVAILABLE		4.020	5.000	-4.500
(Y4LT52)	△	DATA NOT AVAILABLE		4.020	5.000	-4.500

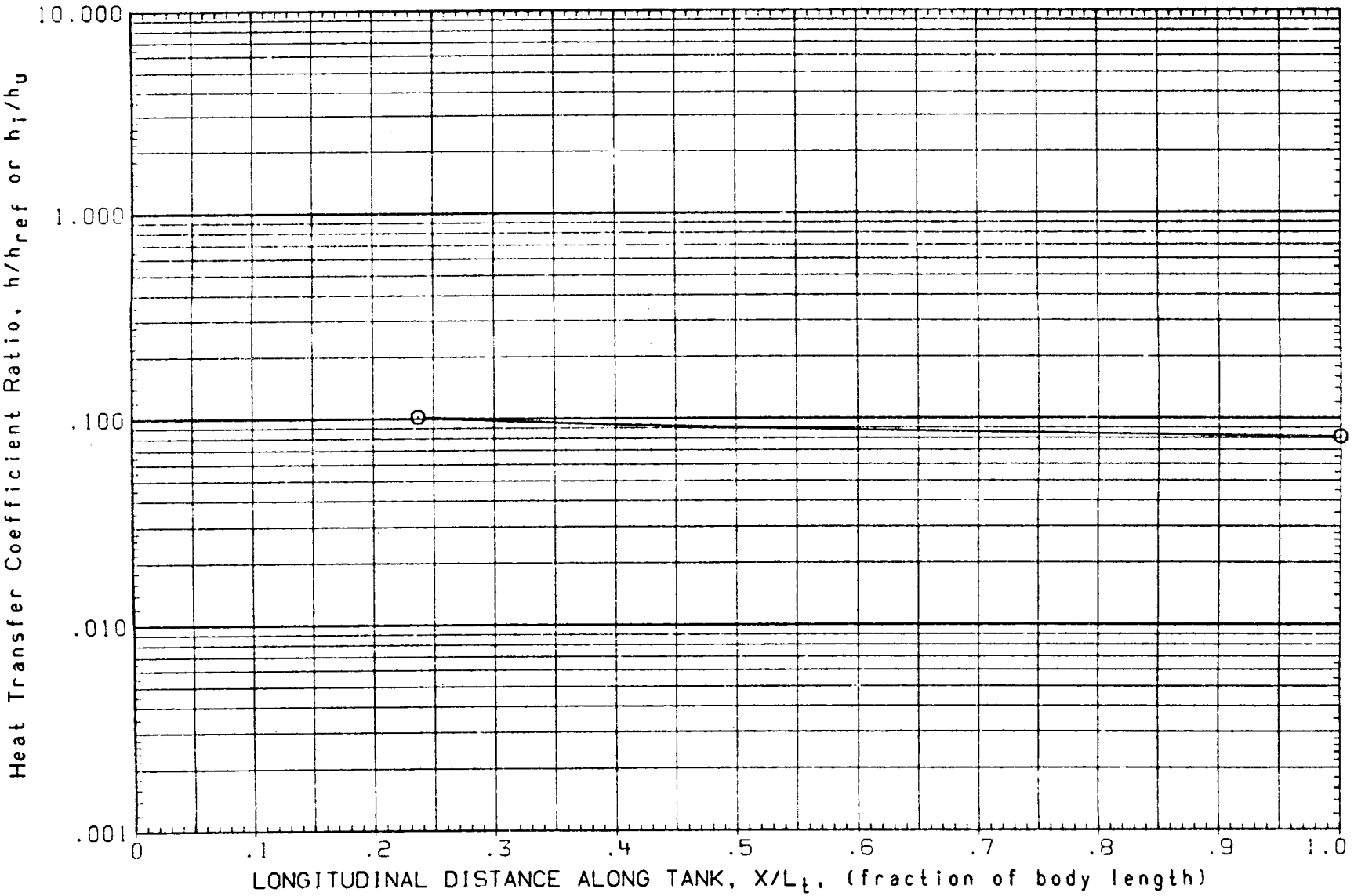

FIG. 4-16 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 247.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT52)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-4.500
(C9NT52)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-4.500
(V4LT52)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-4.500
(X4LT52)	◇	IH85 (W.L. TEST) OTS/ET = V4LT52/C9NT52=	HI/HU	4.020	5.000	-4.500
(Y4LT52)	△	IH85 (W.L. THEORY) OTS/ET = V4LT52/A9NT52=	HI/HU	4.020	5.000	-4.500

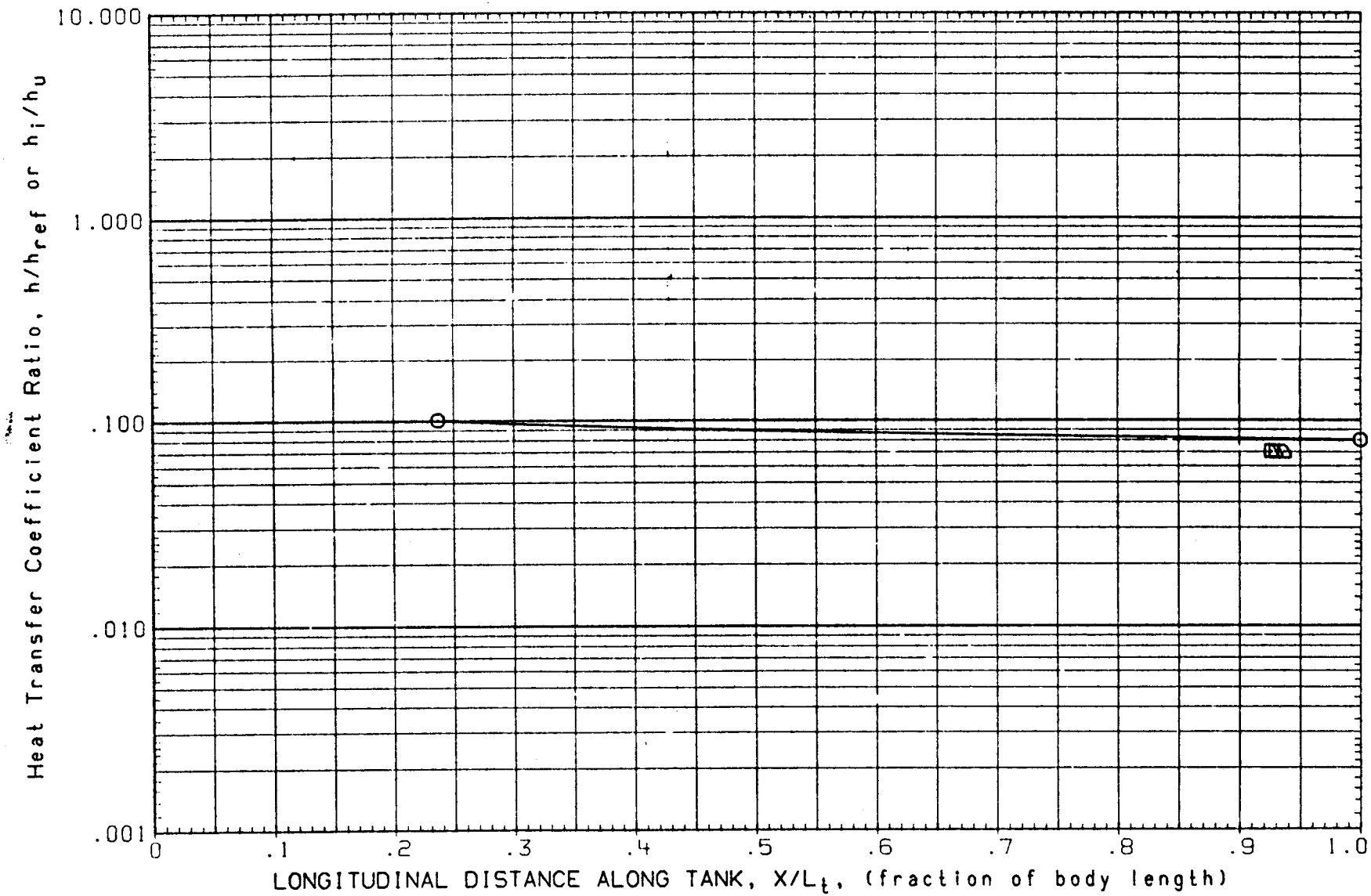

FIG. 4-16 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 250.570

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT52)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	4.020	5.000	-4.500
(C9NT52)	⌂	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	4.020	5.000	-4.500
(V4LT52)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	5.000	-4.500
(X4LT52)	◇	IH85 (W.L. TEST) OTS/ET = V4LT52/C9NT52= HI/HU	4.020	5.000	-4.500
(Y4LT52)	△	IH85 (W.L. THEORY) OTS/ET = V4LT52/A9NT52= HI/HU	4.020	5.000	-4.500

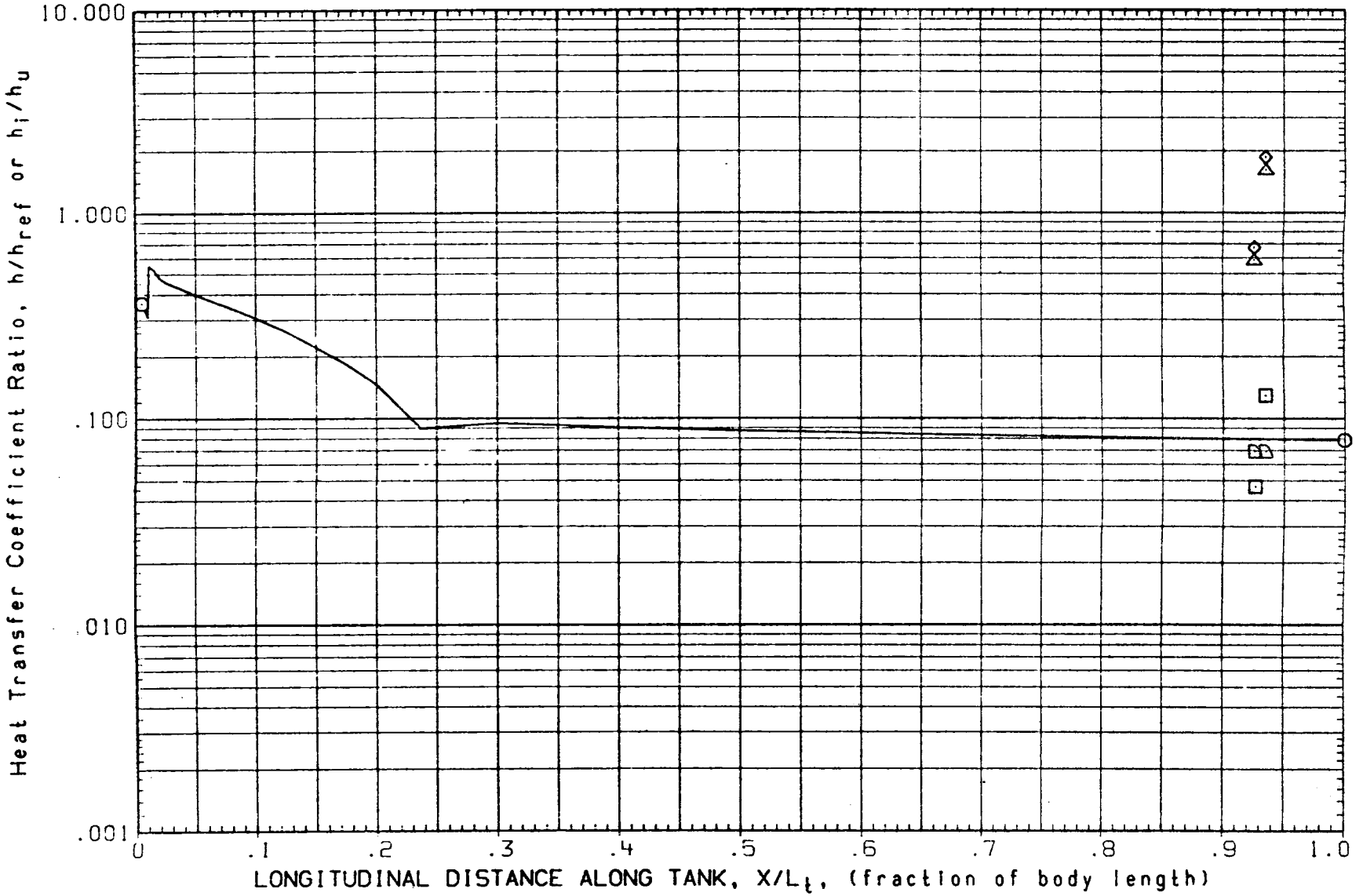

FIG. 4-16 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 258.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT52)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-4.500
(C9NT52)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-4.500
(V4LT52)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-4.500
(X4LT52)	◇	IH85 (W.L. TEST) OTS/ET = V4LT52/C9NT52=	HI/HU	4.020	5.000	-4.500
(Y4LT52)	△	IH85 (W.L. THEORY) OTS/ET = V4LT52/A9NT52=	HI/HU	4.020	5.000	-4.500

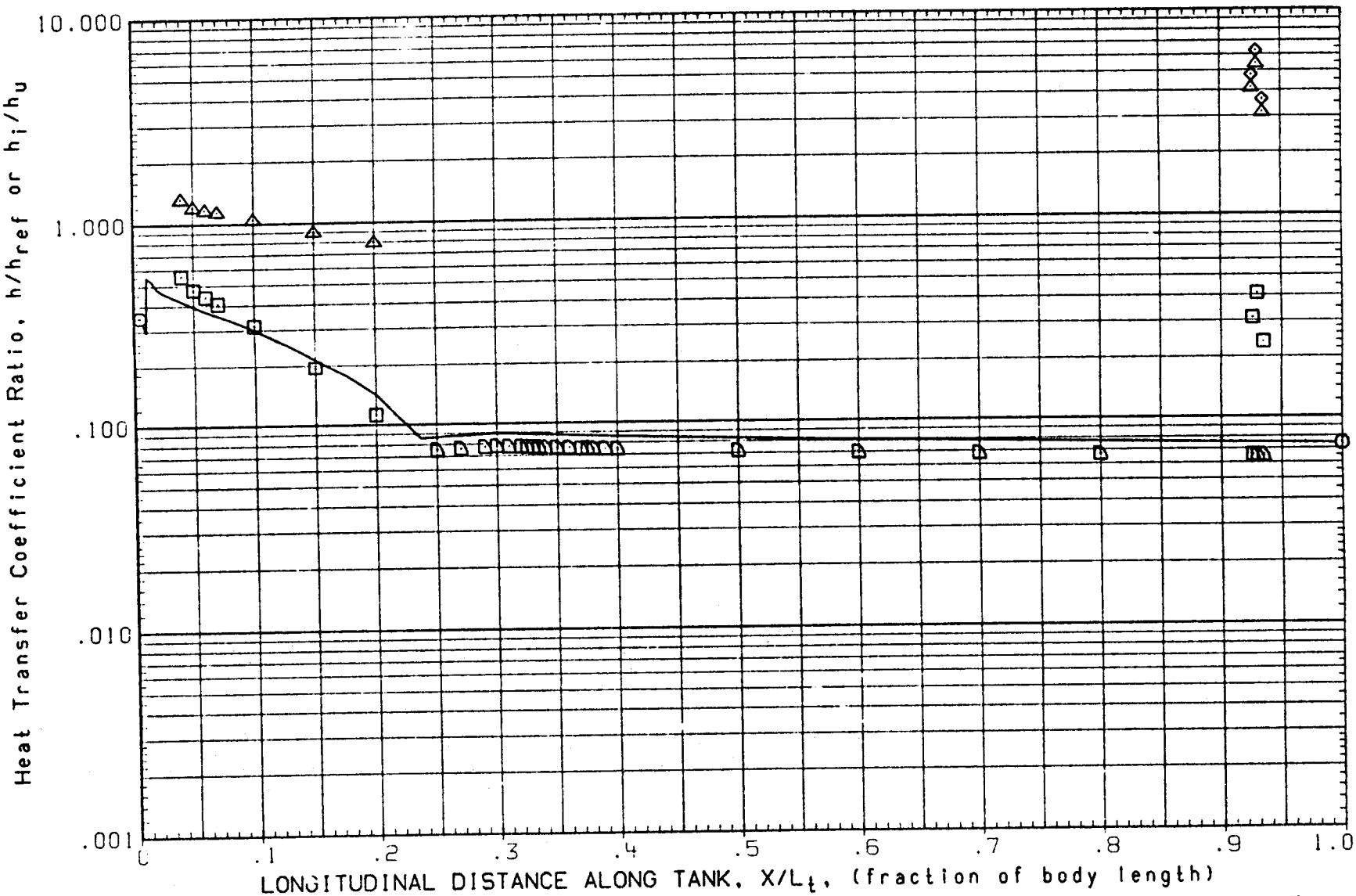

FIG. 4-16 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 270.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT52)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-4.500
(C9NT52)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-4.500
(V4LT52)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-4.500
(X4LT52)	◇	IH85 (W.L. TEST) OTS/ET = V4LT52/C9NT52=	HI/HU	4.020	5.000	-4.500
(Y4LT52)	△	IH85 (W.L. THEORY) OTS/ET = V4LT52/A9NT52=	HI/HU	4.020	5.000	-4.500

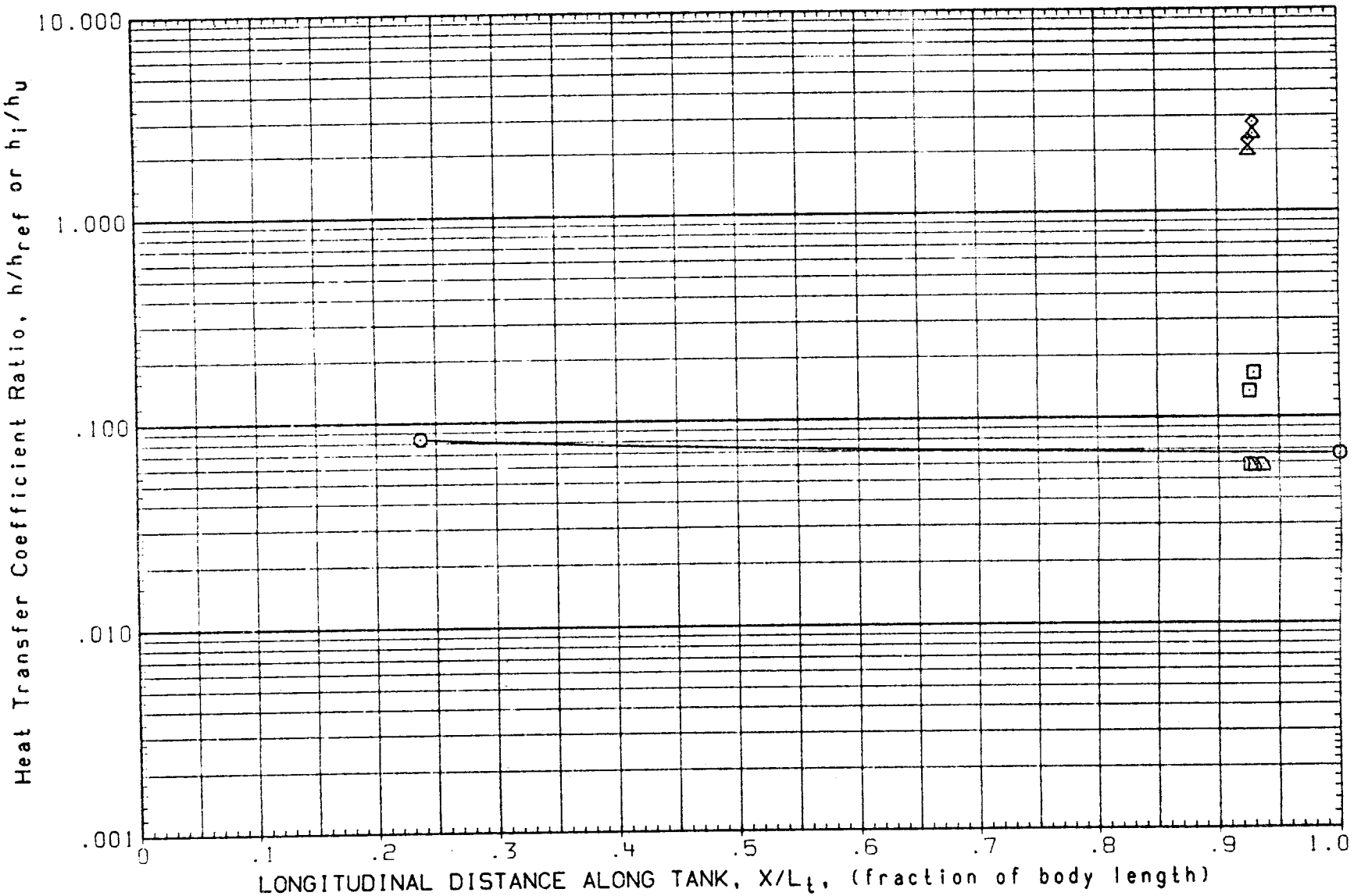

FIG. 4-16 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 289.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT52)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-4.500
(C9NT52)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-4.500
(V4LT52)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-4.500
(X4LT52)	◇	IH85 (W.L. TEST) OTS/ET = V4LT52/C9NT52=	HI/HU	4.020	5.000	-4.500
(Y4LT52)	△	IH85 (W.L. THEORY) OTS/ET = V4LT52/A9NT52=	HI/HU	4.020	5.000	-4.500

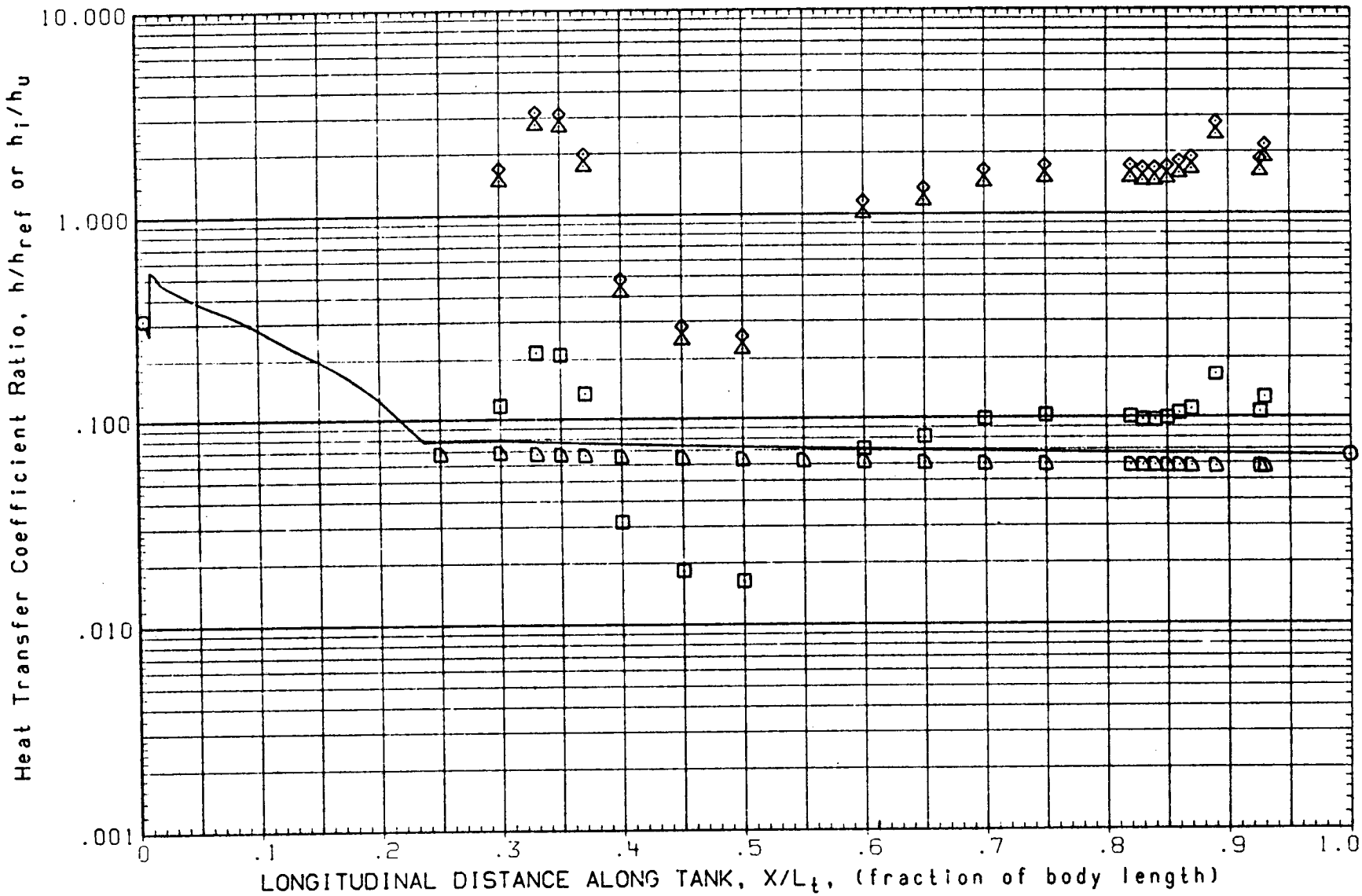

FIG. 4-16 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 292.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT52)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-4.500
(C9NT52)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-4.500
(V4LT52)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-4.500
(X4LT52)	◇	IH85 (W.L. TEST) OTS/ET = V4LT52/C9NT52=	HI/HU	4.020	5.000	-4.500
(Y4LT52)	△	IH85 (W.L. THEORY) OTS/ET = V4LT52/A9NT52=	HI/HU	4.020	5.000	-4.500

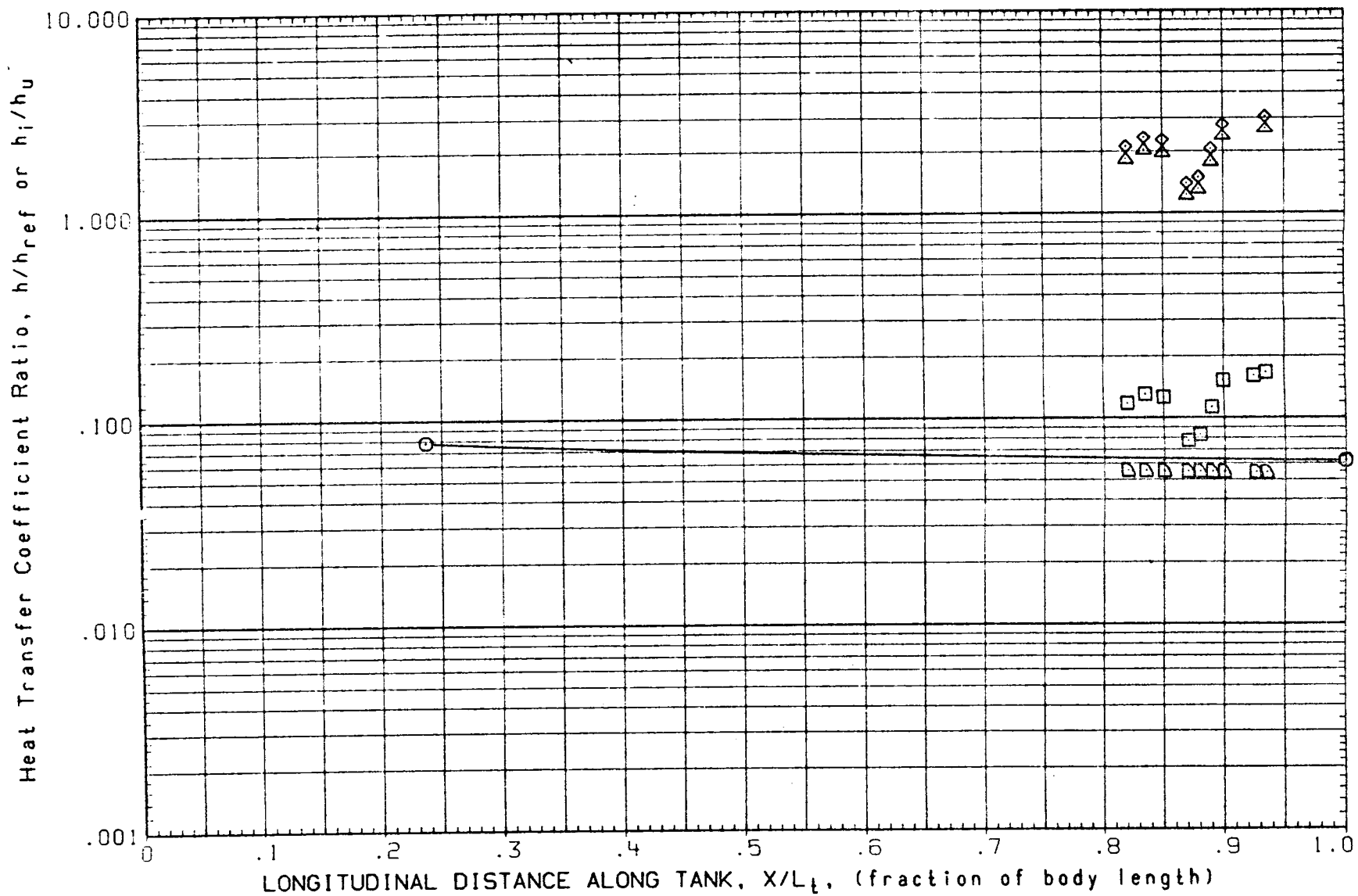

FIG. 4-16 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 301.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT52)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-4.500
(C9NT52)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-4.500
(V4LT52)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-4.500
(X4LT52)	◇	IH85 (W.L. TEST) OTS/ET = V4LT52/C9NT52=	HI/HU	4.020	5.000	-4.500
(Y4LT52)	△	IH85 (W.L. THEORY) OTS/ET = V4LT52/A9NT52=	HI/HU	4.020	5.000	-4.500

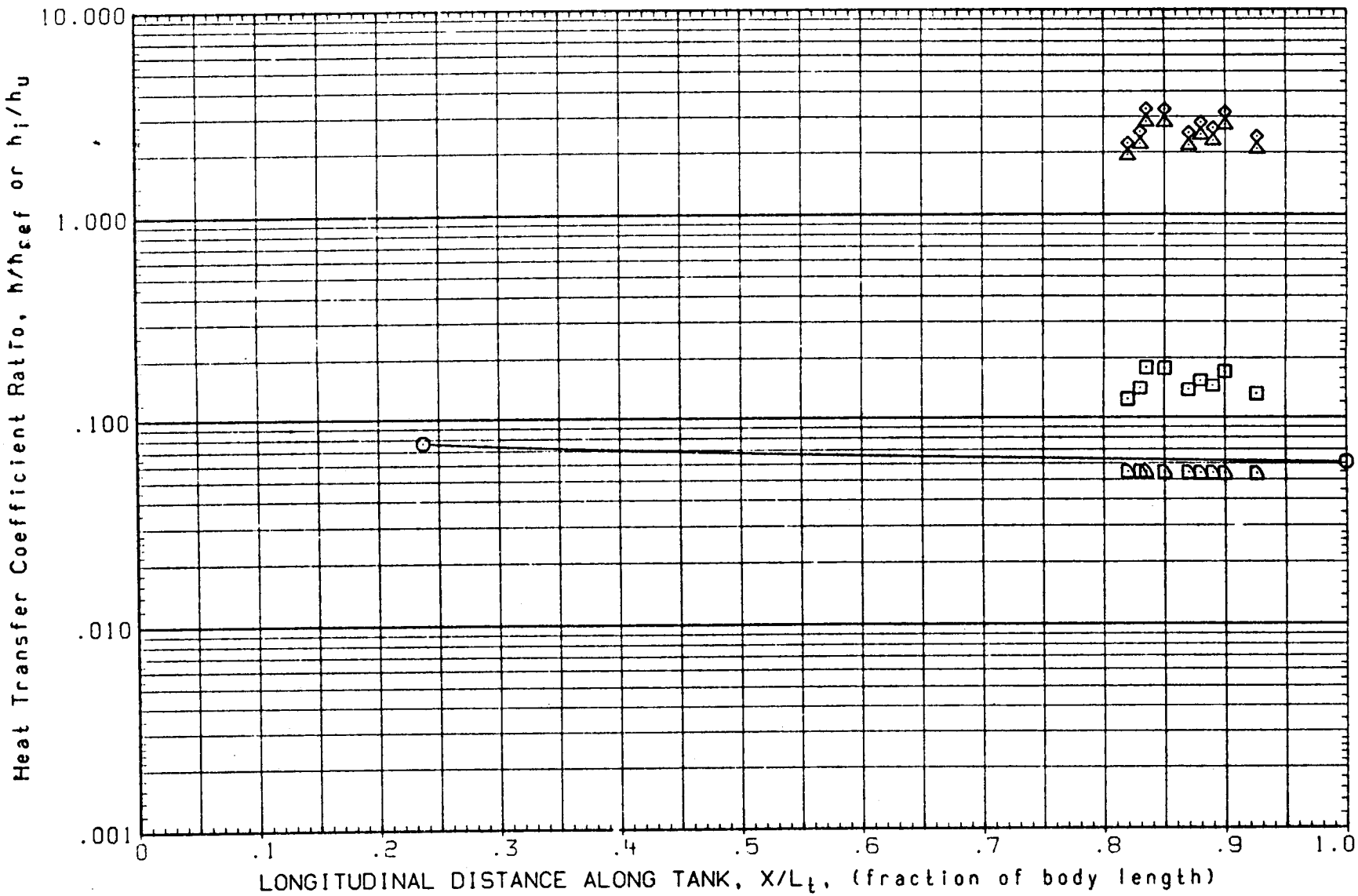

FIG. 4-16 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 305.400

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT52)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-4.500
(C9NT52)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-4.500
(V4LT52)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-4.500
(X4LT52)	◇	IH85 (W.L. TEST) OTS/ET = V4LT52/C9NT52= HI/HU		4.020	5.000	-4.500
(Y4LT52)	△	IH85 (W.L. THEORY) OTS/ET = V4LT52/A9NT52= HI/HU		4.020	5.000	-4.500

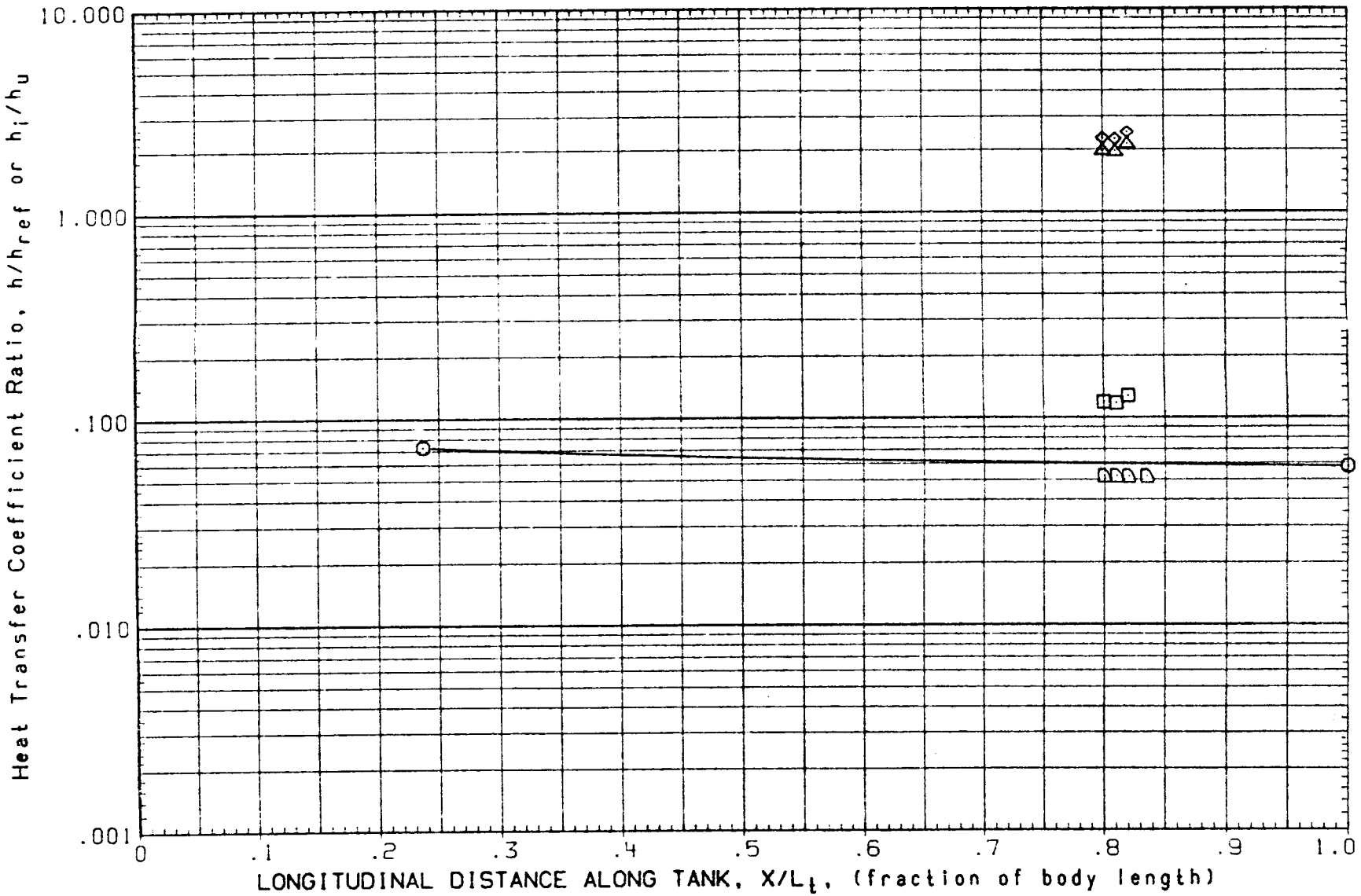

FIG. 4-16 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 309.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT52)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-4.500
(C9NT52)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-4.500
(V4LT52)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-4.500
(X4LT52)	◇	IH85 (W.L. TEST) OTS/ET = V4LT52/C9NT52=	HI/HU	4.020	5.000	-4.500
(Y4LT52)	△	IH85 (W.L. THEORY) OTS/ET = V4LT52/A9NT52=	HI/HU	4.020	5.000	-4.500

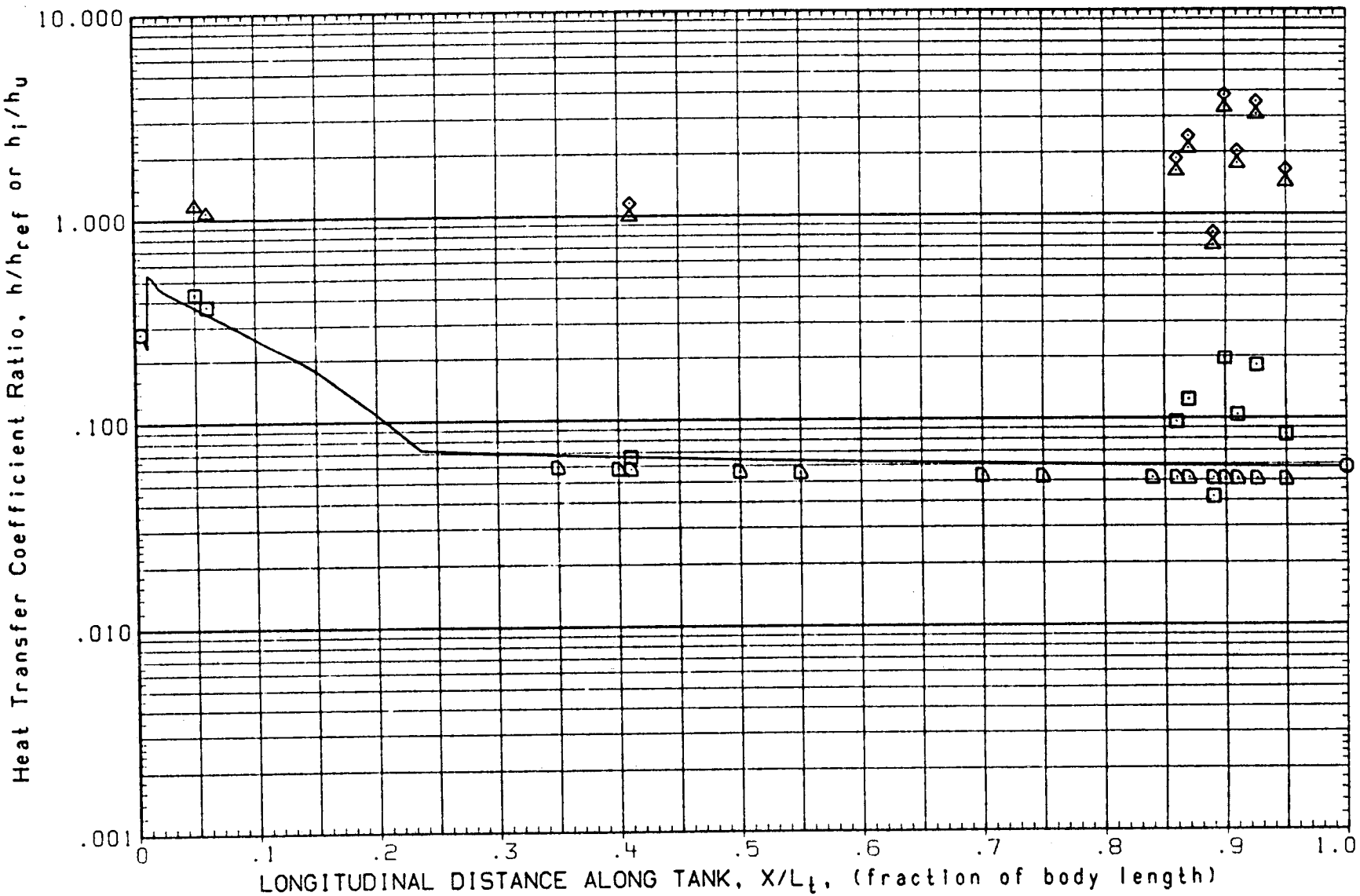

FIG. 4-16 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 315.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT52)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-4.500
(C9NT52)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-4.500
(V4LT52)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-4.500
(X4LT52)	◇	IH85 (W.L. TEST) OTS/ET = V4LT52/C9NT52=	HI/HU	4.020	5.000	-4.500
(Y4LT52)	△	IH85 (W.L. THEORY) OTS/ET = V4LT52/A9NT52=	HI/HU	4.020	5.000	-4.500

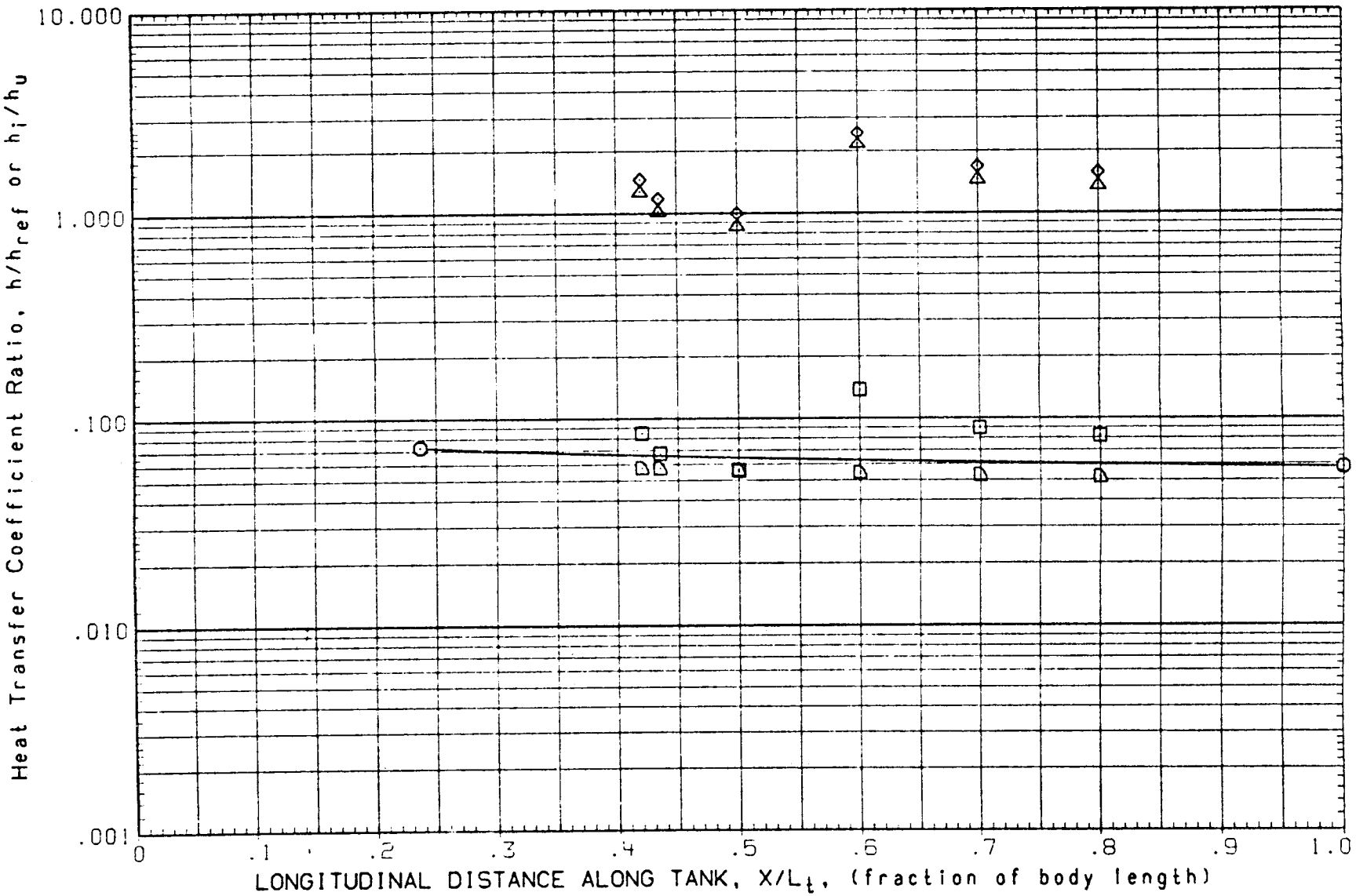

FIG. 4-16 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 322.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT52)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-4.500
(C9NT52)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-4.500
(V4LT52)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-4.500
(X4LT52)	◇	IH85 (W.L. TEST) OTS/ET = V4LT52/C9NT52= HI/HU		4.020	5.000	-4.500
(Y4LT52)	△	IH85 (W.L. THEORY) OTS/ET = V4LT52/A9NT52= HI/HU		4.020	5.000	-4.500

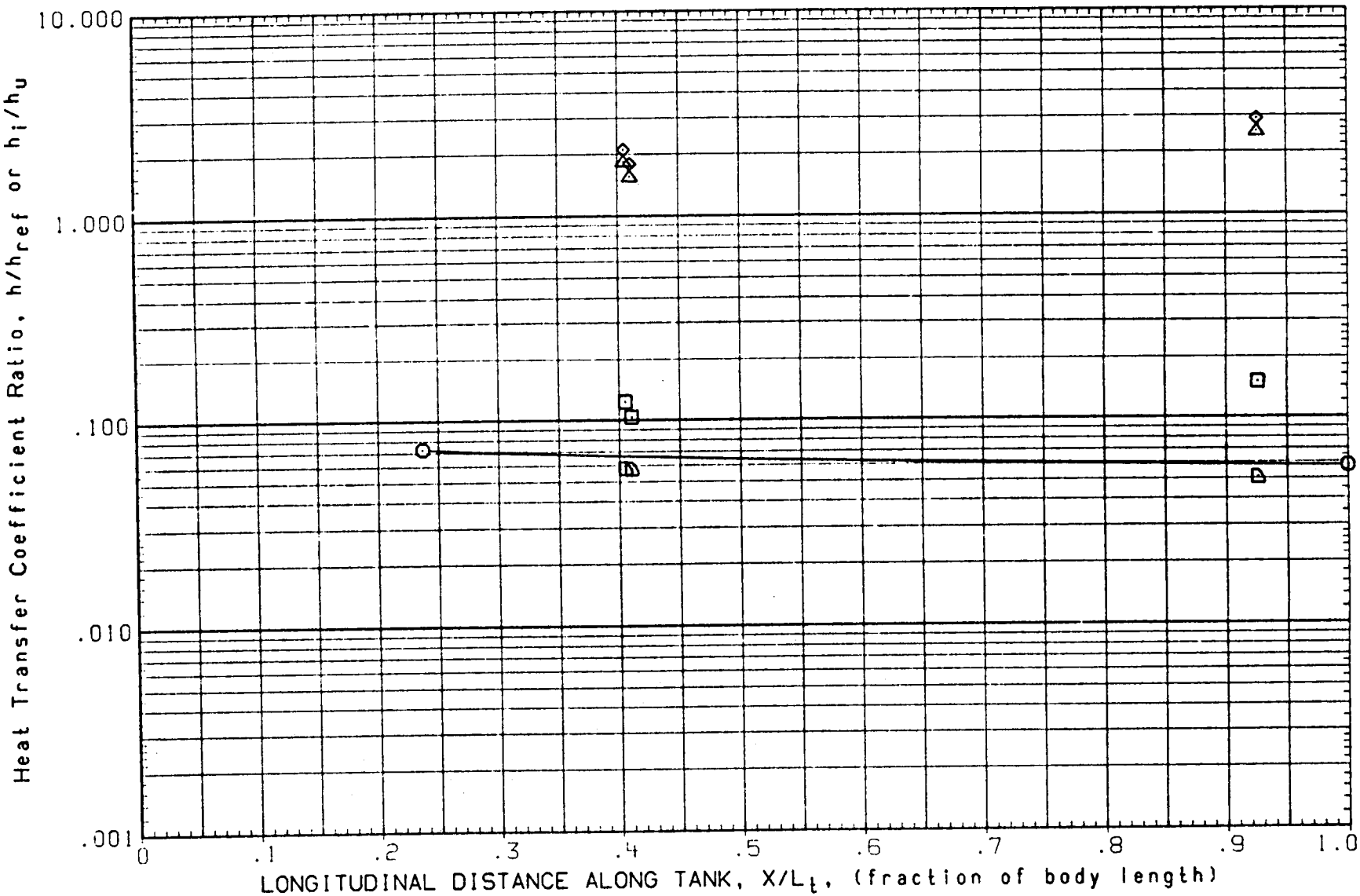

FIG. 4-16 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 324.450

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT52)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-4.500
(C9NT52)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-4.500
(V4LT52)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-4.500
(X4LT52)	◇	IH85 (W.L. TEST) OTS/ET = V4LT52/C9NT52=	HI/HU	4.020	5.000	-4.500
(Y4LT52)	△	IH85 (W.L. THEORY) OTS/ET = V4LT52/A9NT52=	HI/HU	4.020	5.000	-4.500

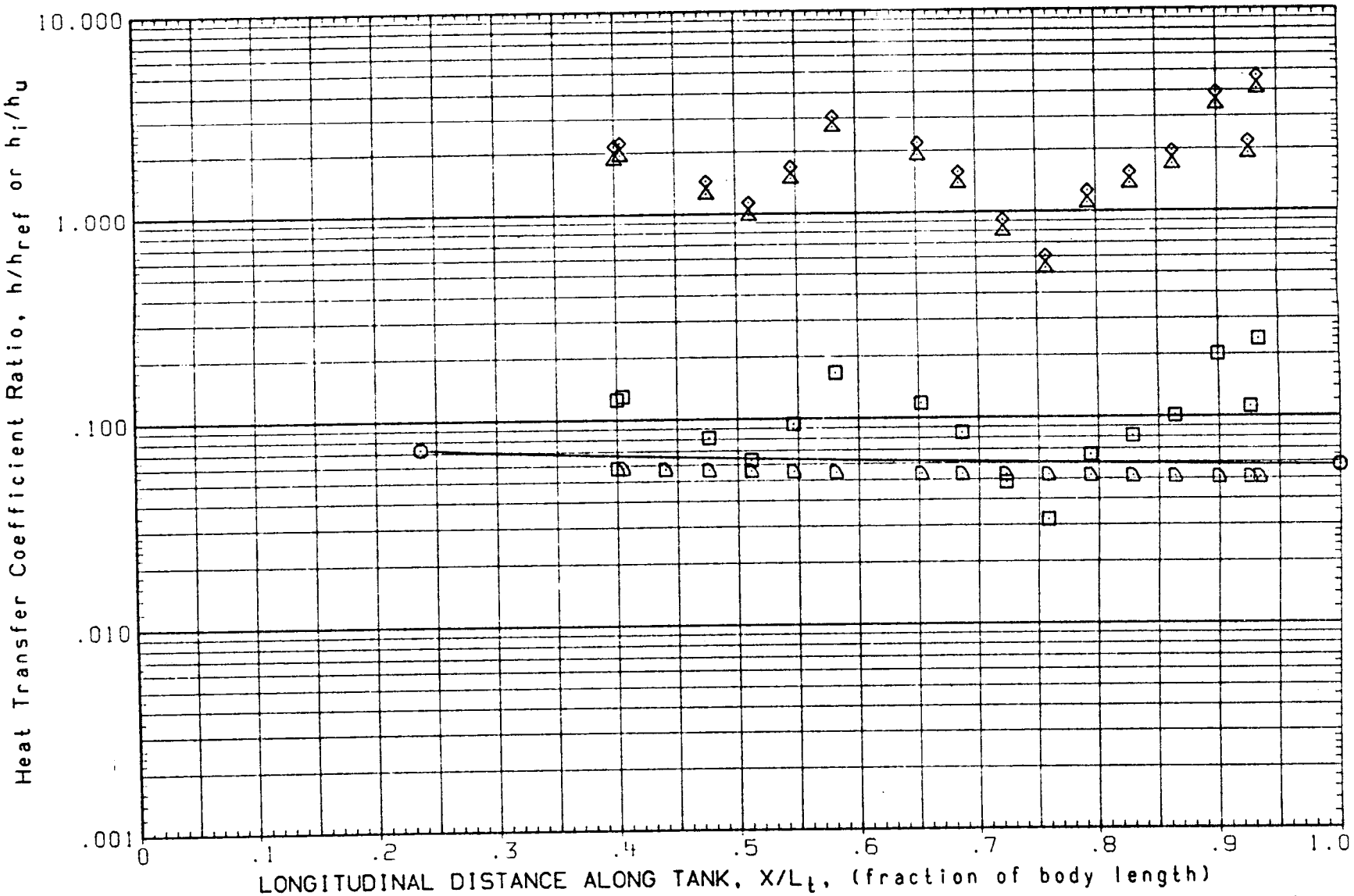

FIG. 4-16 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 326.850

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT52)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-4.500
(C9NT52)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-4.500
(V4LT52)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-4.500
(X4LT52)	◇	IH85 (W,L, TEST) OTS/ET = V4LT52/C9NT52=	HI/HU	4.020	5.000	-4.500
(Y4LT52)	△	IH85 (W,L, THEORY) OTS/ET = V4LT52/A9NT52=	HI/HU	4.020	5.000	-4.500

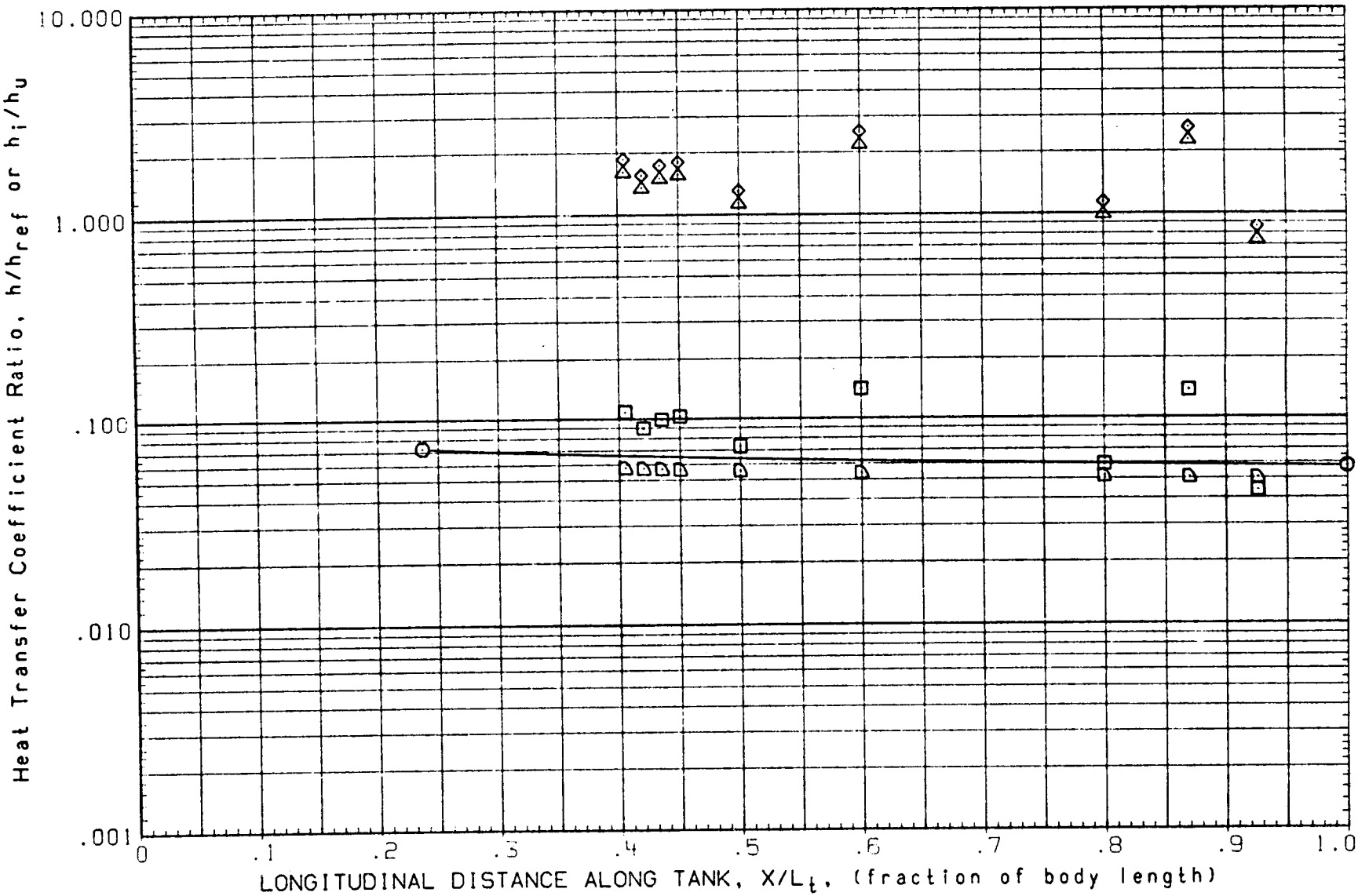

FIG. 4-16 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 330.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT52)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-4.500
(C9NT52)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-4.500
(V4LT52)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-4.500
(X4LT52)	◇	IH85 (W.L. TEST) OTS/ET = V4LT52/C9NT52=	HI/HU	4.020	5.000	-4.500
(Y4LT52)	△	IH85 (W.L. THEORY) OTS/ET = V4LT52/A9NT52=	HI/HU	4.020	5.000	-4.500

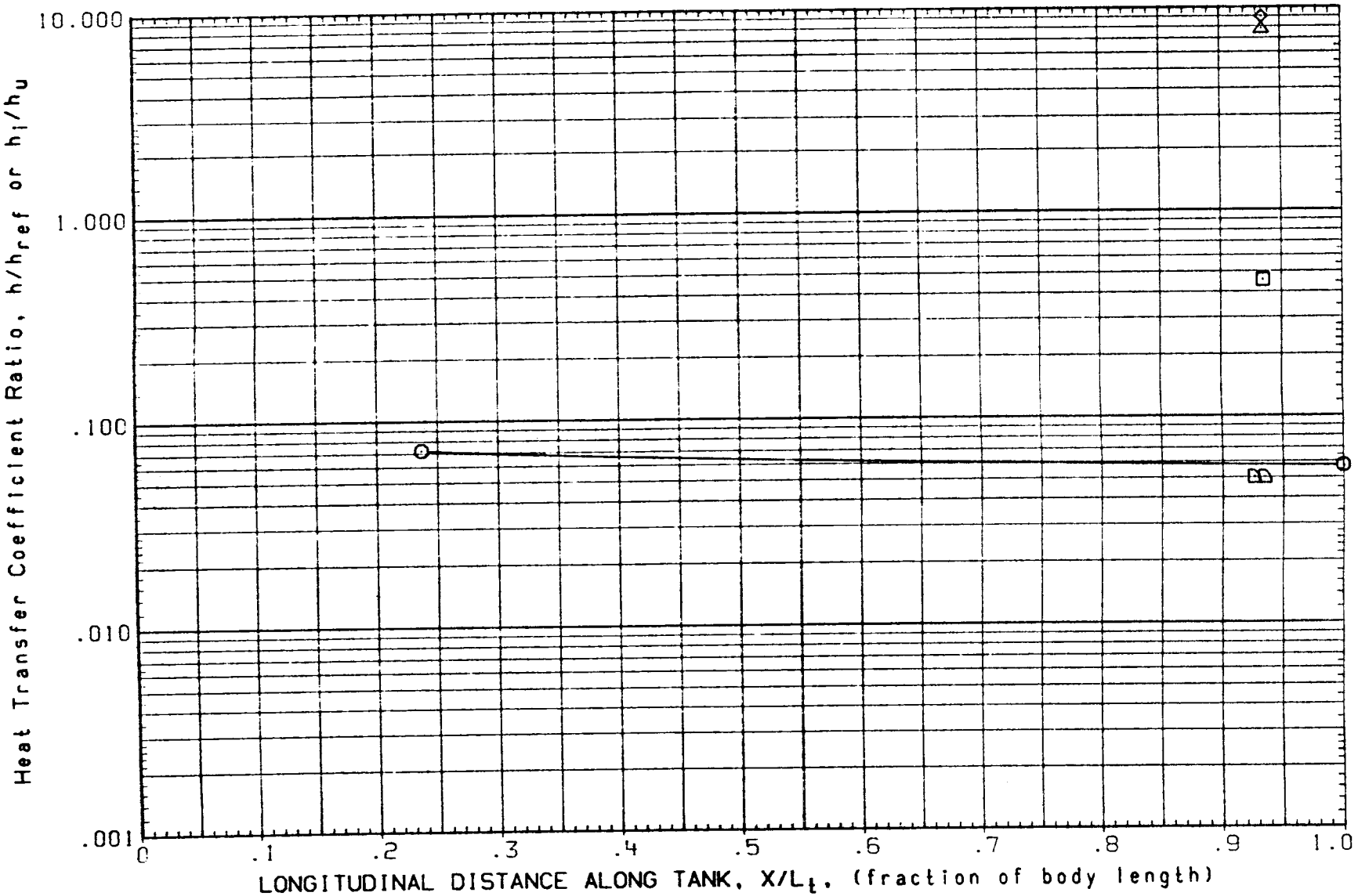

FIG. 4-16 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 334.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT52)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-4.500
(C9NT52)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-4.500
(V4LT52)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-4.500
(X4LT52)	◇	IH85 (W.L. TEST) OTS/ET = V4LT52/C9NT52=	HI/HU	4.020	5.000	-4.500
(Y4LT52)	△	IH85 (W.L. THEORY) OTS/ET = V4LT52/A9NT52=	HI/HU	4.020	5.000	-4.500

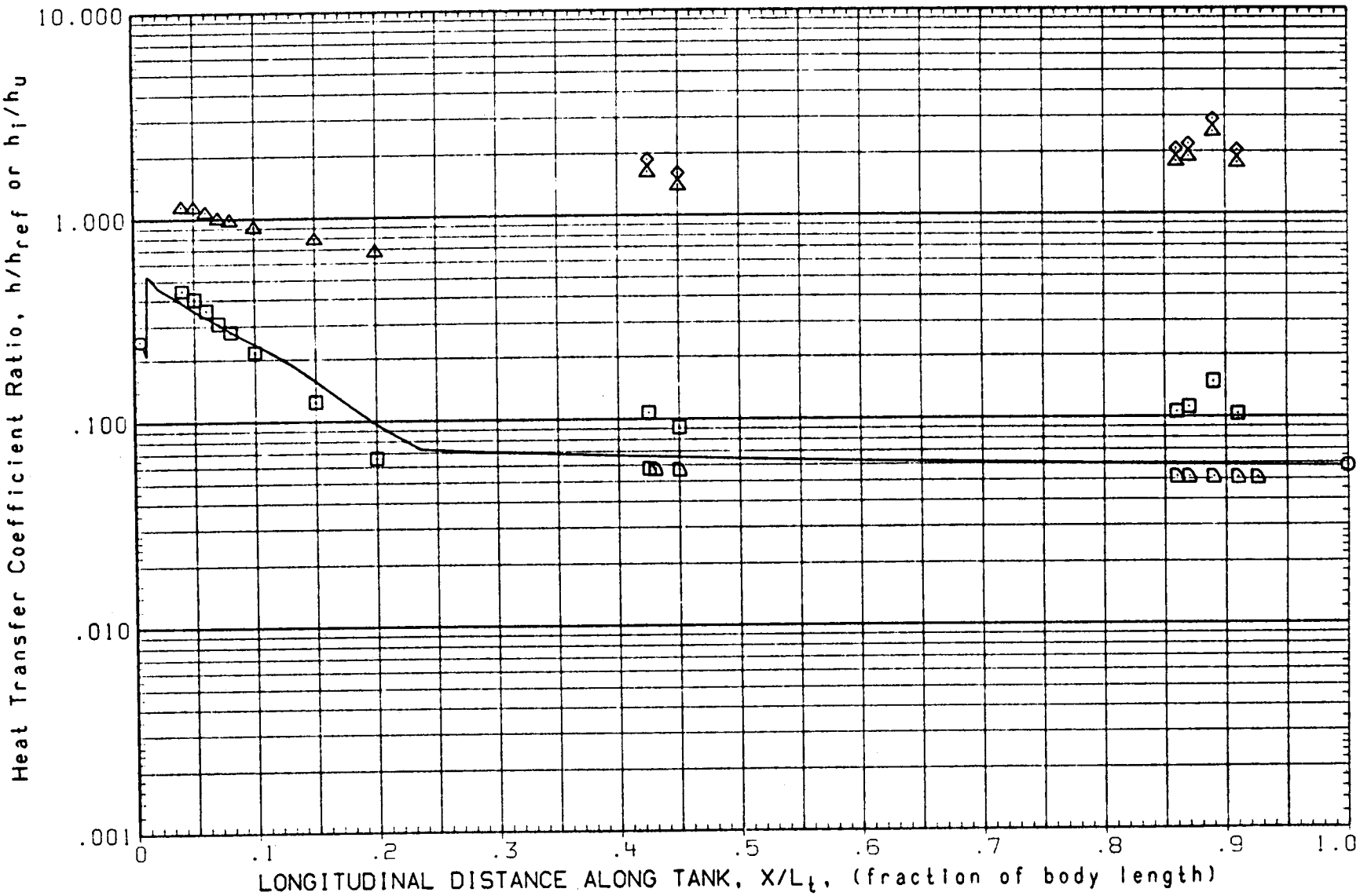

FIG. 4-16 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 337.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT52)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-4.500
(C9NT52)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-4.500
(V4LT52)	□	DATA NOT AVAILABLE		4.020	5.000	-4.500
(X4LT52)	◇	DATA NOT AVAILABLE		4.020	5.000	-4.500
(Y4LT52)	△	DATA NOT AVAILABLE		4.020	5.000	-4.500

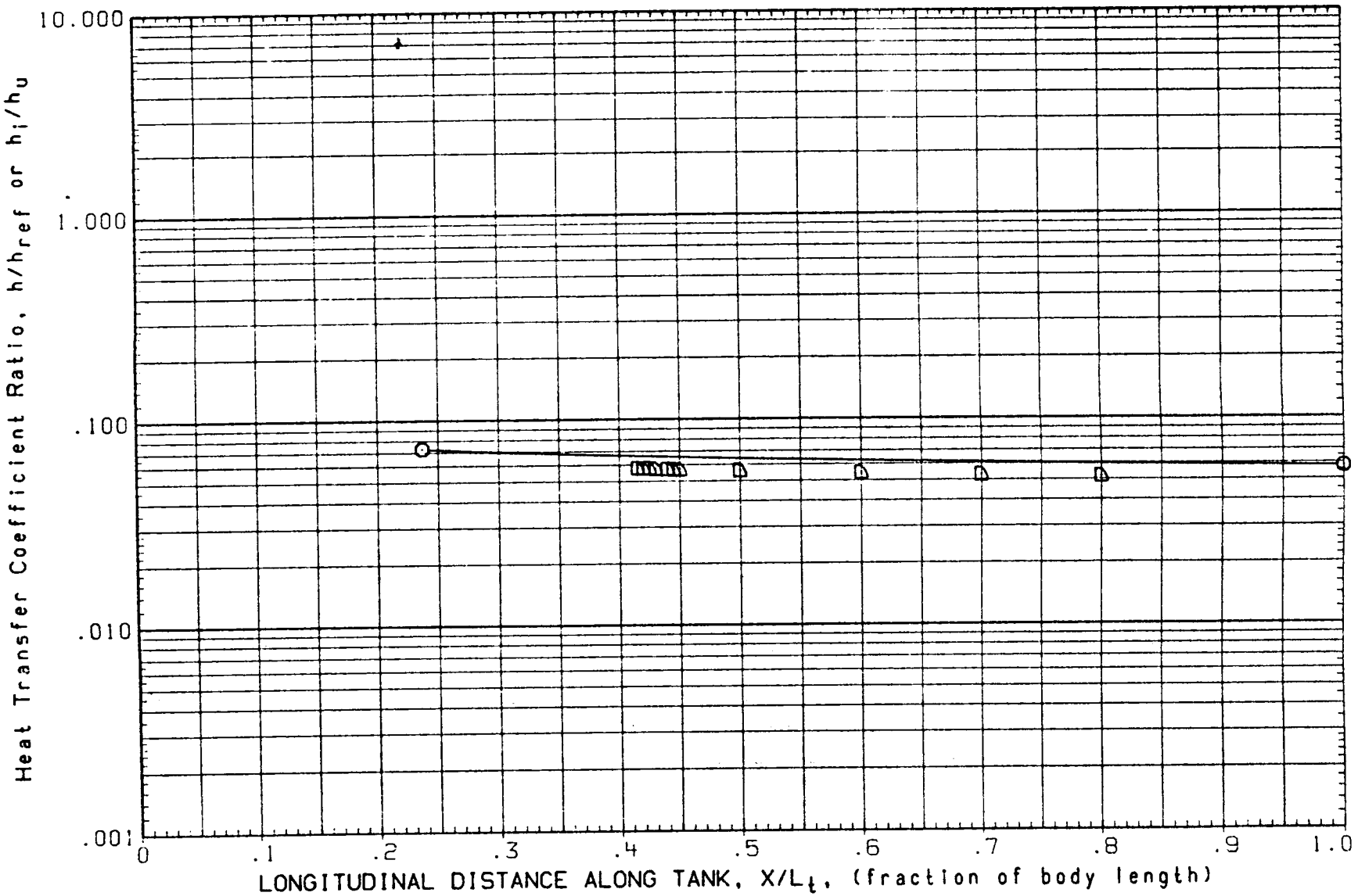

FIG. 4-16 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 343.120

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT52)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-4.500
(C9NT52)	⊿	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-4.500
(Y4LT52)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-4.500
(X4LT52)	◇	IH85 (W.L. TEST) OTS/ET = V4LT52/C9NT52=	HI/HU	4.020	5.000	-4.500
(Y4LT52)	△	IH85 (W.L. THEORY) OTS/ET = V4LT52/A9NT52=	HI/HU	4.020	5.000	-4.500

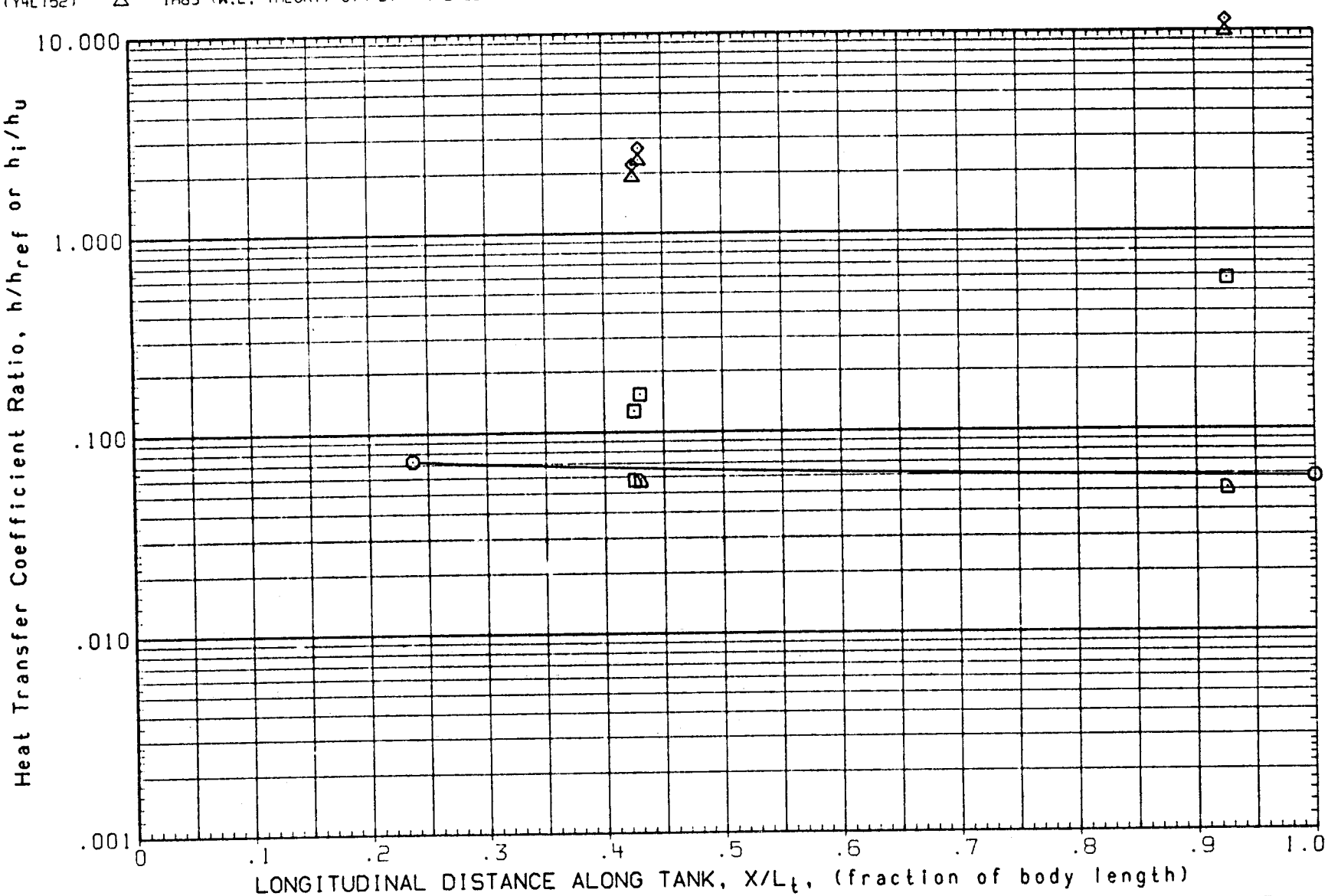

FIG. 4-16 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 345.560

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT52)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-4.500
(C9NT52)	⬡	TANK ALONE CREATED DATA (.87 • THEORY)	HU/HREF	4.020	5.000	-4.500
(V4LT52)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-4.500
(X4LT52)	◇	IH85 (W.L. TEST) OTS/ET = V4LT52/C9NT52=	HI/HU	4.020	5.000	-4.500
(Y4LT52)	△	IH85 (W.L. THEORY) OTS/ET = V4LT52/A9NT52=	HI/HU	4.020	5.000	-4.500

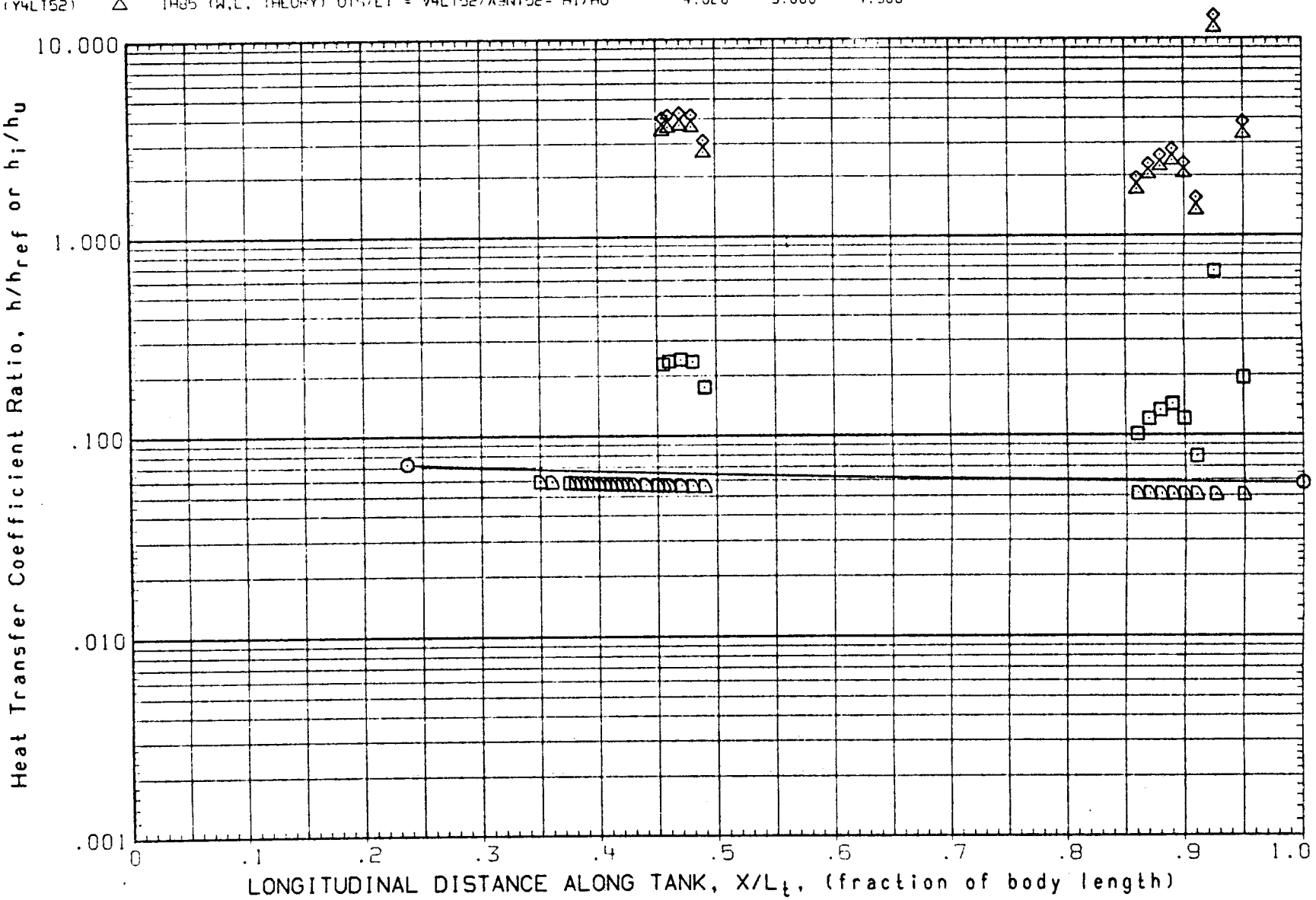

FIG. 4-16 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 348.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT52)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-4.500
(C9NT52)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-4.500
(V4LT52)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-4.500
(X4LT52)	◇	IH85 (W.L. TEST) OTS/ET = V4LT52/C9NT52=	HI/HU	4.020	5.000	-4.500
(Y4LT52)	△	IH85 (W.L. THEORY) OTS/ET = V4LT52/A9NT52=	HI/HU	4.020	5.000	-4.500

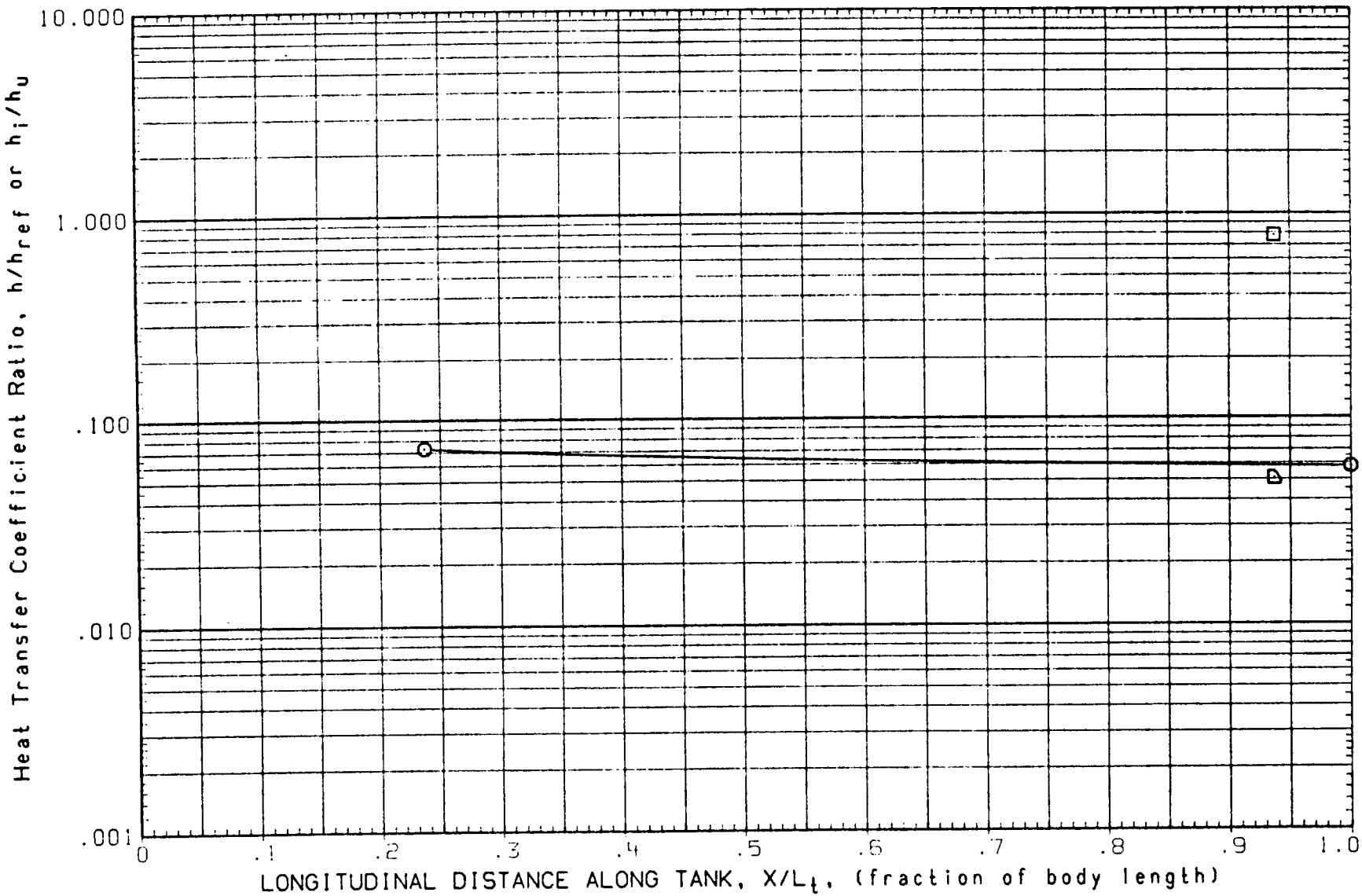

FIG. 4-16 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 352.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT52)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-4.500
(C9NT52)	△	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	-4.500
(V4LT52)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	-4.500
(X4LT52)	◇	IH85 (W.L. TEST) OTS/ET = V4LT52/C9NT52=	HI/HU	4.020	5.000	-4.500
(Y4LT52)	△	IH85 (W.L. THEORY) OTS/ET = V4LT52/A9NT52=	HI/HU	4.020	5.000	-4.500

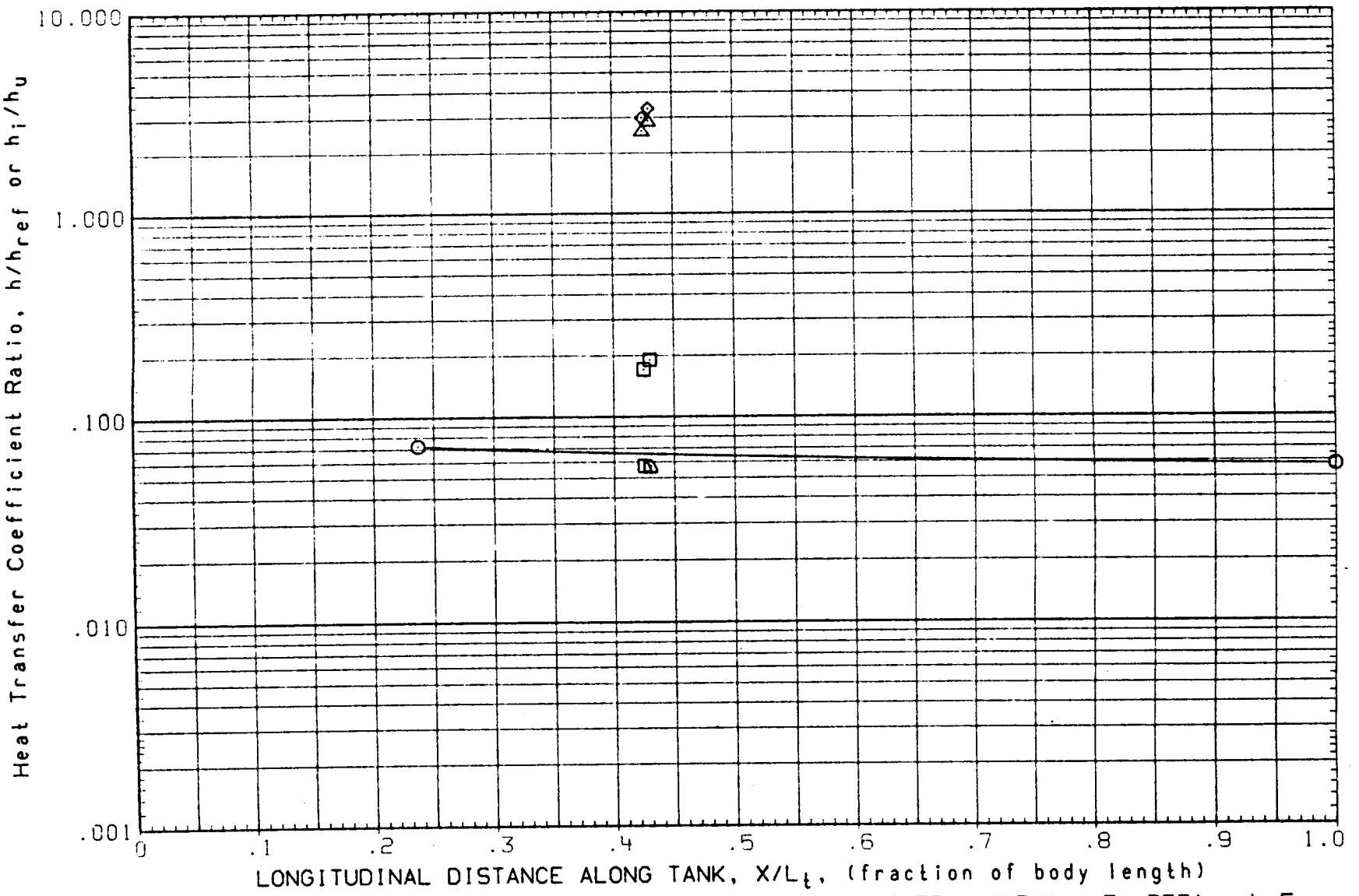

FIG. 4-16 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 354.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT52)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-4.500
(C9NT52)	⌂	DATA NOT AVAILABLE		4.020	5.000	-4.500
(V4LT52)	□	DATA NOT AVAILABLE		4.020	5.000	-4.500
(X4LT52)	◇	DATA NOT AVAILABLE		4.020	5.000	-4.500
(Y4LT52)	△	DATA NOT AVAILABLE		4.020	5.000	-4.500

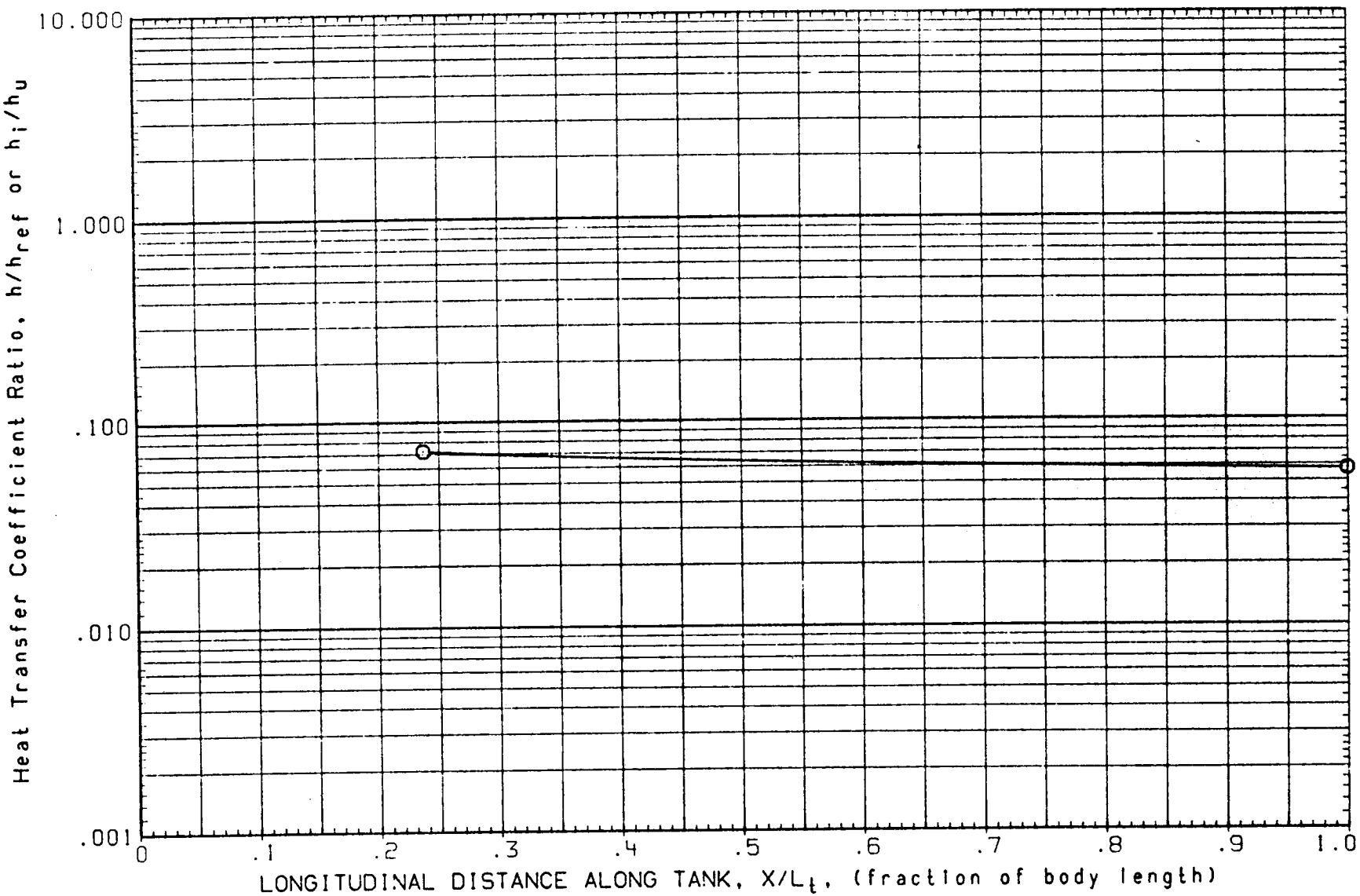

FIG. 4-16 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 355.160

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT52)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	-4.500
(C9NT52)	⌂	DATA NOT AVAILABLE		4.020	5.000	-4.500
(V4LT52)	□	DATA NOT AVAILABLE		4.020	5.000	-4.500
(X4LT52)	◇	DATA NOT AVAILABLE		4.020	5.000	-4.500
(Y4LT52)	△	DATA NOT AVAILABLE		4.020	5.000	-4.500

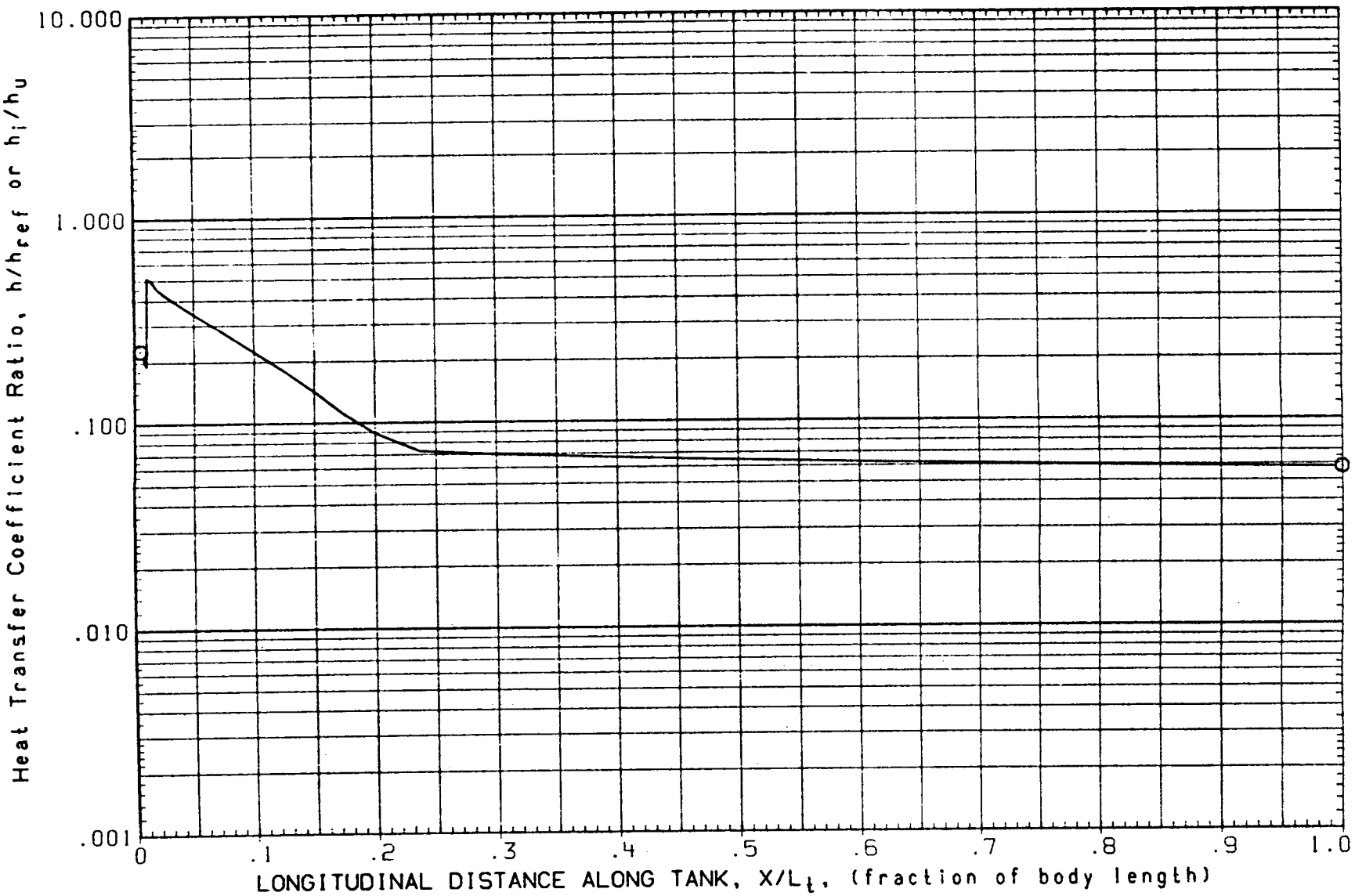

FIG. 4-16 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= -4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 360.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT55)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	3.000
(C9NT55)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	3.000
(V4LT55)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	3.000
(X4LT55)	◇	IH85 (W.L. TEST) OTS/ET = V4LT55/C9NT55=	HI/HU	4.020	5.000	3.000
(Y4LT55)	△	IH85 (W.L. THEORY) OTS/ET = V4LT55/A9NT55=	HI/HU	4.020	5.000	3.000

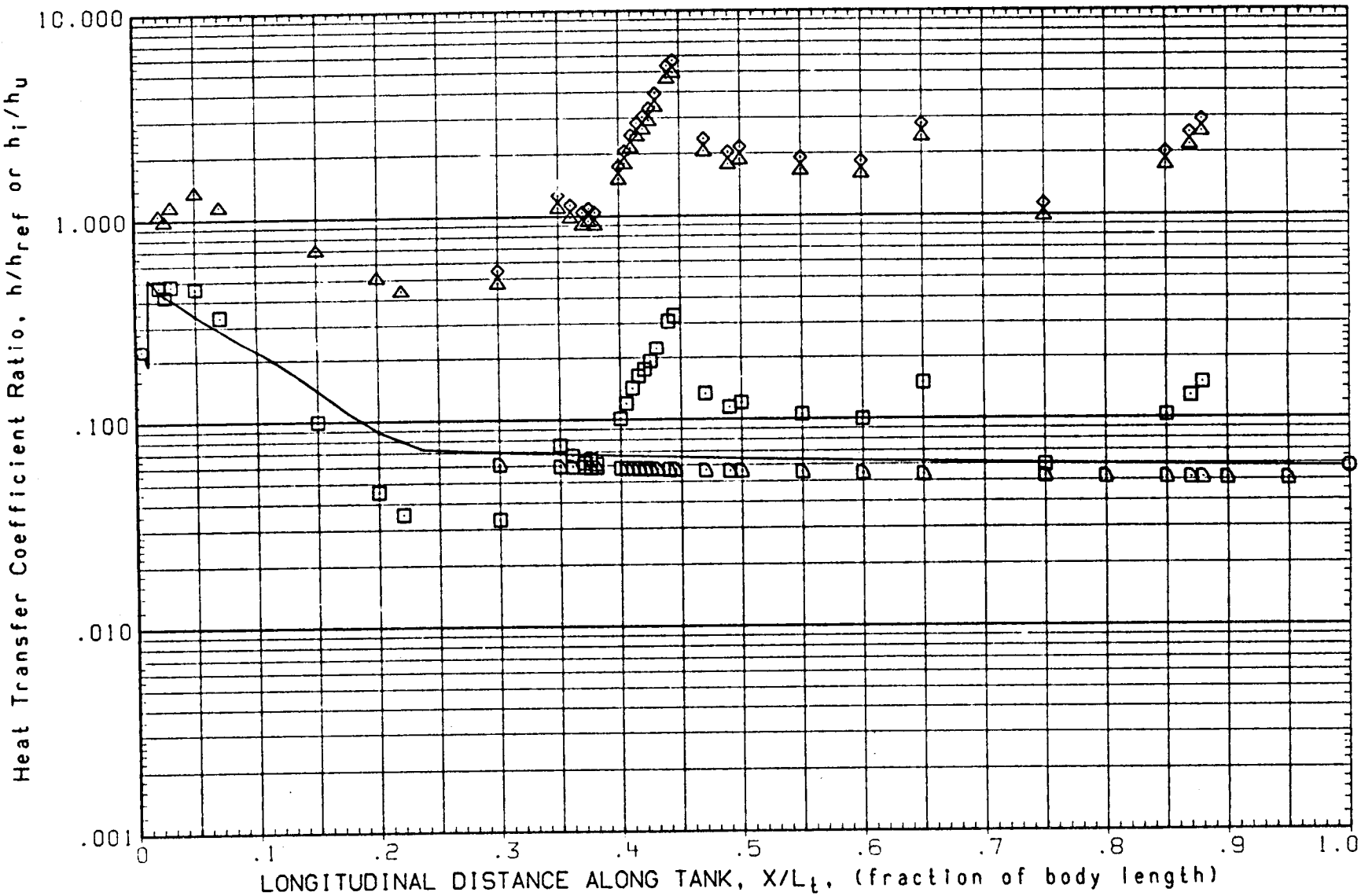

FIG. 4-17 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = .000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT55)	○	DATA NOT AVAILABLE	4.020	5.000	3.000
(C9NT55)	⬠	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	4.020	5.000	3.000
(V4LT55)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	5.000	3.000
(X4LT55)	◇	IH85 (W.L. TEST) OTS/ET = V4LT55/C9NT55= HI/HU	4.020	5.000	3.000
(Y4LT55)	△	IH85 (W.L. THEORY) OTS/ET = V4LT55/A9NT55= HI/HU	4.020	5.000	3.000

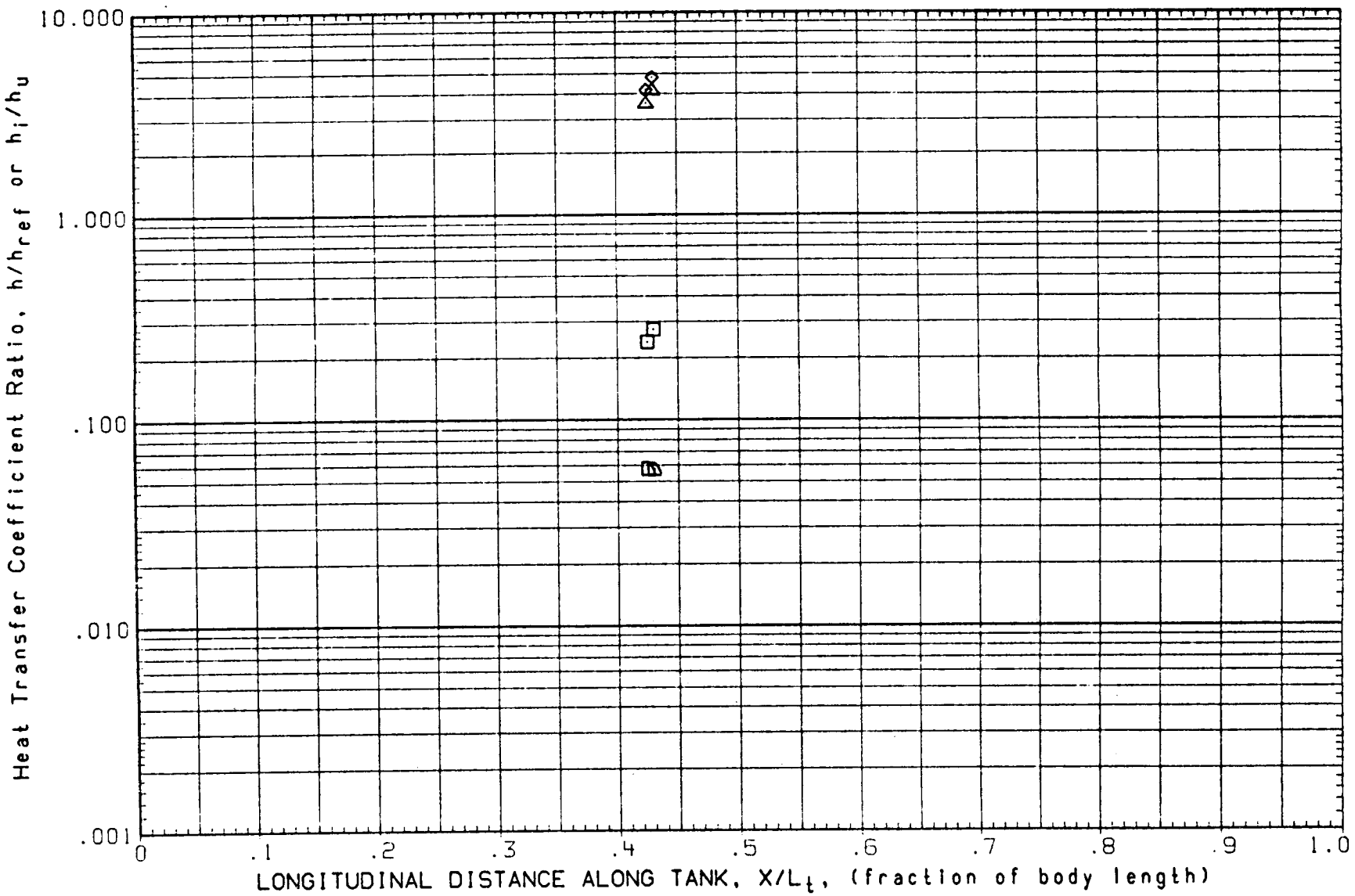

FIG. 4-17 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 3
0 < X/LT < 1.0 (L'NEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 5.625

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT55)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	3.000
(C9NT55)	⌂	DATA NOT AVAILABLE		4.020	5.000	3.000
(V4LT55)	□	DATA NOT AVAILABLE		4.020	5.000	3.000
(X4LT55)	◇	DATA NOT AVAILABLE		4.020	5.000	3.000
(Y4LT55)	△	DATA NOT AVAILABLE		4.020	5.000	3.000

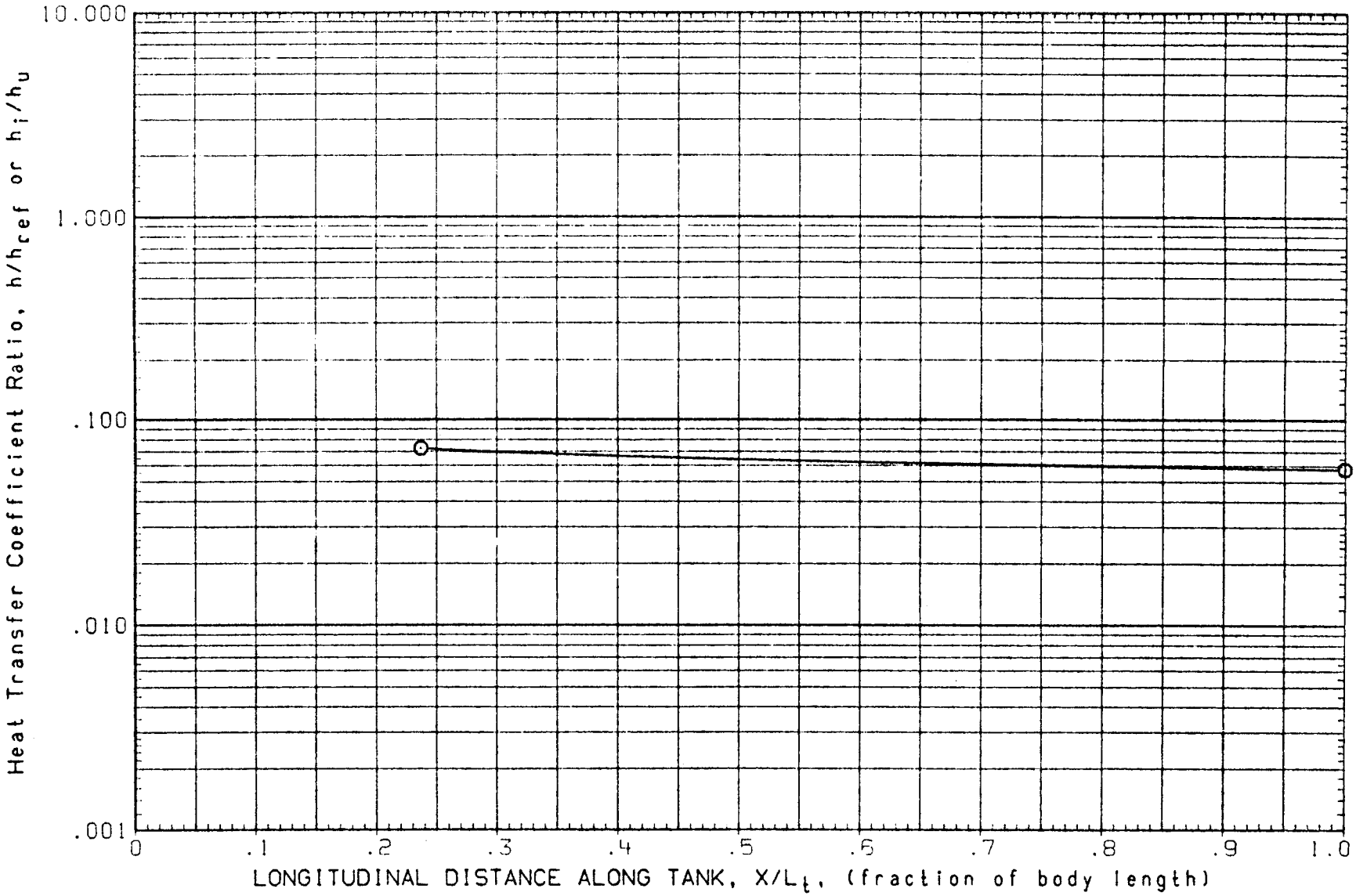

FIG. 4-17 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 5.630

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT55)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	3.000
(C9NT55)	□	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	3.000
(V4LT55)	⊡	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) 5		4.020	5.000	3.000
(X4LT55)	◇	IH85 (W.L. TEST) OTS/ET - V4LT55/C9NT55= HI/HU		4.020	5.000	3.000
(Y4LT55)	△	IH85 (W.L. THEORY) OTS/ET - V4LT55/A9NT55= HI/HU		4.020	5.000	3.000

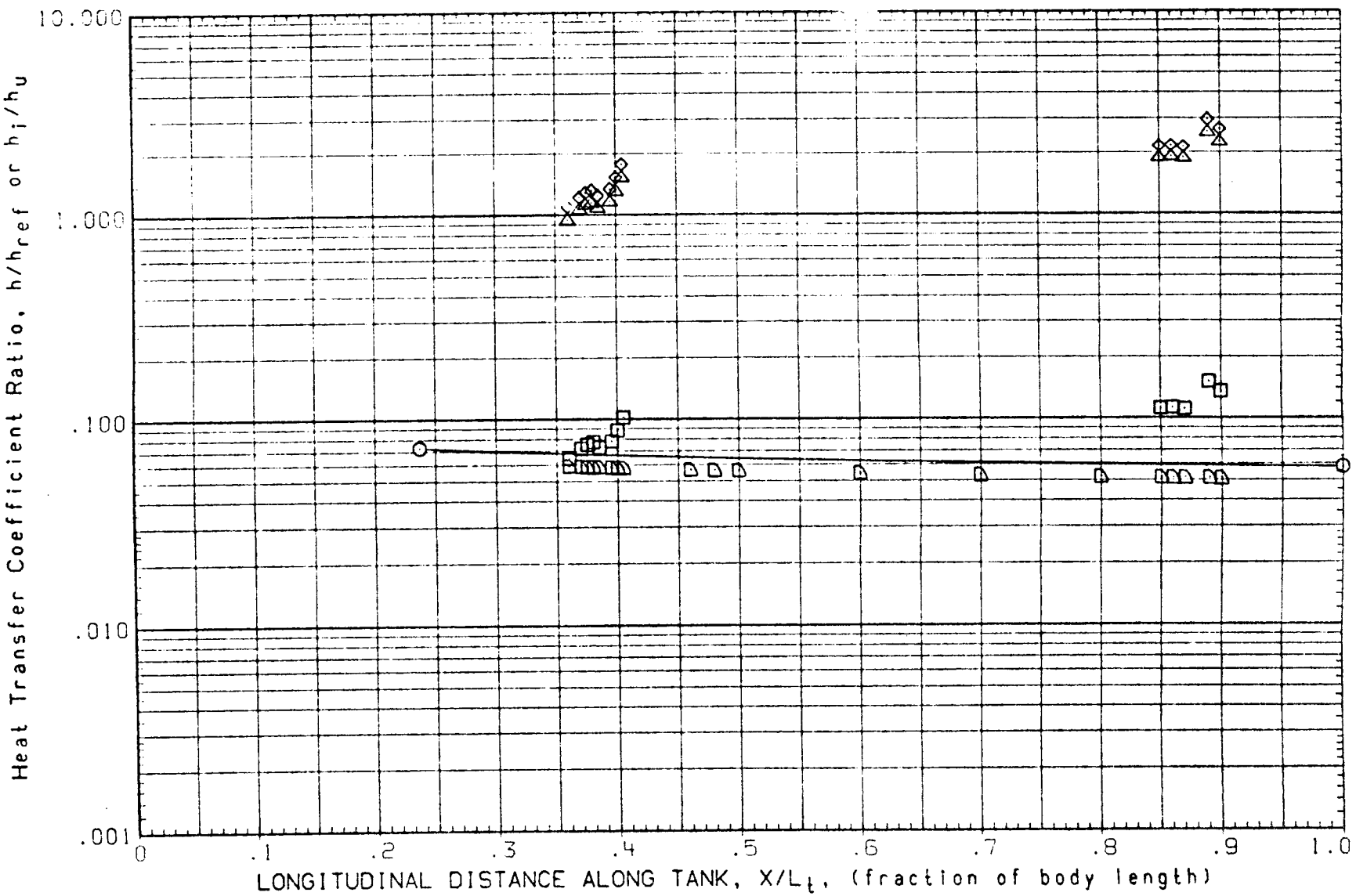

FIG. 4-17 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 11.250

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT55)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	3.000
(C9NT55)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	3.000
(V4LT55)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	3.000
(X4LT55)	◇	IH85 (W.L. TEST) OTS/ET = V4LT55/C9NT55=	HI/HU	4.020	5.000	3.000
(Y4LT55)	△	IH85 (W.L. THEORY) OTS/ET = V4LT55/A9NT55=	HI/HU	4.020	5.000	3.000

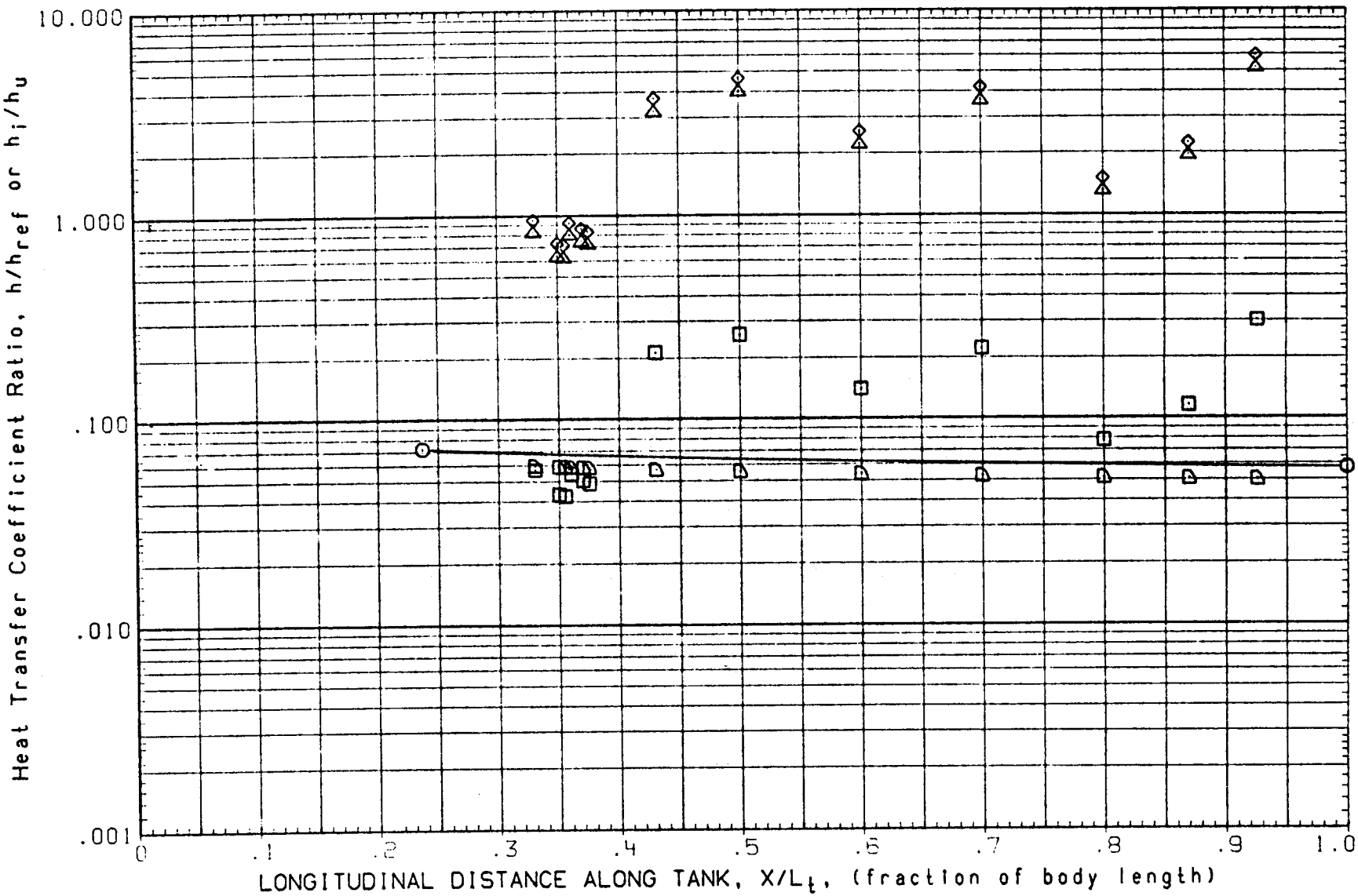

FIG. 4-17 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 17.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT55)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	3.000
(C9NT55)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	3.000
(V4LT55)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	3.000
(X4LT55)	◇	IH85 (W.L. TEST) OTS/ET = V4LT55/C9NT55=	HI/HU	4.020	5.000	3.000
(Y4LT55)	△	IH85 (W.L. THEORY) OTS/ET = V4LT55/A9NT55=	HI/HU	4.020	5.000	3.000

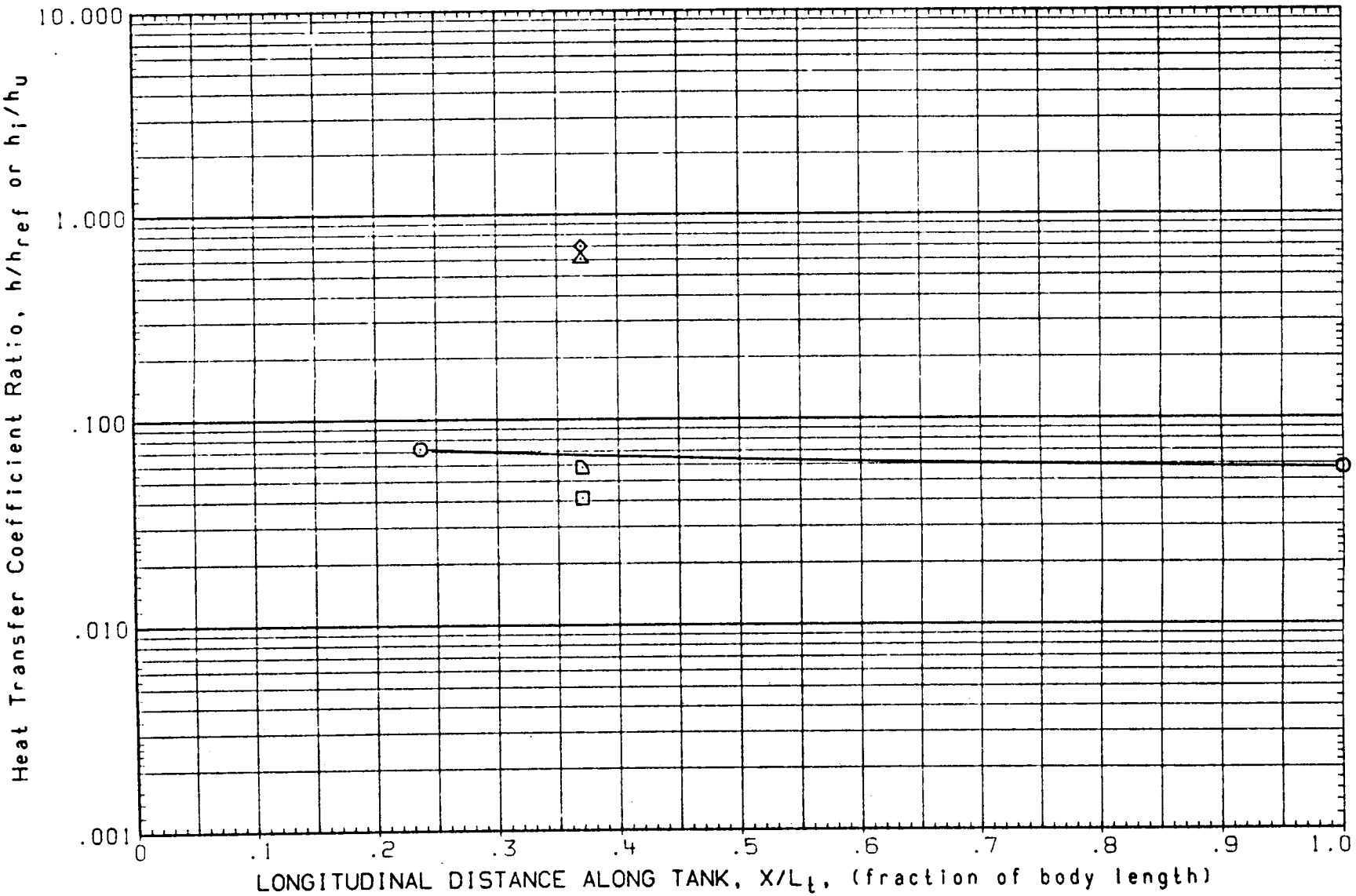

FIG. 4-17 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 20.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT55)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	3.000
(C9NT55)	⊏	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	3.000
(V4LT55)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	3.000
(X4LT55)	◇	IH85 (W.L. TEST) OTS/ET = V4LT55/C9NT55=	HI/HU	4.020	5.000	3.000
(Y4LT55)	△	IH85 (W.L. THEORY) OTS/ET = V4LT55/A9NT55=	HI/HU	4.020	5.000	3.000

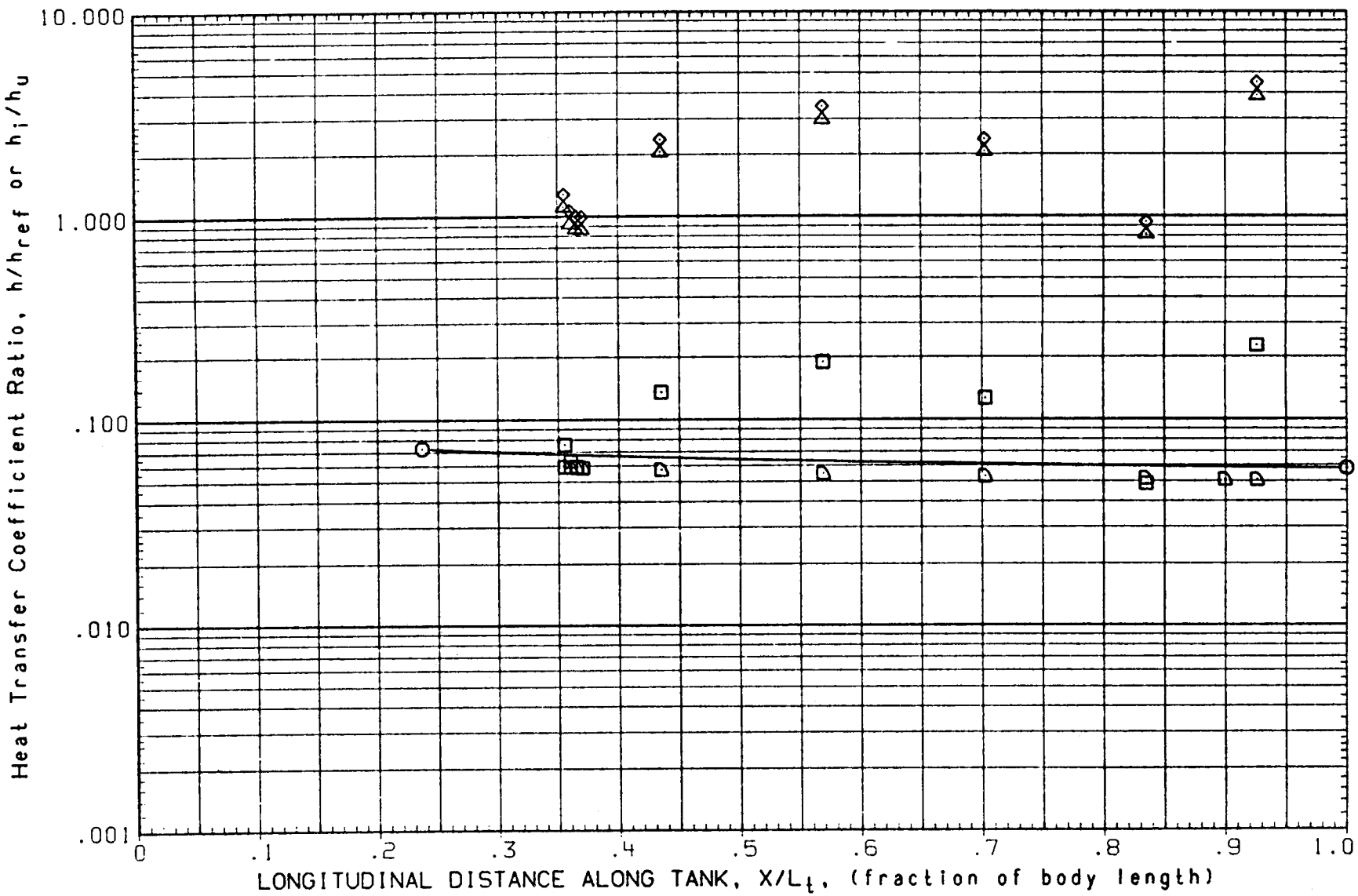

FIG. 4-17 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 23.070

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT55)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	3.000
(C9NT55)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	3.000
(V4LT55)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	3.000
(X4LT55)	◇	IH85 (W.L. TEST) OTS/ET = V4LT55/C9NT55=	HI/HU	4.020	5.000	3.000
(Y4LT55)	△	IH85 (W.L. THEORY) OTS/ET = V4LT55/A9NT55=	HI/HU	4.020	5.000	3.000

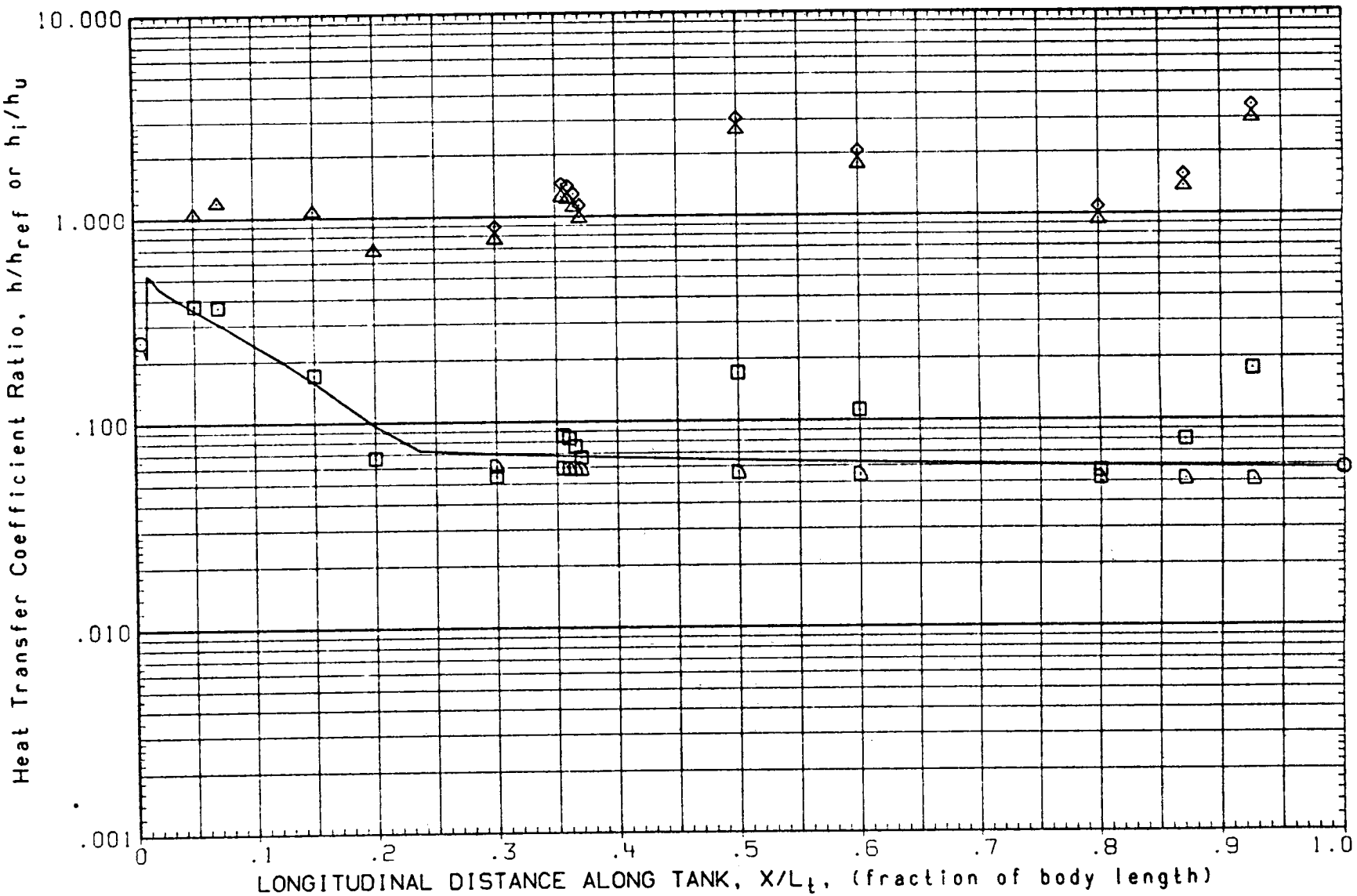

FIG. 4-17 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 29.800

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT55)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	3.000
(C9NT55)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	3.000
(V4LT55)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	3.000
(X4LT55)	◇	IH85 (W.L. TEST) OTS/ET = V4LT55/C9NT55=	HI/HU	4.020	5.000	3.000
(Y4LT55)	△	IH85 (W.L. THEORY) OTS/ET = V4LT55/A9NT55=	HI/HU	4.020	5.000	3.000

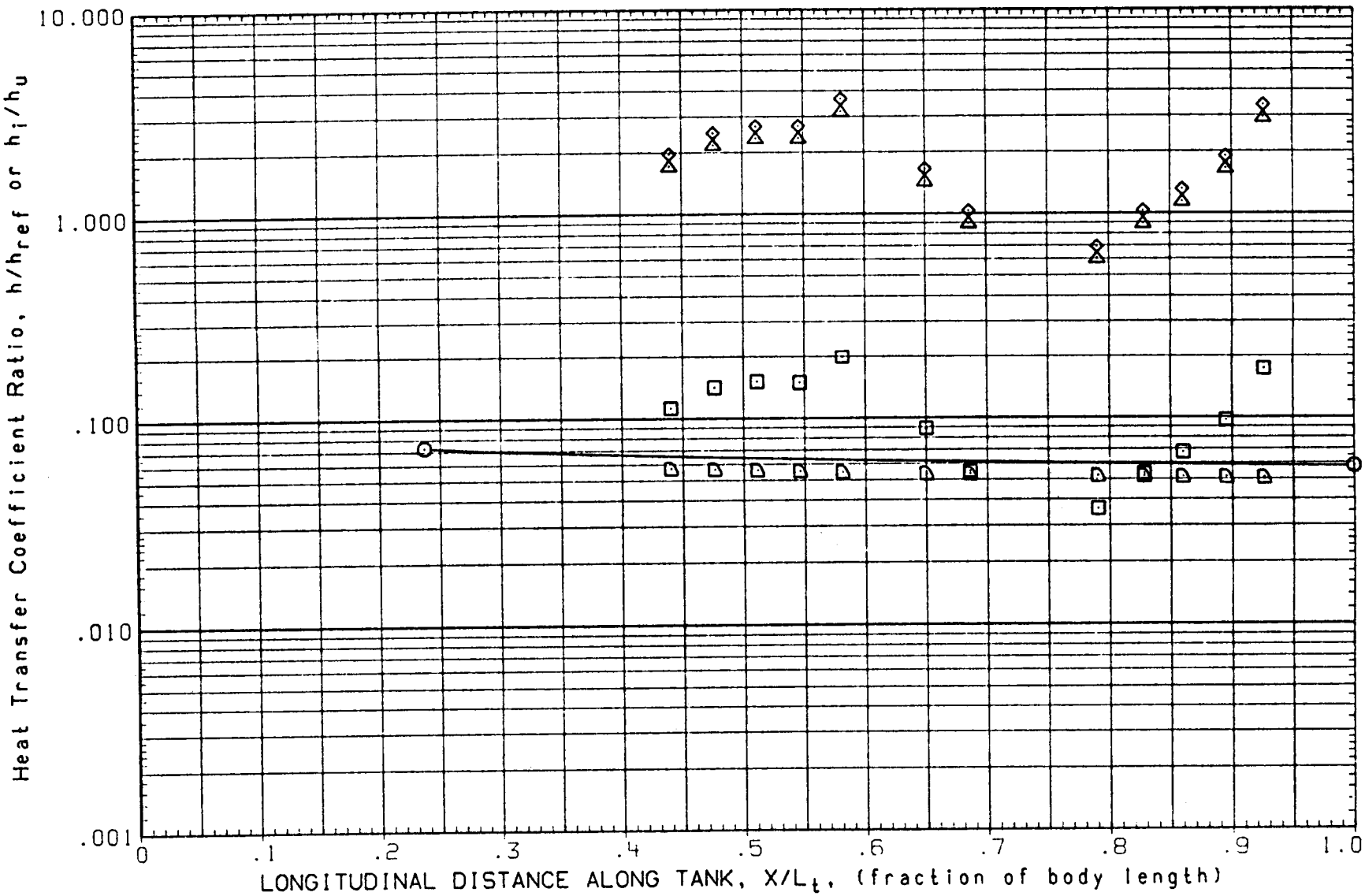

FIG. 4-17 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 31.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT55)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	3.000
(C9NT55)	D	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	3.000
(V4LT55)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	3.000
(X4LT55)	◇	IH85 (W.L. TEST) OTS/ET = V4LT55/C9NT55=	HI/HU	4.020	5.000	3.000
(Y4LT55)	△	IH85 (W.L. THEORY) OTS/ET = V4LT55/A9NT55=	HI/HU	4.020	5.000	3.000

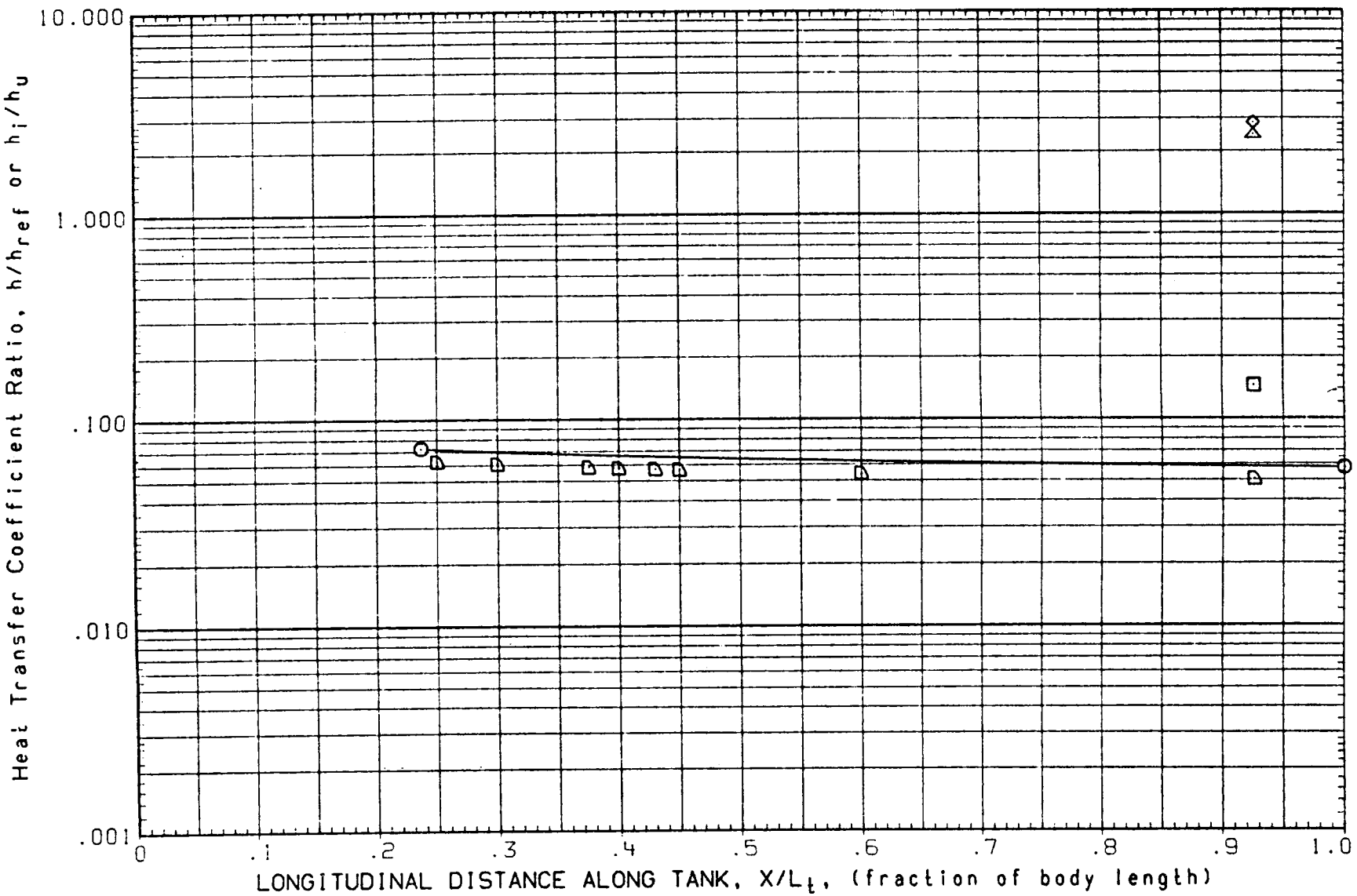

FIG. 4-17 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 33.750

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT55)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	3.000
(C9NT55)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	3.000
(V4LT55)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	3.000
(X4LT55)	◇	IH85 (W.L. TEST) OTS/ET = V4LT55/C9NT55=	HI/HU	4.020	5.000	3.000
(Y4LT55)	△	IH85 (W.L. THEORY) OTS/ET = V4LT55/A9NT55=	HI/HU	4.020	5.000	3.000

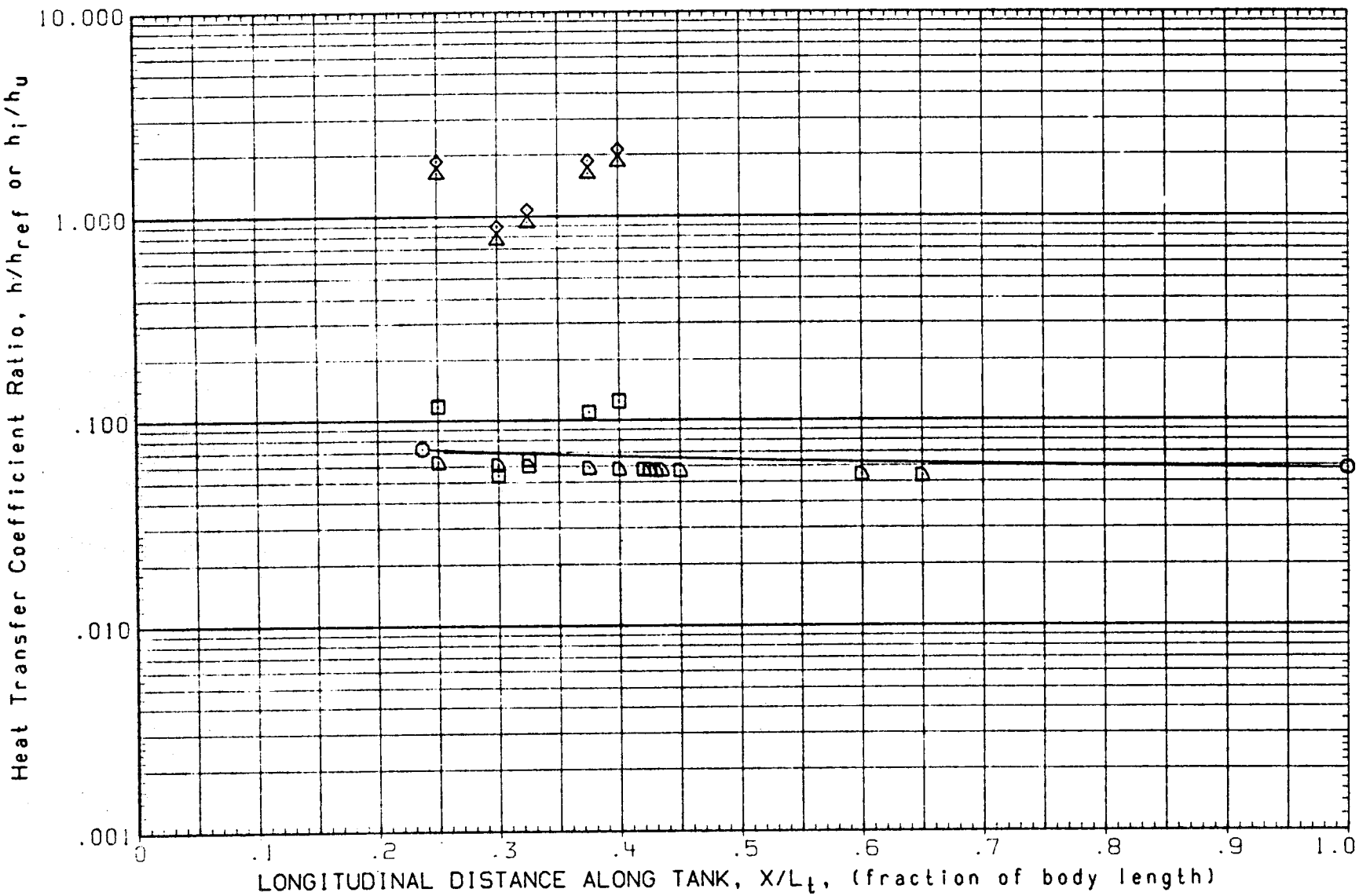

FIG. 4-17 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 36.320

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT55)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	3.000
(C9NT55)	▽	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	3.000
(V4LT55)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) 5		4.020	5.000	3.000
(X4LT55)	◇	IH85 (W.L. TEST) OTS/ET = V4LT55/C9NT55=	HI/HU	4.020	5.000	3.000
(Y4LT55)	△	IH85 (W.L. THEORY) OTS/ET = V4LT55/A9NT55=	HI/HU	4.020	5.000	3.000

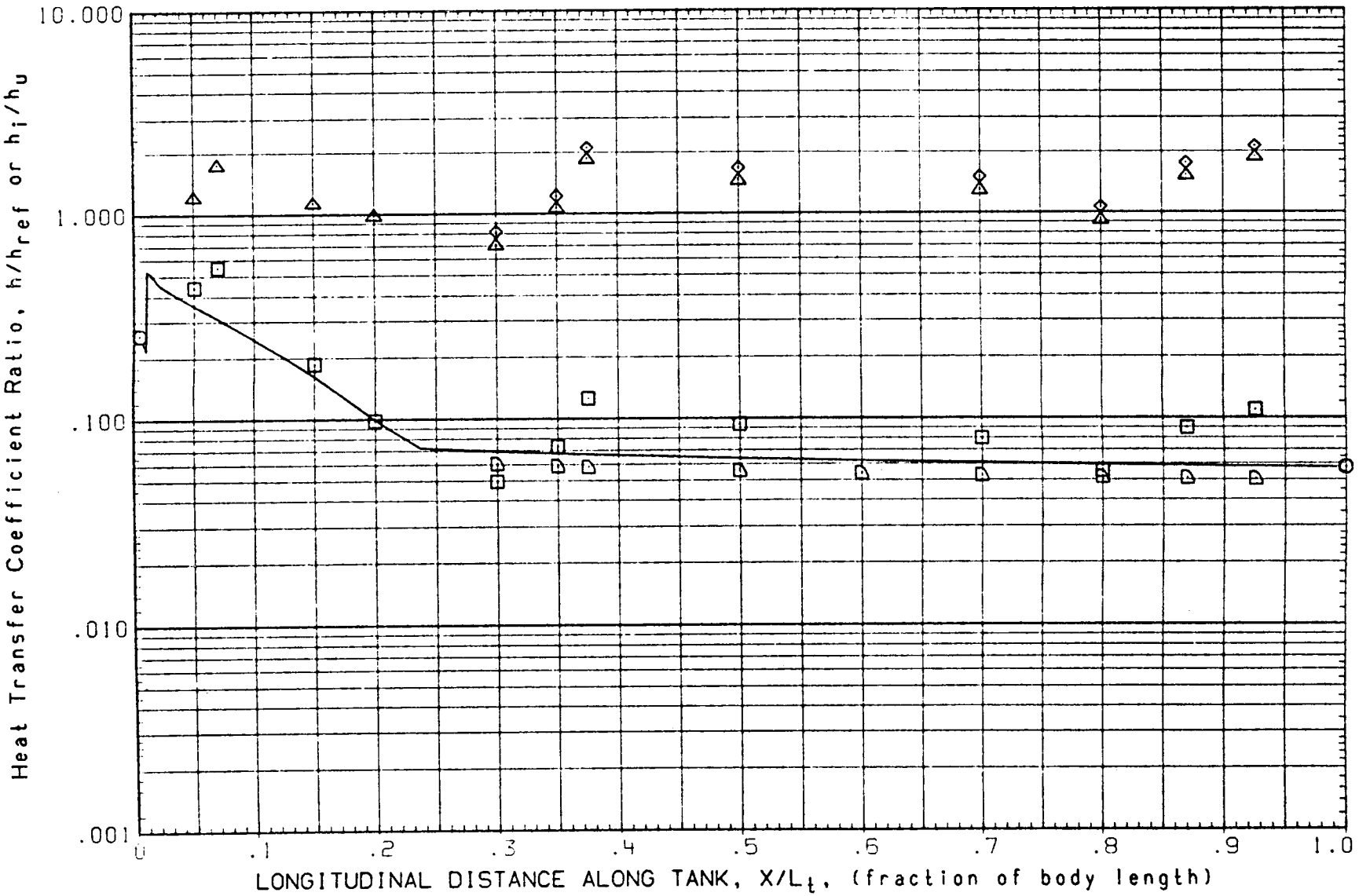

FIG. 4-17 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 37.700

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT55)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	3.000
(C9NT55)	◗	DATA NOT AVAILABLE		4.020	5.000	3.000
(V4LT55)	□	DATA NOT AVAILABLE		4.020	5.000	3.000
(X4LT55)	◇	DATA NOT AVAILABLE		4.020	5.000	3.000
(Y4LT55)	△	DATA NOT AVAILABLE		4.020	5.000	3.000

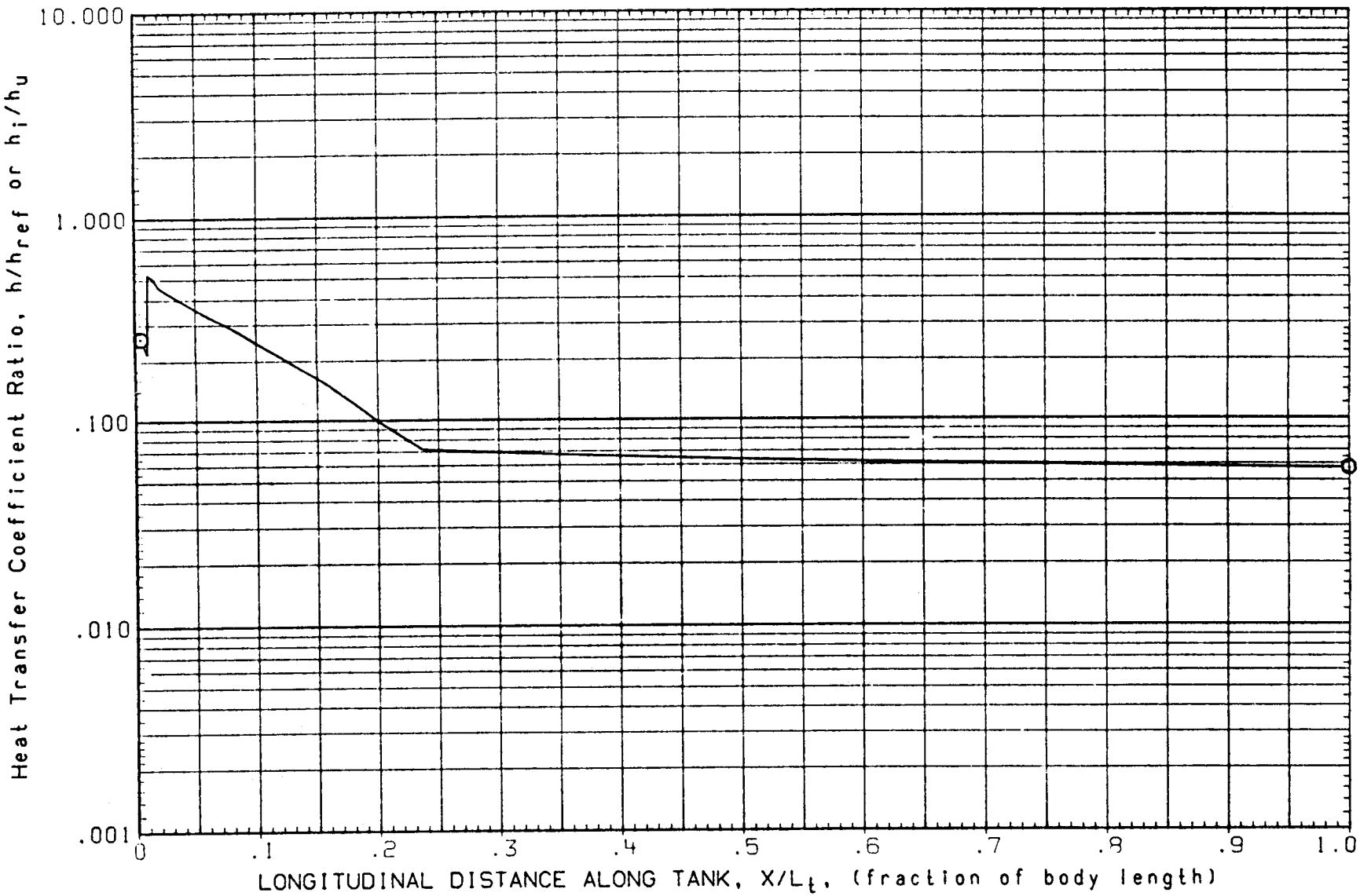

FIG. 4-17 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 39.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT55)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	3.000
(C9NT55)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	3.000
(V4LT55)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	3.000
(X4LT55)	◇	IH85 (W.L. TEST) OTS/ET = V4LT55/C9NT55=	HI/HU	4.020	5.000	3.000
(Y4LT55)	△	IH85 (W.L. THEORY) OTS/ET = V4LT55/A9NT55=	HI/HU	4.020	5.000	3.000

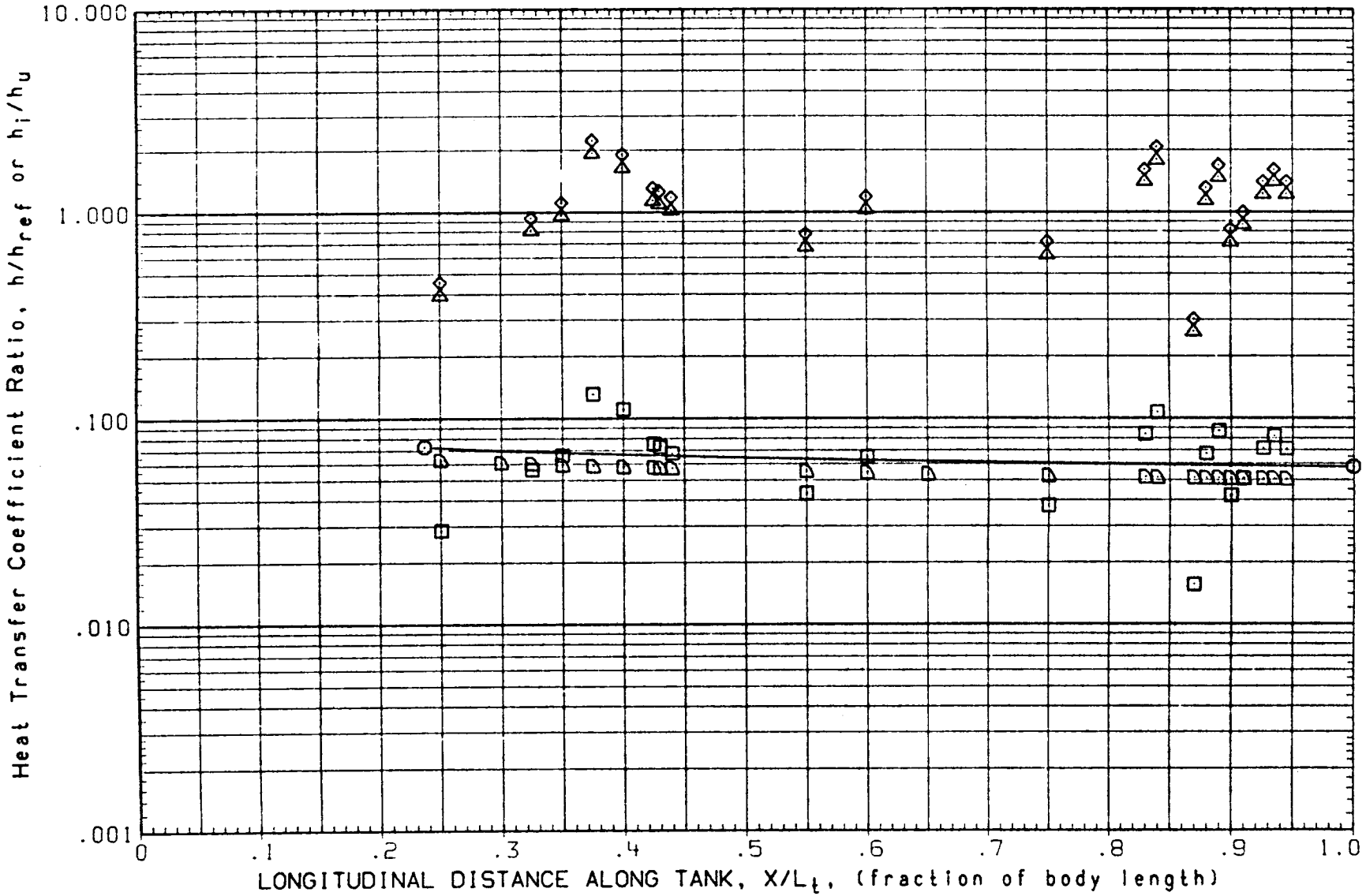

FIG. 4-17 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 45.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT55)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	4.020	5.000	3.000
(C9NT55)	⬠	DATA NOT AVAILABLE	4.020	5.000	3.000
(V4LT55)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	5.000	3.000
(X4LT55)	◇	DATA NOT AVAILABLE	4.020	5.000	3.000
(Y4LT55)	△	IH85 (W.L. THEORY) OTS/ET = V4LT55/A9NT55= HI/HU	4.020	5.000	3.000

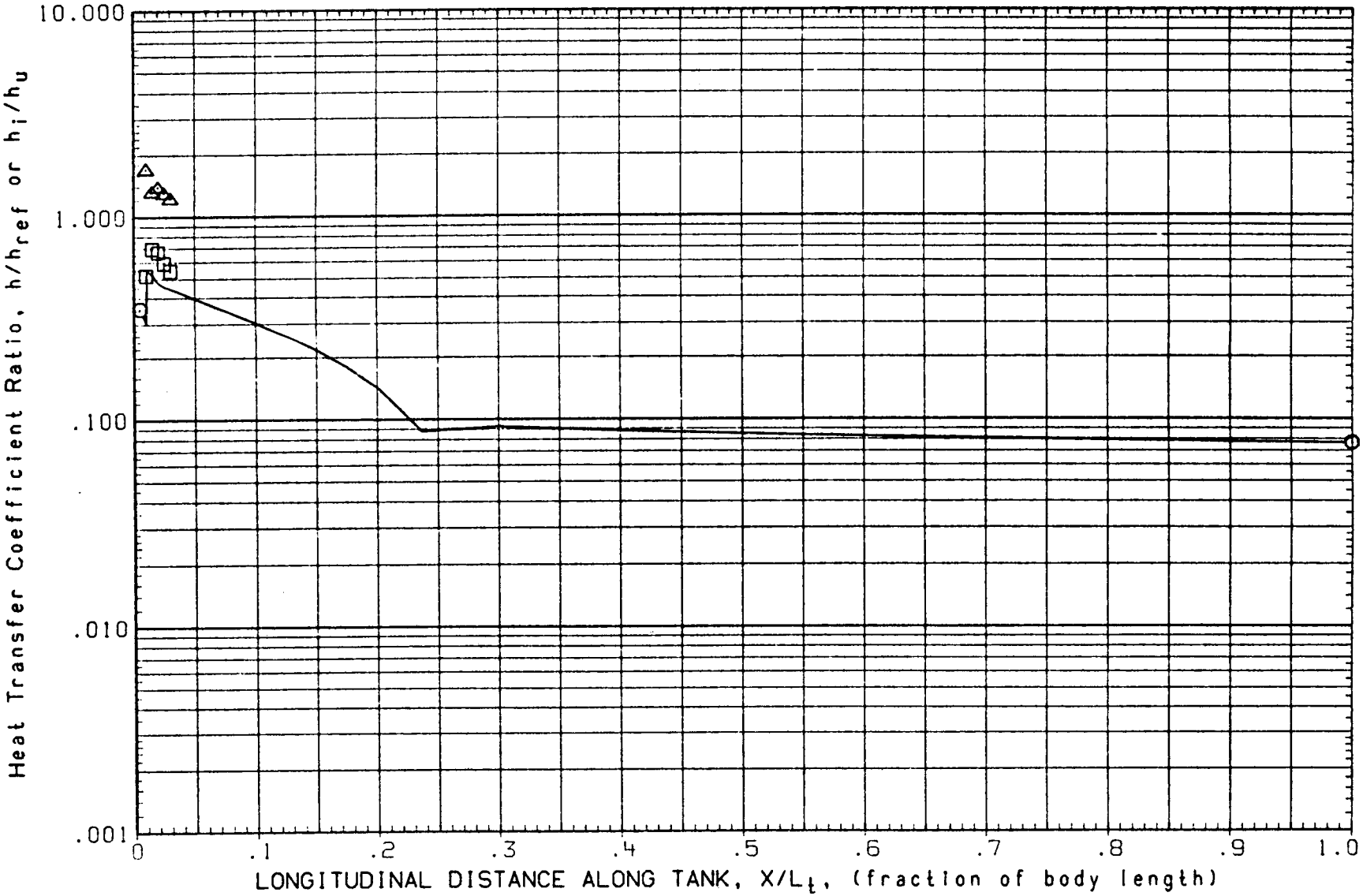

FIG. 4-17 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE,

MACH = 4.020 ALPHA = 5.000 PHI = 180.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT55)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	3.000
(C9NT55)	⌂	DATA NOT AVAILABLE		4.020	5.000	3.000
(Y4LT55)	□	DATA NOT AVAILABLE		4.020	5.000	3.000
(X4LT55)	◇	DATA NOT AVAILABLE		4.020	5.000	3.000
(Y4LT55)	△	DATA NOT AVAILABLE		4.020	5.000	3.000

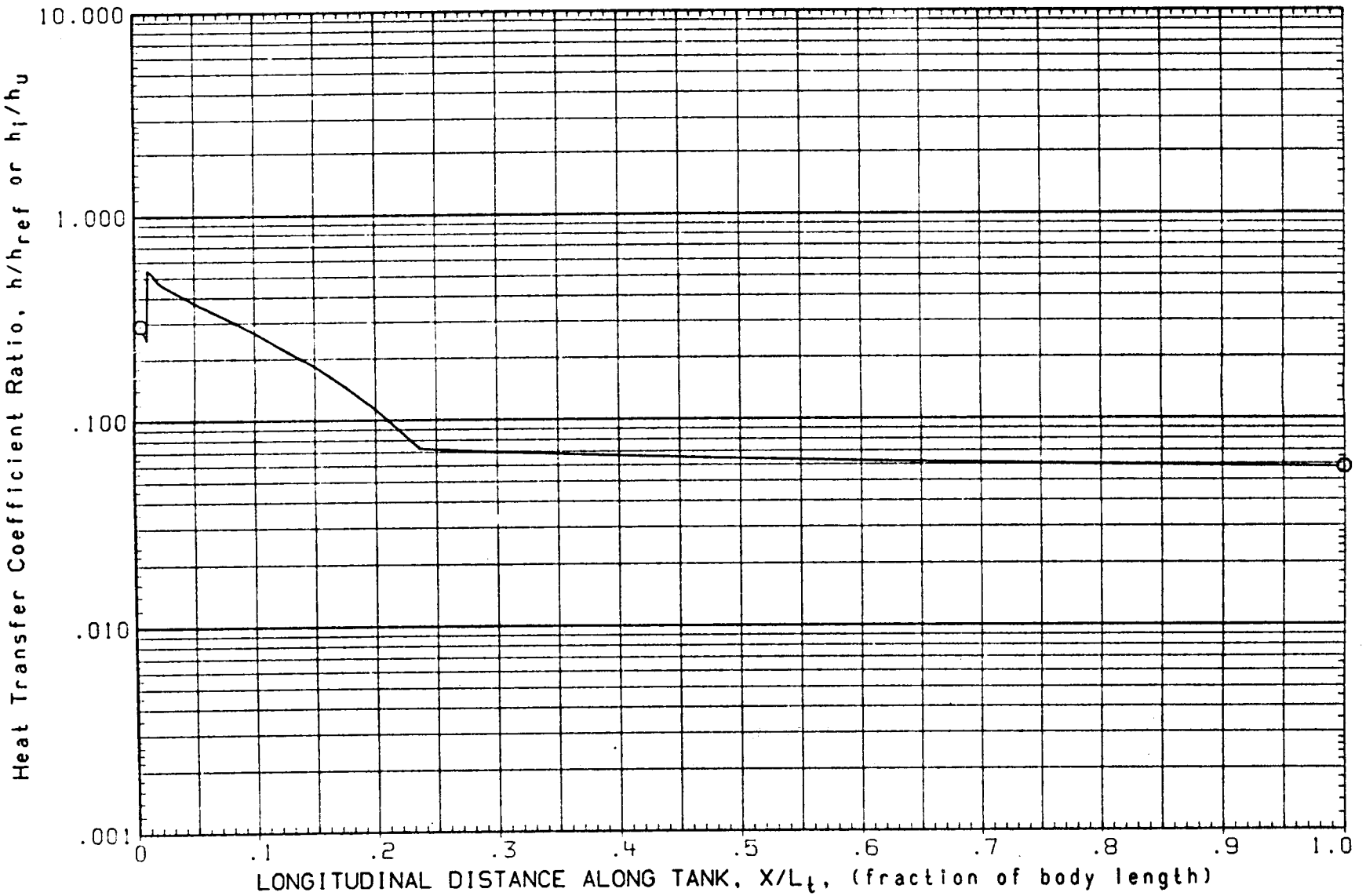

FIG. 4-17 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 235.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT55)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	3.000
(C9NT55)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	3.000
(V4LT55)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	3.000
(X4LT55)	◇	IH85 (W.L. TEST) OTS/ET = V4LT55/C9NT55=	HI/HU	4.020	5.000	3.000
(Y4LT55)	△	IH85 (W.L. THEORY) OTS/ET = V4LT55/A9NT55=	HI/HU	4.020	5.000	3.000

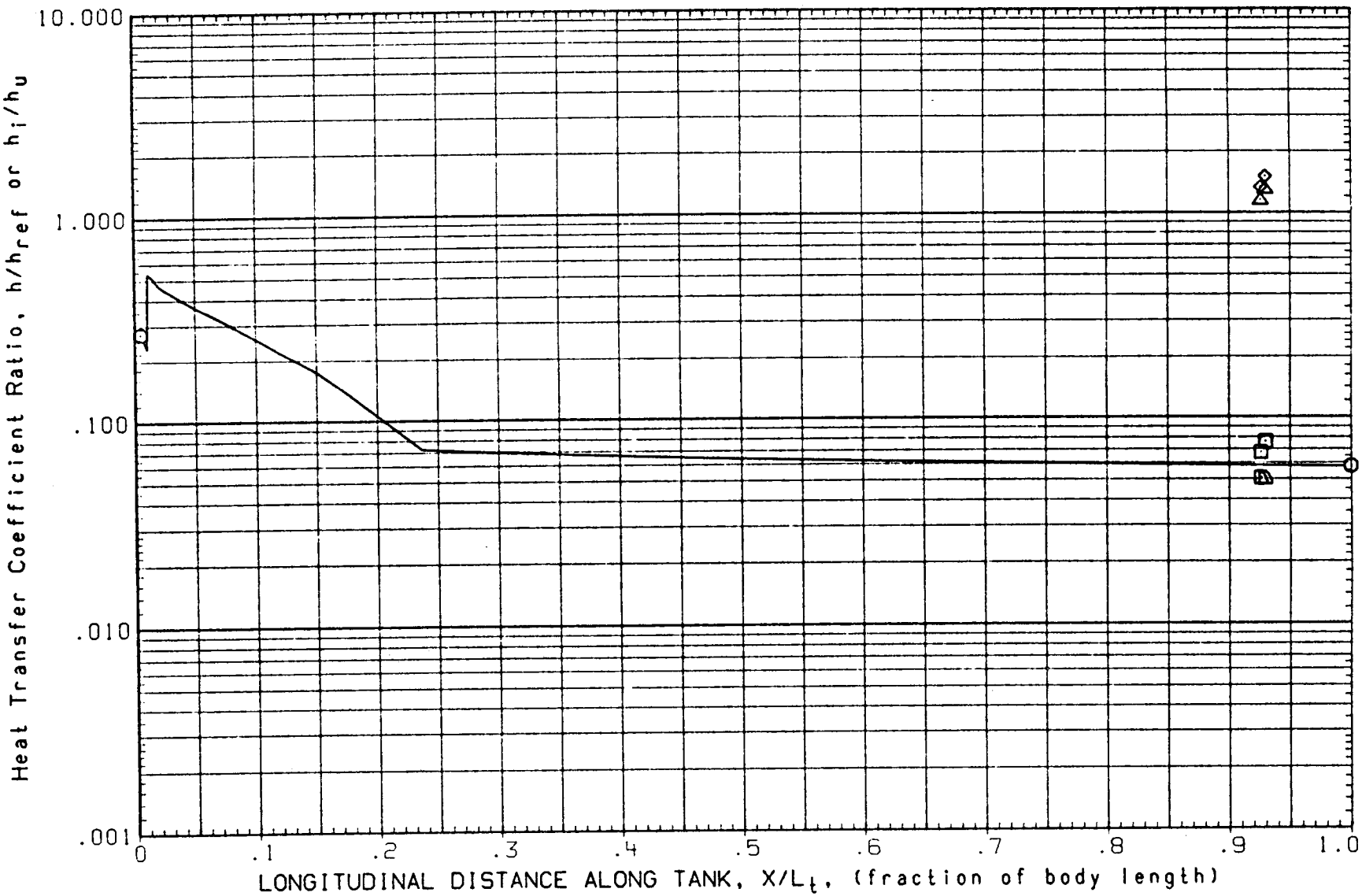

FIG. 4-17 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 247.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT55)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	3.000
(C9NT55)	◗	DATA NOT AVAILABLE		4.020	5.000	3.000
(V4LT55)	□	DATA NOT AVAILABLE		4.020	5.000	3.000
(X4LT55)	◇	DATA NOT AVAILABLE		4.020	5.000	3.000
(Y4LT55)	△	DATA NOT AVAILABLE		4.020	5.000	3.000

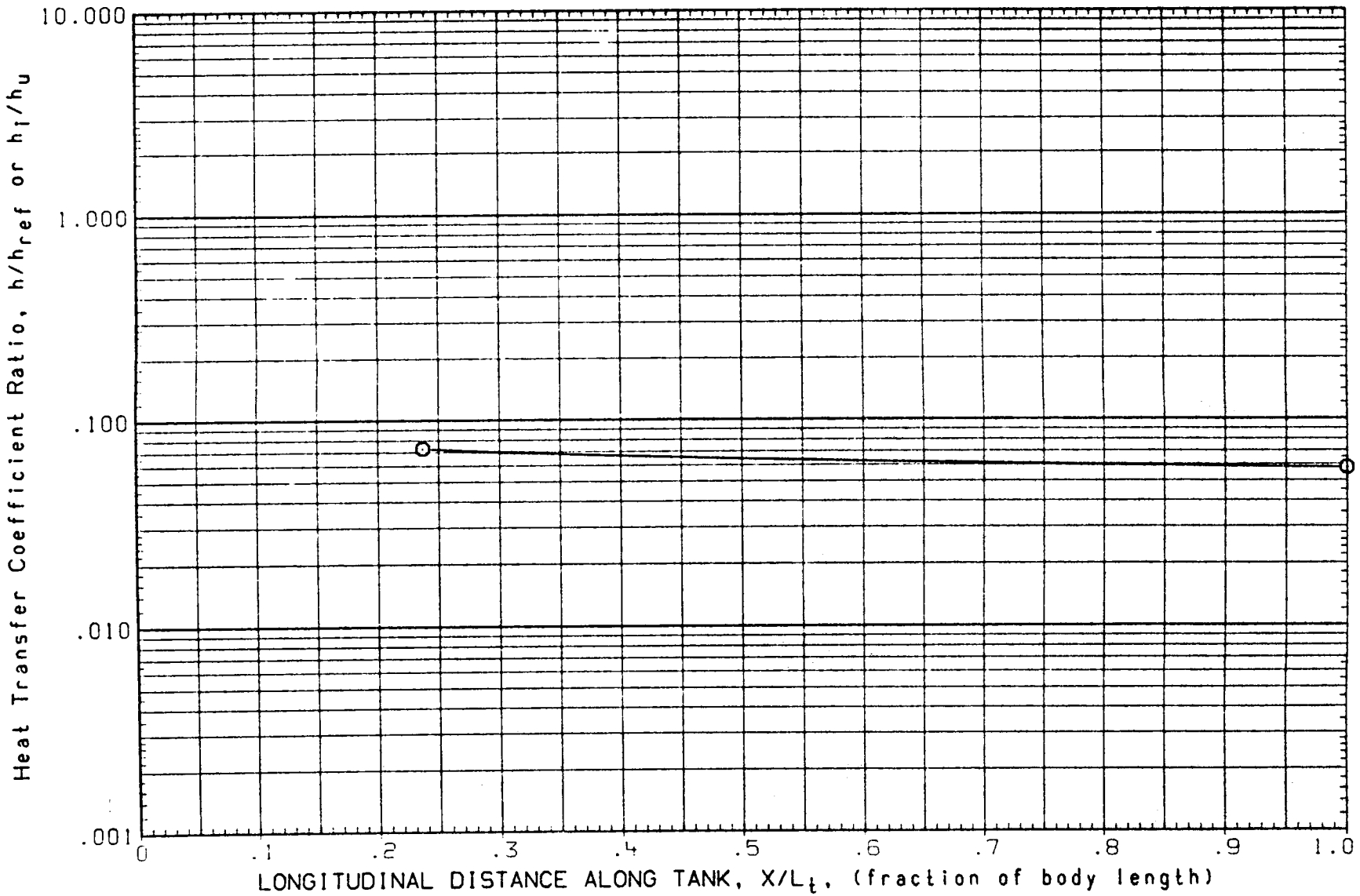

FIG. 4-17 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 247.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT55)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	4.020	5.000	3.000
(C9NT55)	⬠	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	4.020	5.000	3.000
(V4LT55)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	5.000	3.000
(X4LT55)	◇	IH85 (W.L. TEST) OTS/ET = V4LT55/C9NT55= HI/HU	4.020	5.000	3.000
(Y4LT55)	△	IH85 (W.L. THEORY) OTS/ET = V4LT55/A9NT55= HI/HU	4.020	5.000	3.000

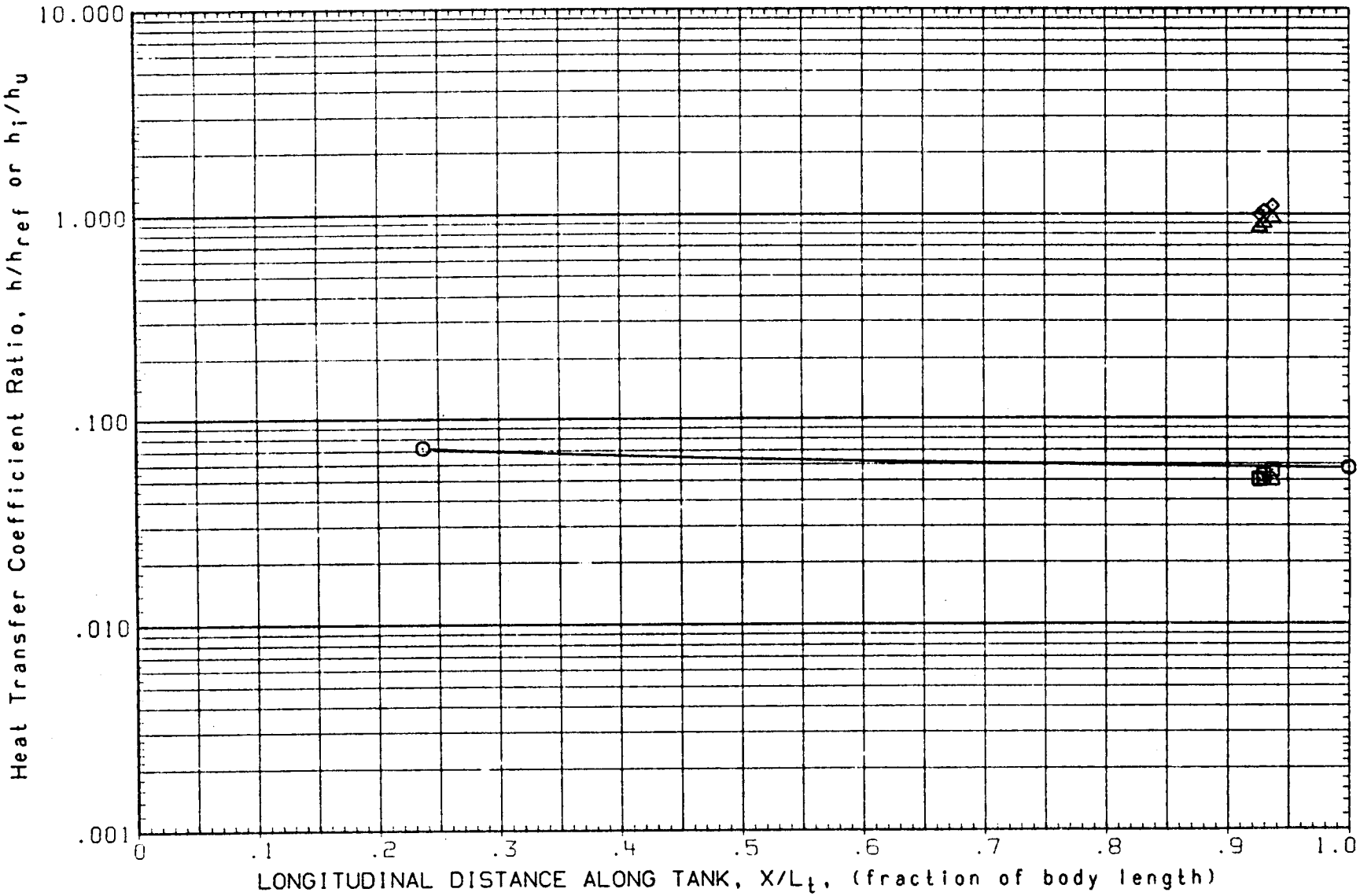

FIG. 4-17 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 250.570

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT55)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	3.000
(C9NT55)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	3.000
(V4LT55)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	3.000
(X4LT55)	◇	IH85 (W.L. TEST) OTS/ET = V4LT55/C9NT55= HI/HU		4.020	5.000	3.000
(Y4LT55)	△	IH85 (W.L. THEORY) OTS/ET = V4LT55/A9NT55= HI/HU		4.020	5.000	3.000

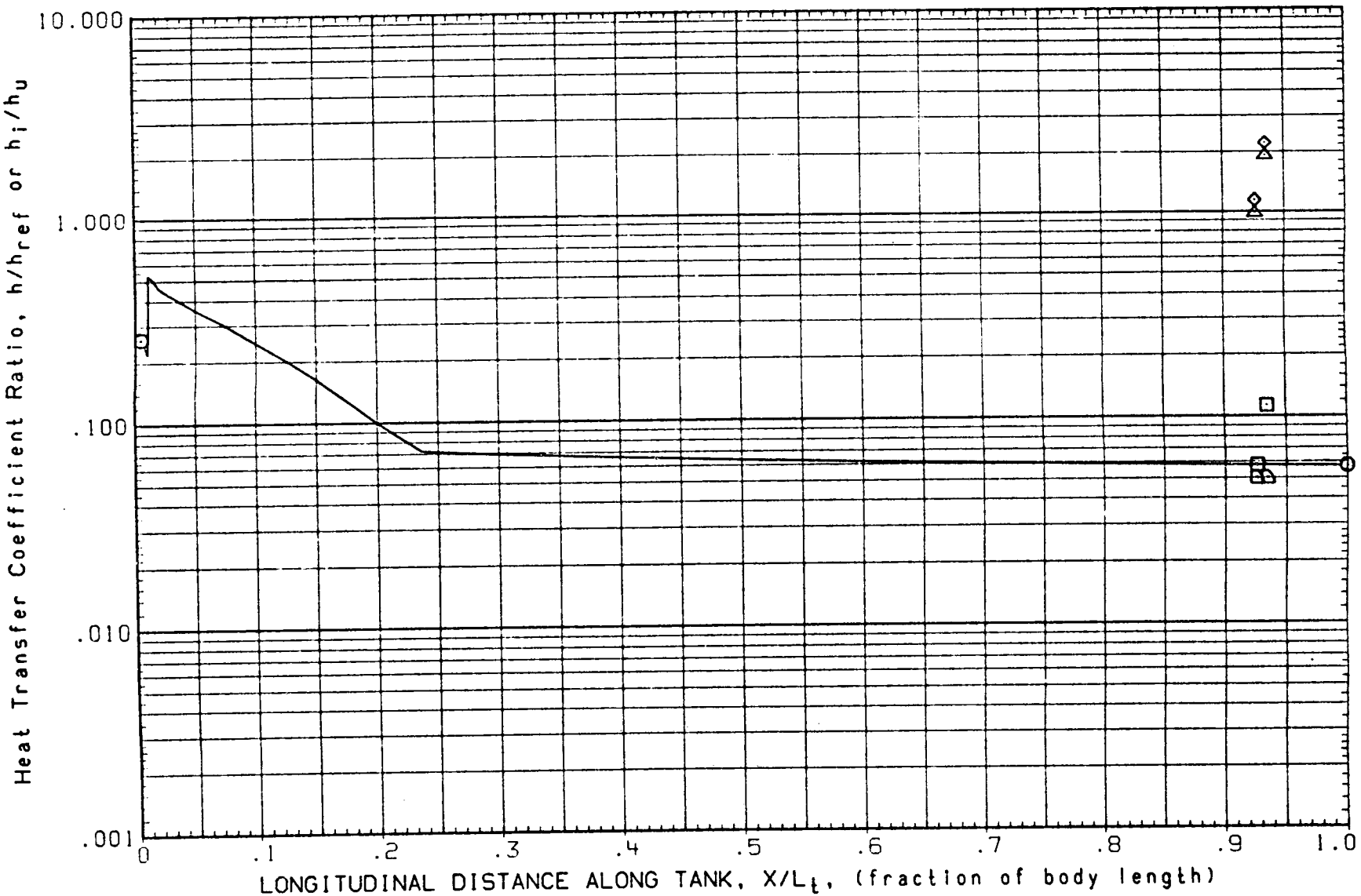

FIG. 4-17 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 258.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT55)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	3.000
(C9NT55)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	3.000
(V4LT55)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	3.000
(X4LT55)	◇	IH85 (W.L. TEST) OTS/ET = V4LT55/C9NT55=	HI/HU	4.020	5.000	3.000
(Y4LT55)	△	IH85 (W.L. THEORY) OTS/ET = V4LT55/A9NT55=	HI/HU	4.020	5.000	3.000

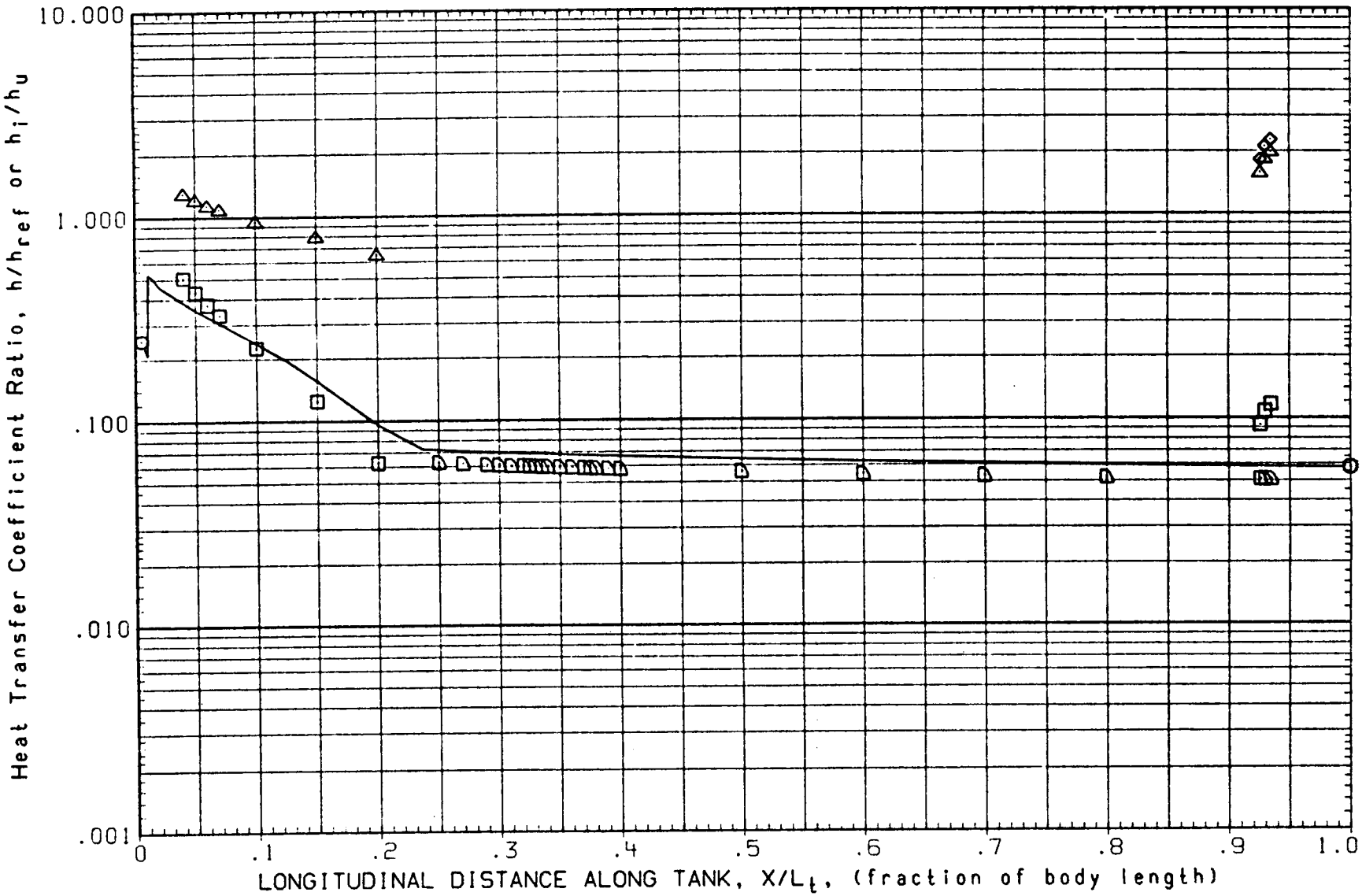

FIG. 4-17 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 270.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT55)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	3.000
(C9NT55)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	3.000
(V4LT55)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	3.000
(X4LT55)	◇	IH85 (W.L. TEST) OTS/ET = V4LT55/C9NT55=	HI/HU	4.020	5.000	3.000
(Y4LT55)	△	IH85 (W.L. THEORY) OTS/ET = V4LT55/A9NT55=	HI/HU	4.020	5.000	3.000

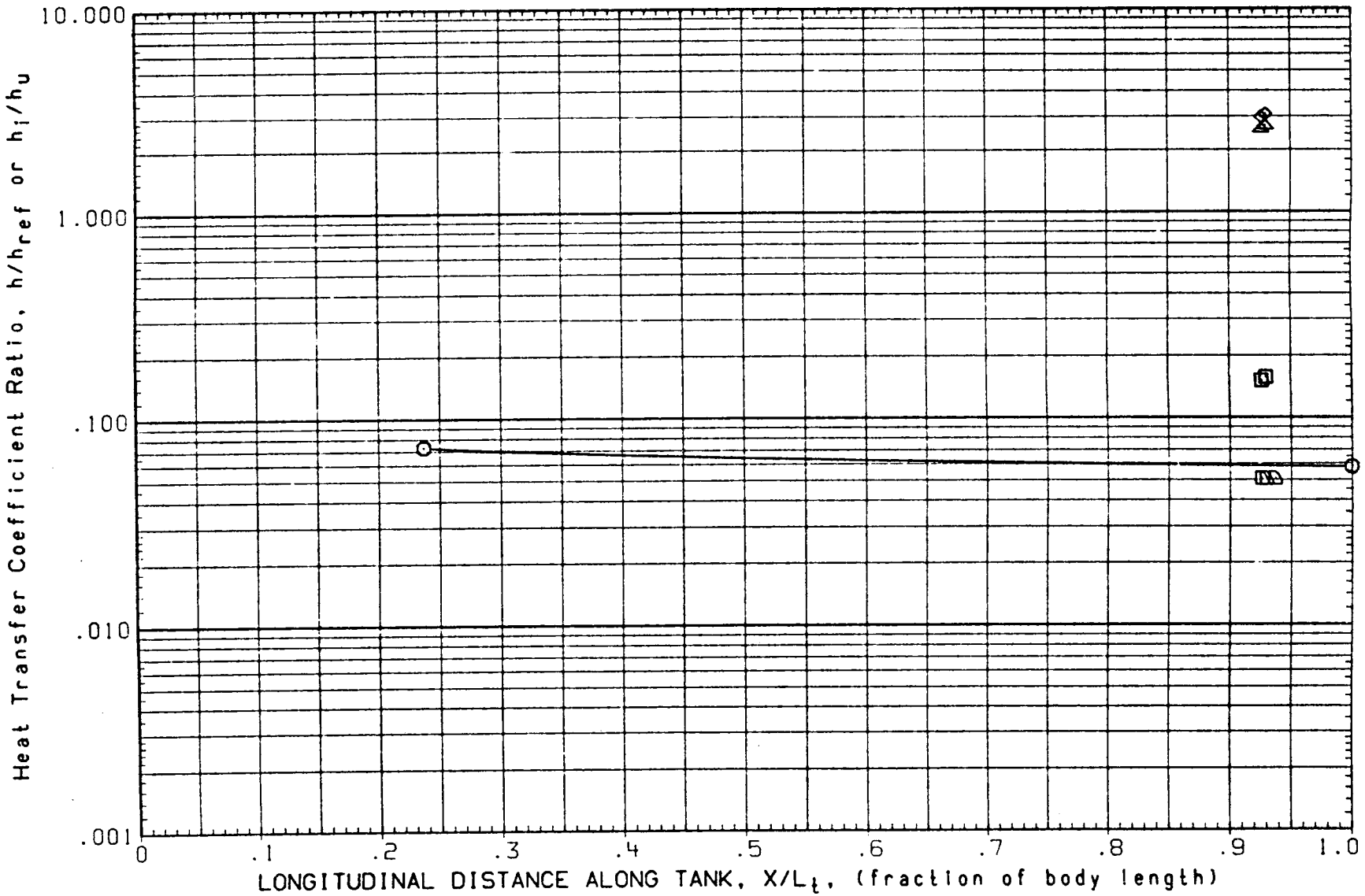

FIG. 4-17 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 289.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT55)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	3.000
(C9NT55)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	3.000
(V4LT55)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	3.000
(X4LT55)	◇	IH85 (W.L. TEST) OTS/ET = V4LT55/C9NT55=	HI/HU	4.020	5.000	3.000
(Y4LT55)	△	IH85 (W.L. THEORY) OTS/ET = V4LT55/A9NT55=	HI/HU	4.020	5.000	3.000

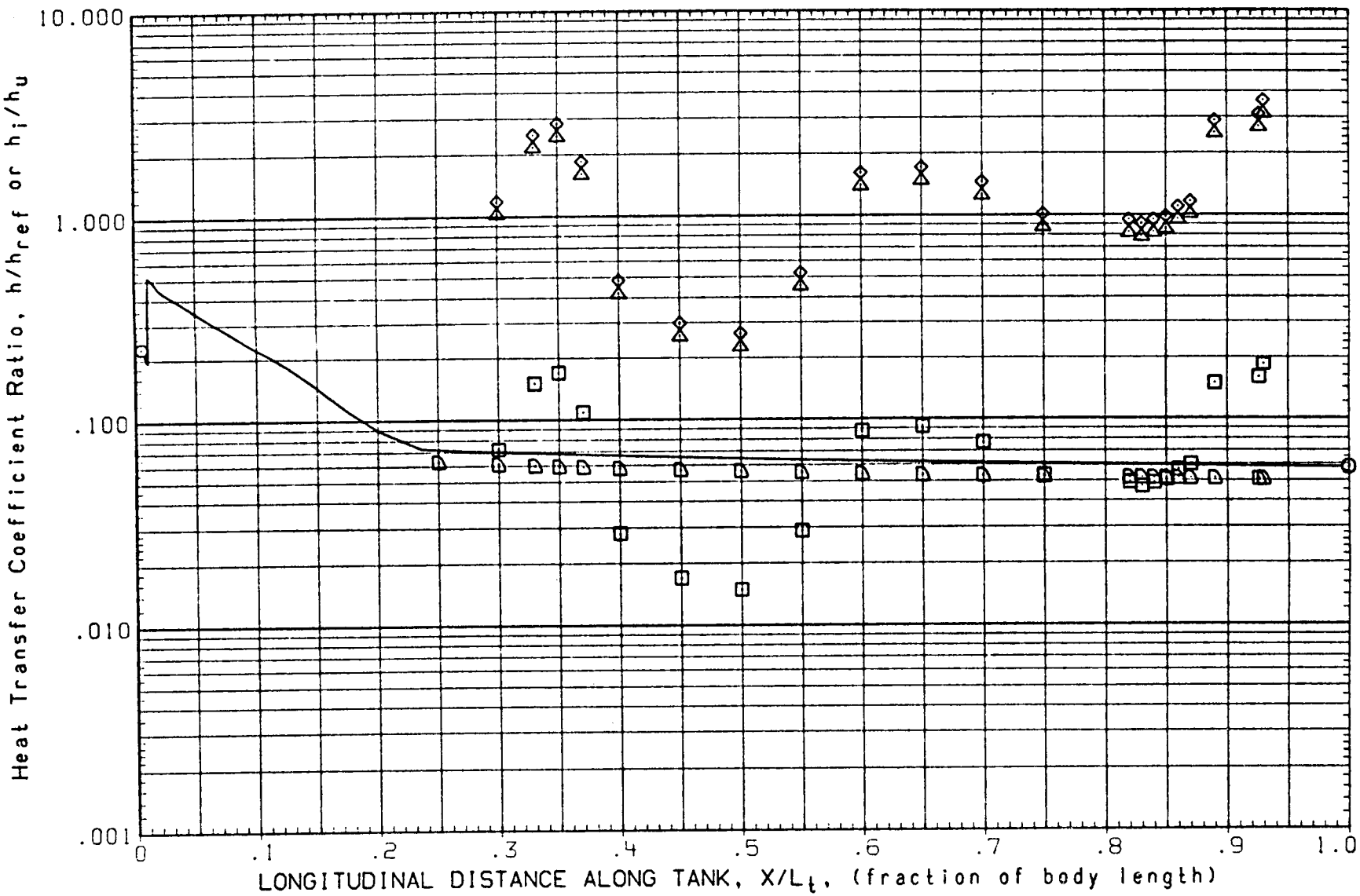

FIG. 4-17 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 292.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT55)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	3.000
(C9NT55)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	3.000
(V4LT55)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5 000	3.000
(X4LT55)	◇	IH85 (W.L. TEST) OTS/ET = V4LT55/C9NT55=	HI/HU	4.020	5.000	3.000
(Y4LT55)	△	IH85 (W.L. THEORY) OTS/ET = V4LT55/A9NT55=	HI/HU	4.020	5.000	3.000

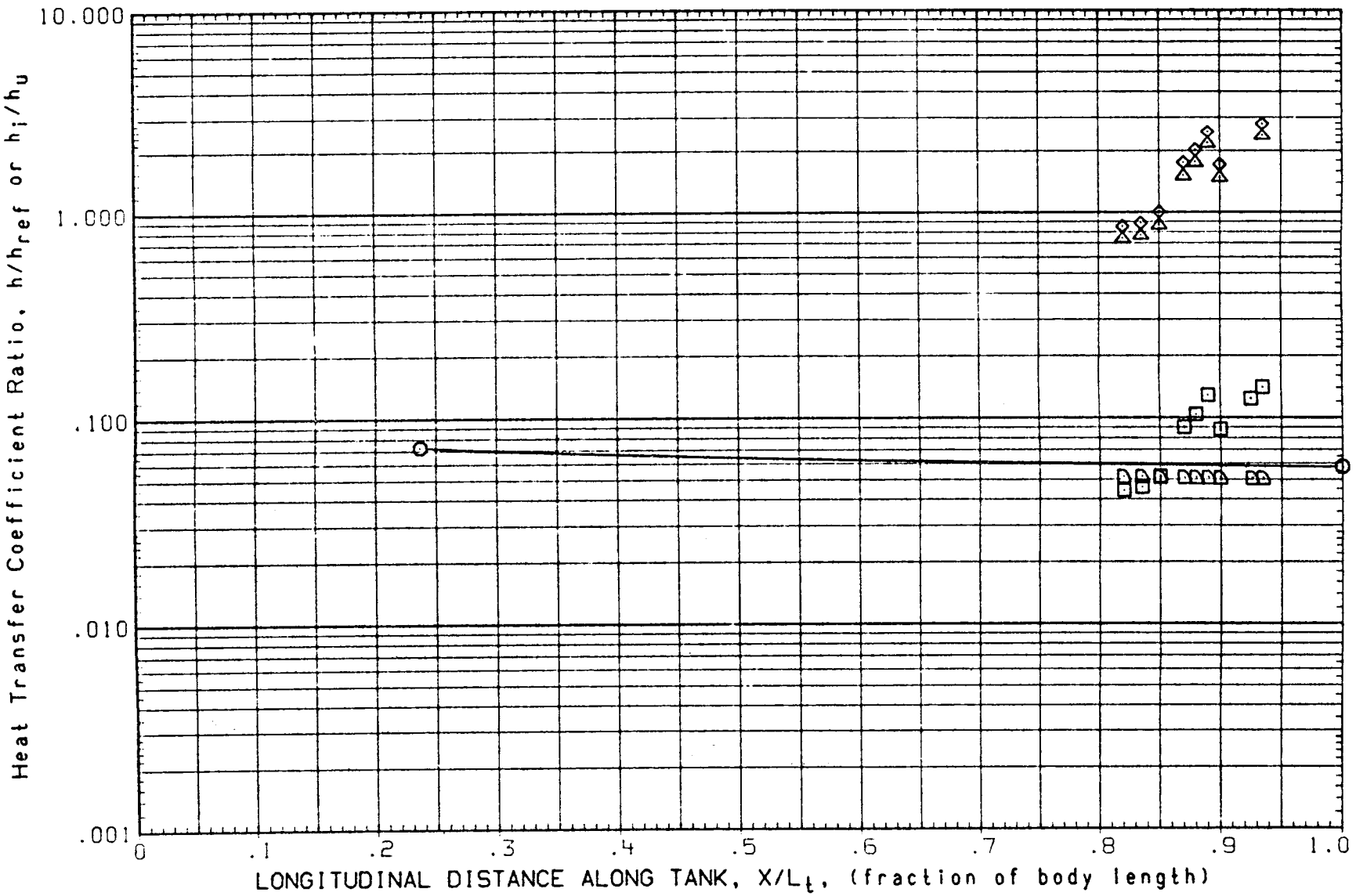

FIG. 4-17 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 301.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT55)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	3.000
(C9NT55)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	3.000
(V4LT55)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	3.000
(X4LT55)	◇	IH85 (W.L. TEST) OTS/ET = V4LT55/C9NT55= HI/HU		4.020	5.000	3.000
(Y4LT55)	△	IH85 (W.L. THEORY) OTS/ET = V4LT55/A9NT55= HI/HU		4.020	5.000	3.000

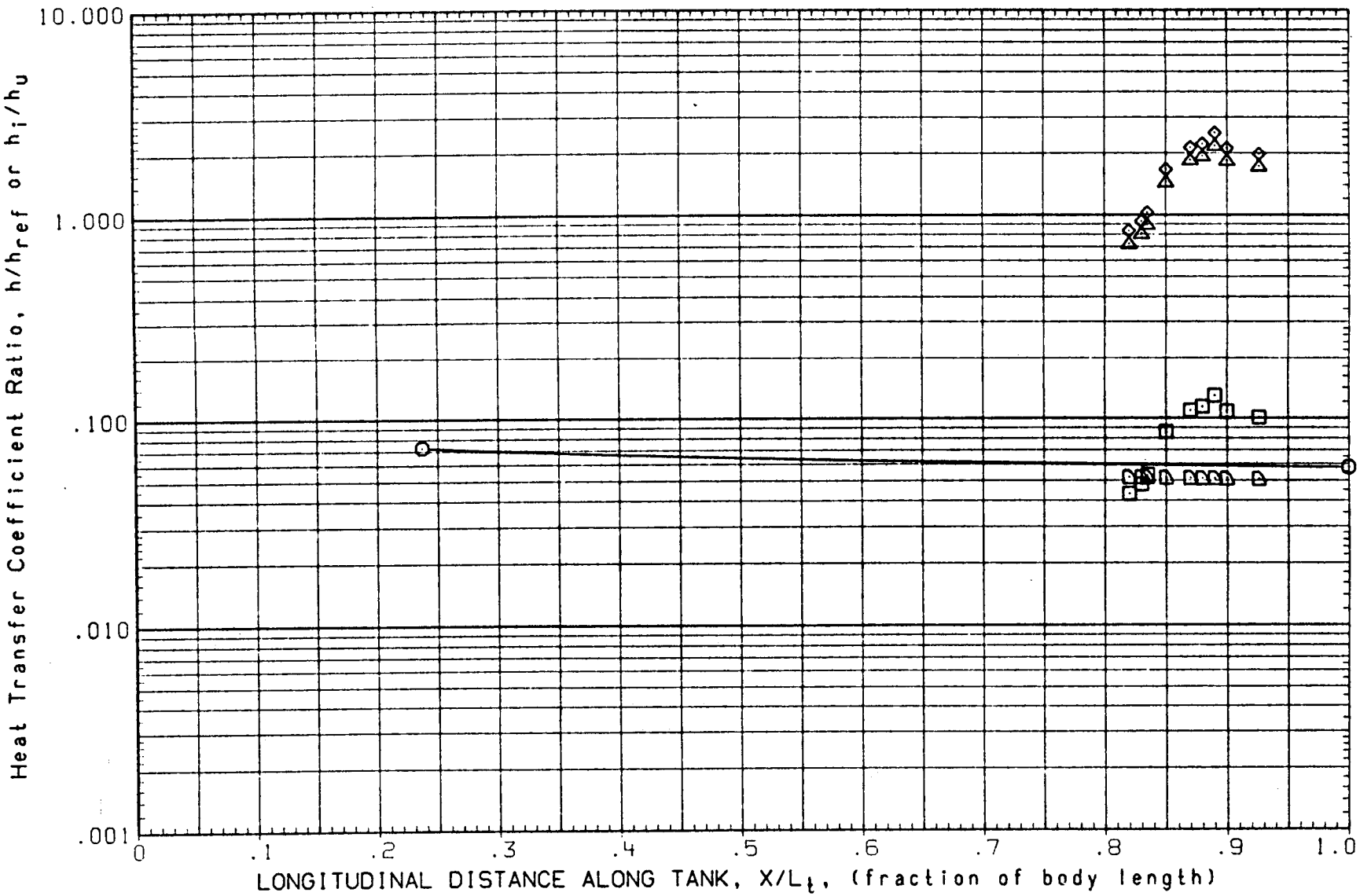

FIG. 4-17 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 305.400

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT55)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	3.000
(C9NT55)	⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	3.000
(V4LT55)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	3.000
(X4LT55)	◇	IH85 (W.L. TEST) OTS/ET = V4LT55/C9NT55=	HI/HU	4.020	5.000	3.000
(Y4LT55)	△	IH85 (W.L. THEORY) OTS/ET = V4LT55/A9NT55=	HI/HU	4.020	5.000	3.000

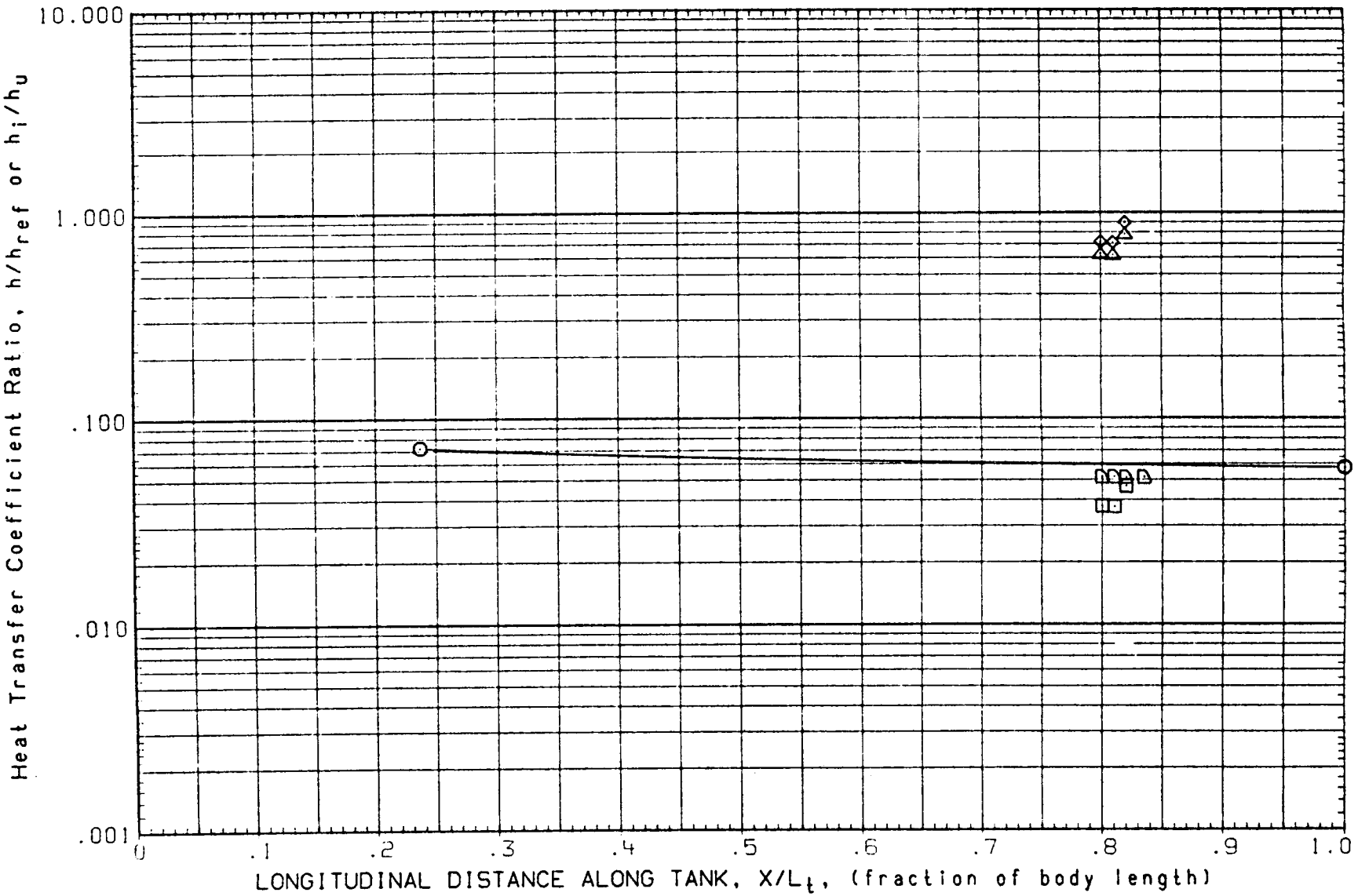

FIG. 4-17 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 309.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT55)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	3.000
(C9NT55)	⊏	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	3.000
(V4LT55)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	3.000
(X4LT55)	◇	IH85 (W.L. TEST) OTS/ET = V4LT55/C9NT55=	HI/HU	4.020	5.000	3.000
(Y4LT55)	△	IH85 (W.L. THEORY) OTS/ET = V4LT55/A9NT55=	HI/HU	4.020	5.000	3.000

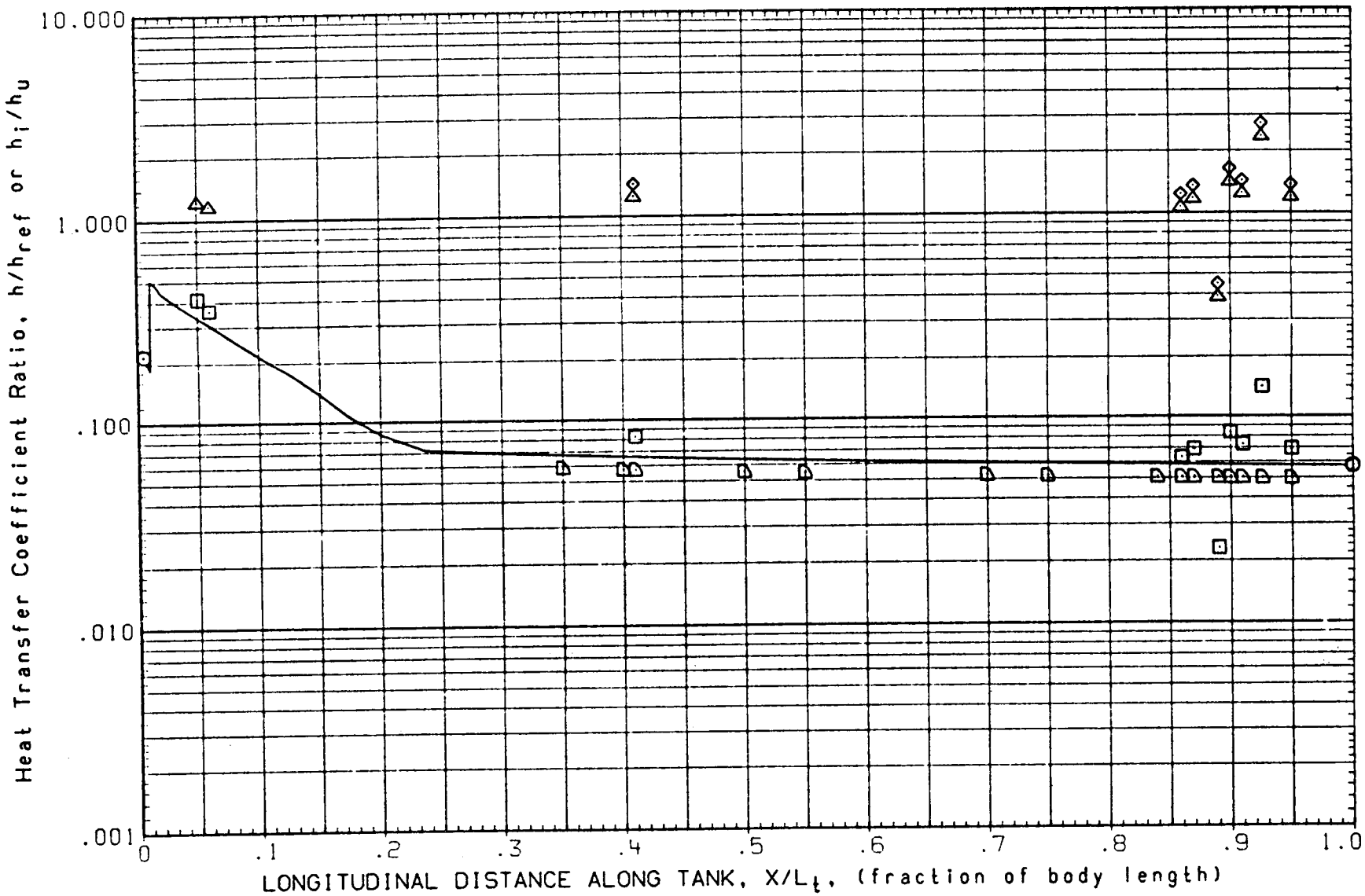

FIG. 4-17 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 315.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT55)	○	EXTERNAL TANK THEORY. N.S.,TURBULENT	HU/HREF	4.020	5.000	3.000
(C9NT55)	△	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	3.000
(V4LT55)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	3.000
(X4LT55)	◇	IH85 (W.L. TEST) OTS/ET = V4LT55/C9NT55= HI/HU		4.020	5.000	3.000
(Y4LT55)	△	IH85 (W.L. THEORY) OTS/ET = V4LT55/A9NT55= HI/HU		4.020	5.000	3.000

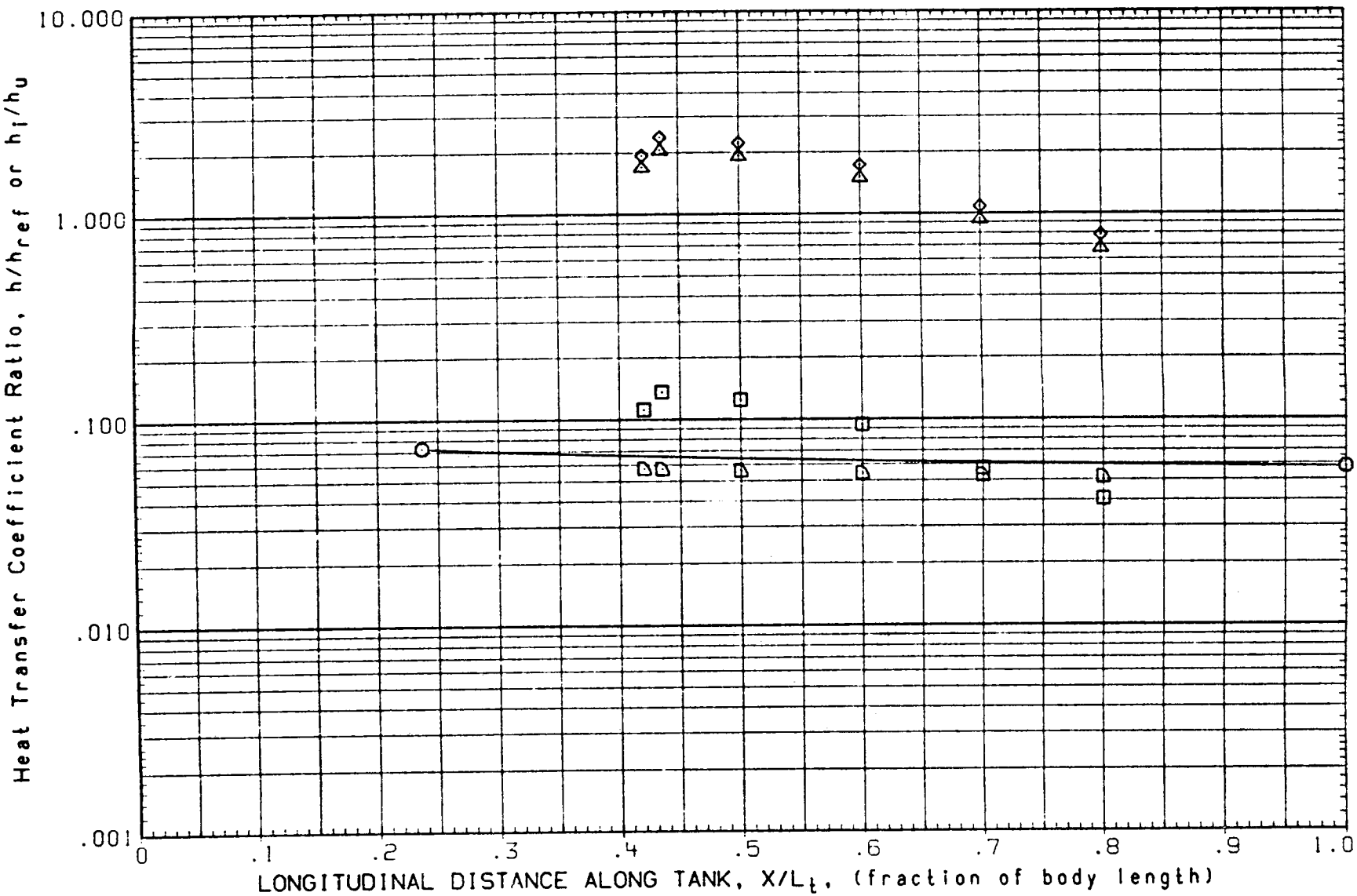

FIG. 4-17 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 322.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT55)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	3.000
(C9NT55)	⊿	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	3.000
(V4LT55)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	3.000
(X4LT55)	◇	IH85 (W.L. TEST) OTS/ET = V4LT55/C9NT55=	HI/HU	4.020	5.000	3.000
(Y4LT55)	△	IH85 (W.L. THEORY) OTS/ET = V4LT55/A9NT55=	HI/HU	4.020	5.000	3.000

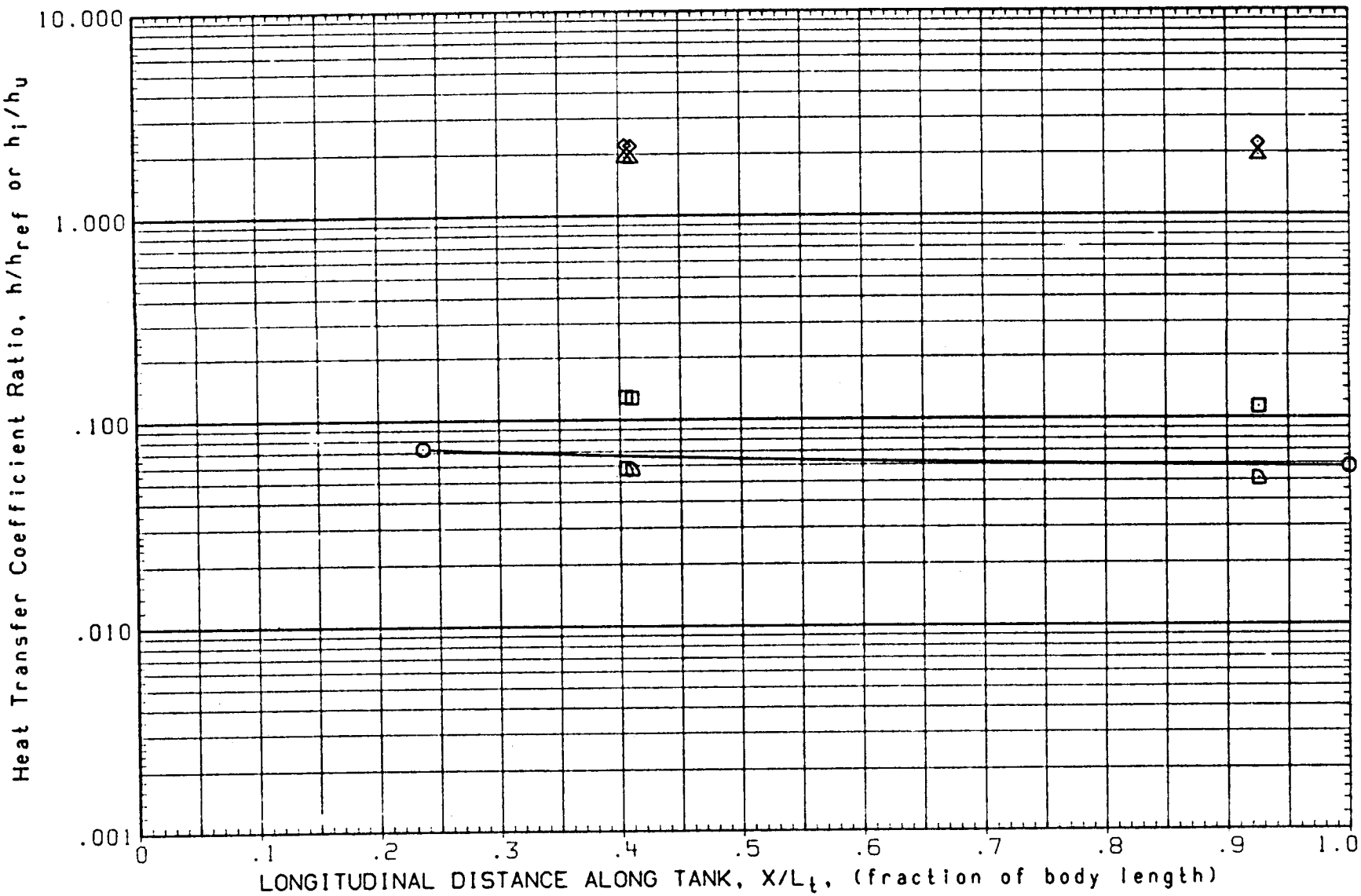

FIG. 4-17 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 324.450

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT55)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	3.000
(C9NT55)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	3.000
(V4LT55)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	3.000
(X4LT55)	◇	IH85 (W.L. TEST) OTS/ET = V4LT55/C9NT55=	HI/HU	4.020	5.000	3.000
(Y4LT55)	△	IH85 (W.L. THEORY) OTS/ET = V4LT55/A9NT55=	HI/HU	4.020	5.000	3.000

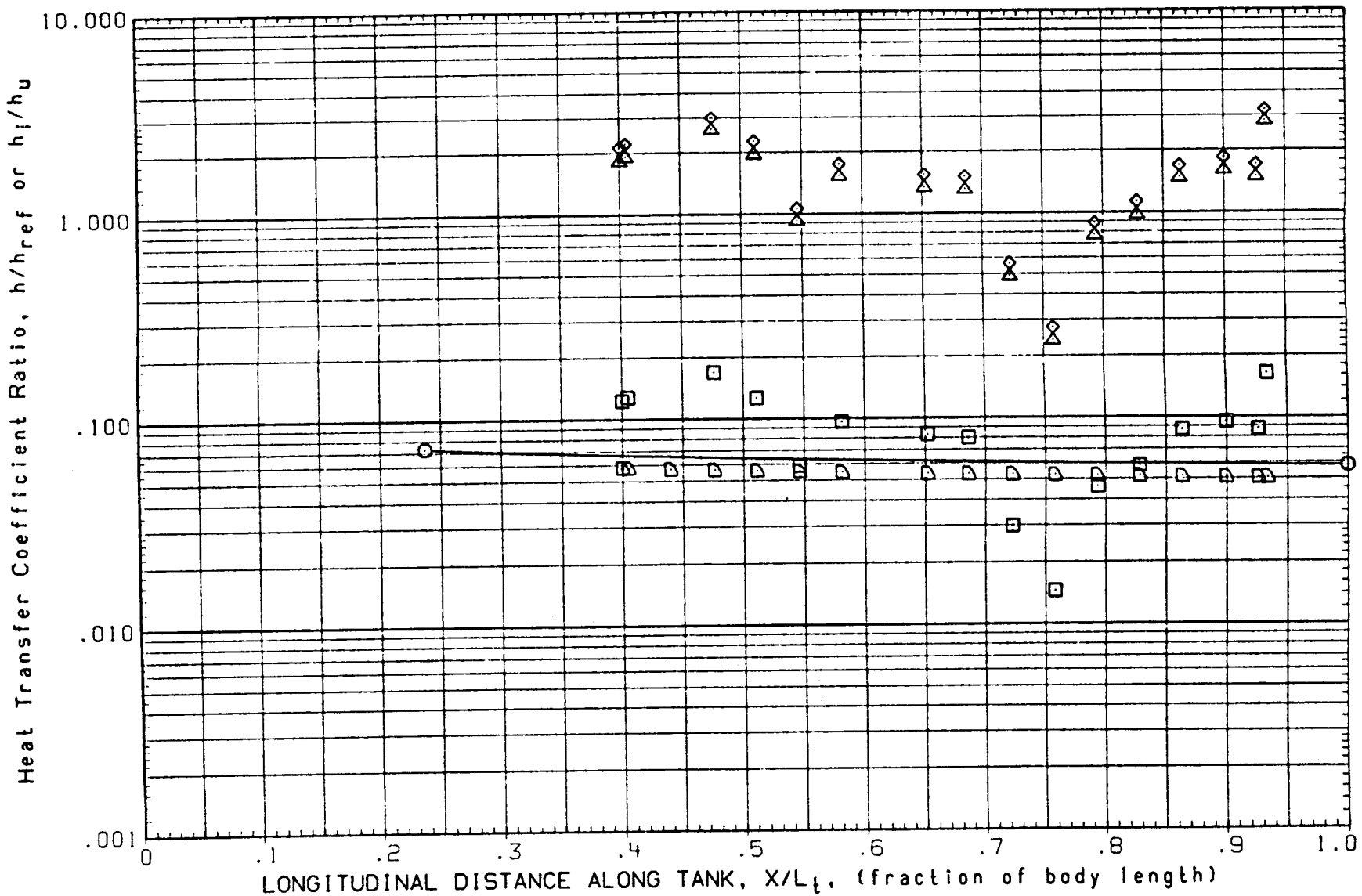

FIG. 4-17 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 326.850

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT55)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	3.000
(C9NT55)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	3.000
(Y4LT55)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	3.000
(X4LT55)	◇	IH85 (W.L. TEST) OTS/ET = V4LT55/C9NT55=	HI/HU	4.020	5.000	3.000
(Y4LT55)	△	IH85 (W.L. THEORY) OTS/ET = V4LT55/A9NT55=	HI/HU	4.020	5.000	3.000

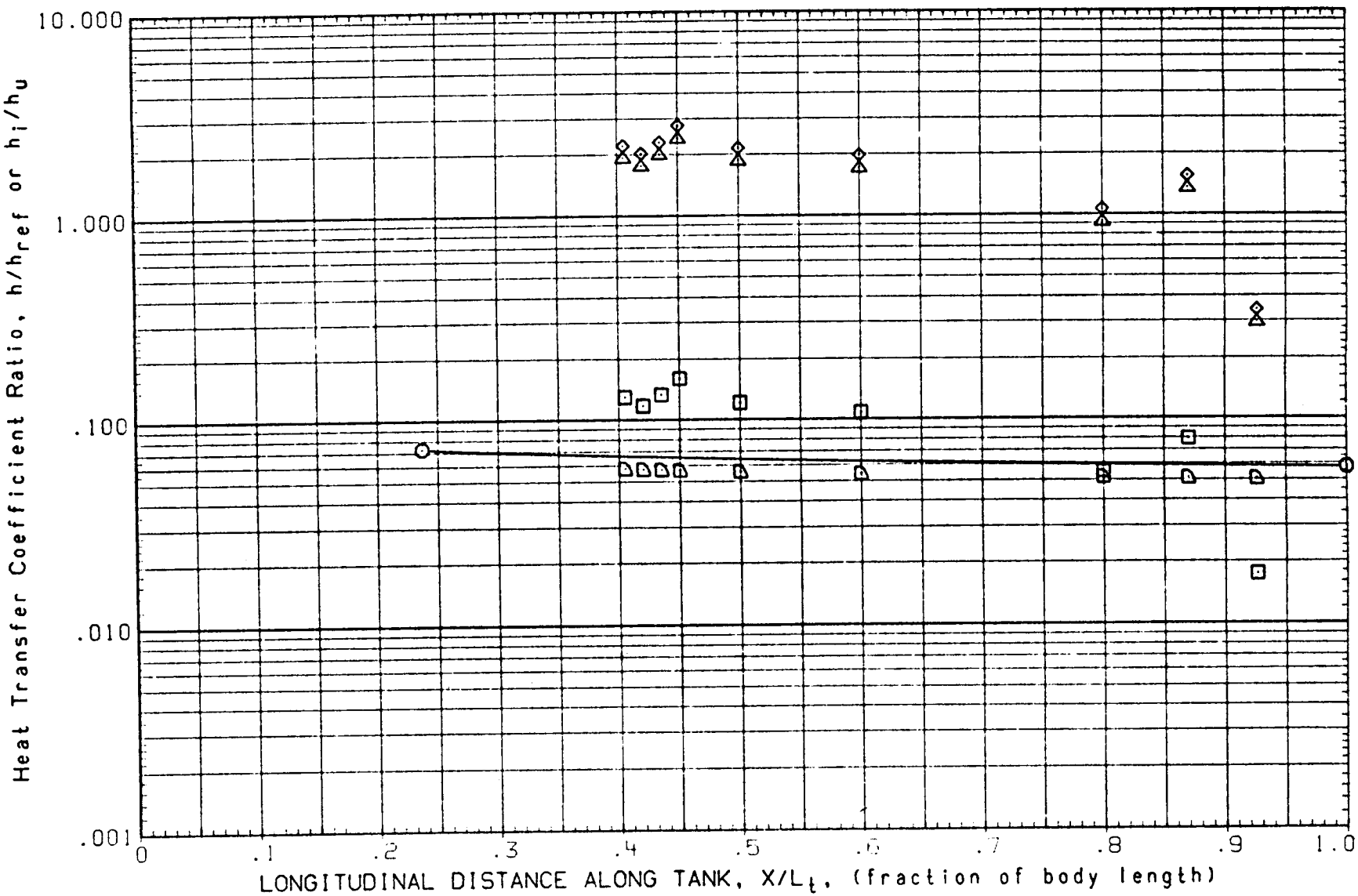

FIG. 4-17 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 330.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT55)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	3.000
(C9NT55)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	3.000
(V4LT55)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	3.000
(X4LT55)	◇	IH85 (W.L. TEST) OTS/ET = V4LT55/C9NT55=	HI/HU	4.020	5.000	3.000
(Y4LT55)	△	IH85 (W.L. THEORY) OTS/ET = V4LT55/A9NT55=	HI/HU	4.020	5.000	3.000

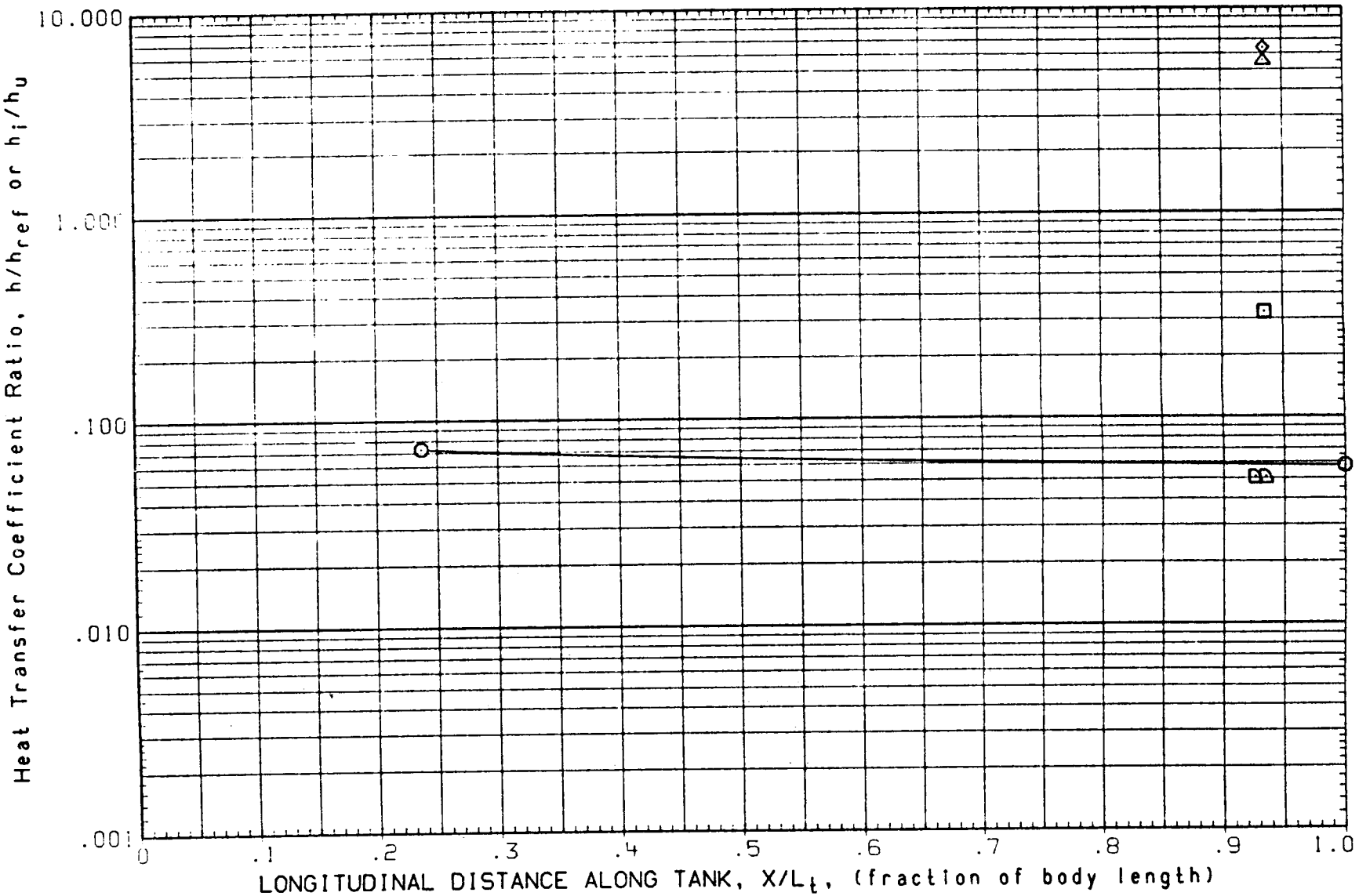

FIG. 4-17 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 334.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT55)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	3.000
(C9NT55)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	3.000
(V4LT55)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	3.000
(X4LT55)	◇	IH85 (W.L. TEST) OTS/ET = V4LT55/C9NT55=	HI/HU	4.020	5.000	3.000
(Y4LT55)	△	IH85 (W.L. THEORY) OTS/ET = V4LT55/A9NT55=	HI/HU	4.020	5.000	3.000

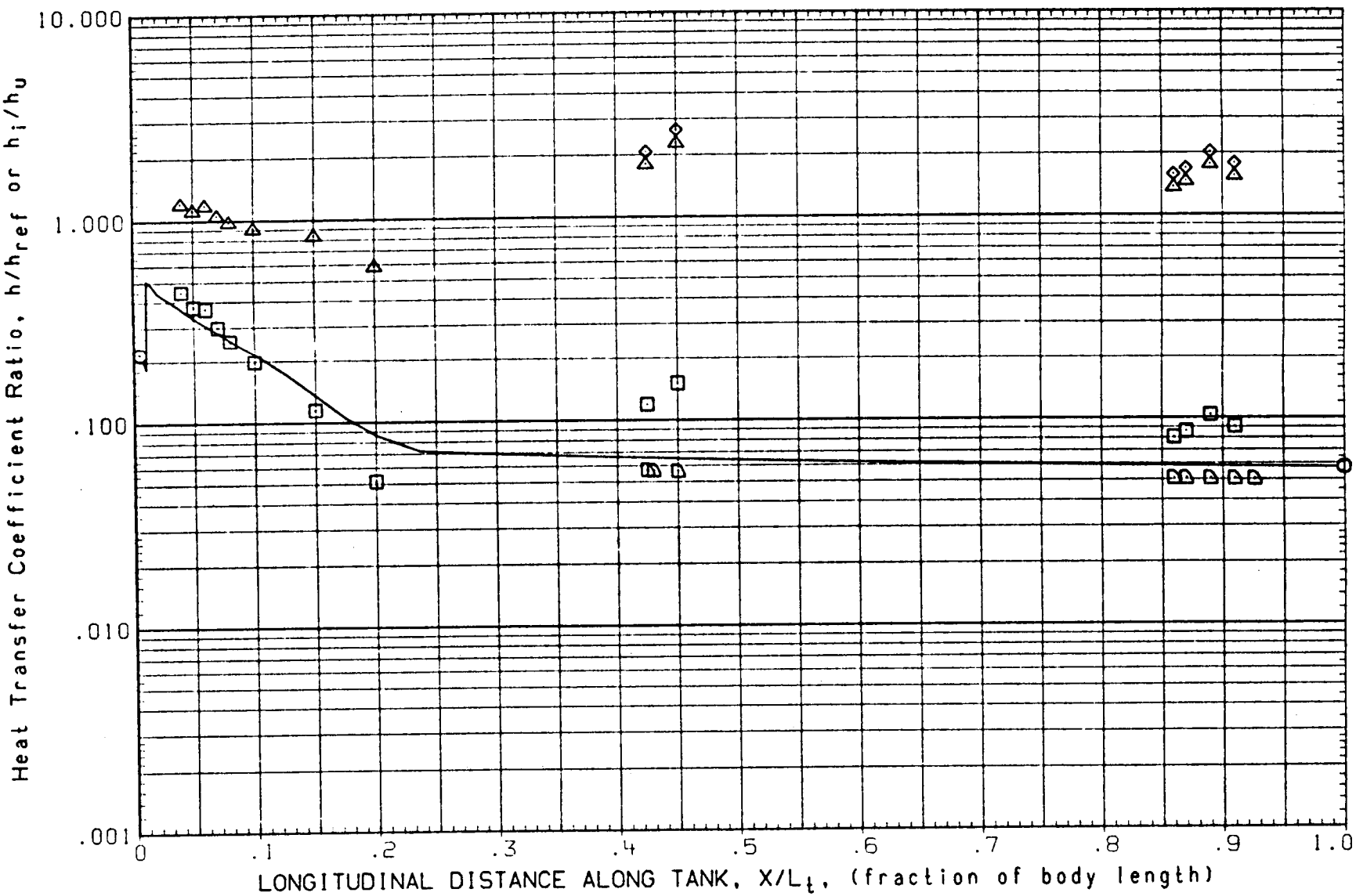

FIG. 4-17 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 337.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT55)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	3.000
(C9NT55)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	3.000
(V4LT55)	□	DATA NOT AVAILABLE		4.020	5.000	3.000
(X4LT55)	◇	DATA NOT AVAILABLE		4.020	5.000	3.000
(Y4LT55)	△	DATA NOT AVAILABLE		4.020	5.000	3.000

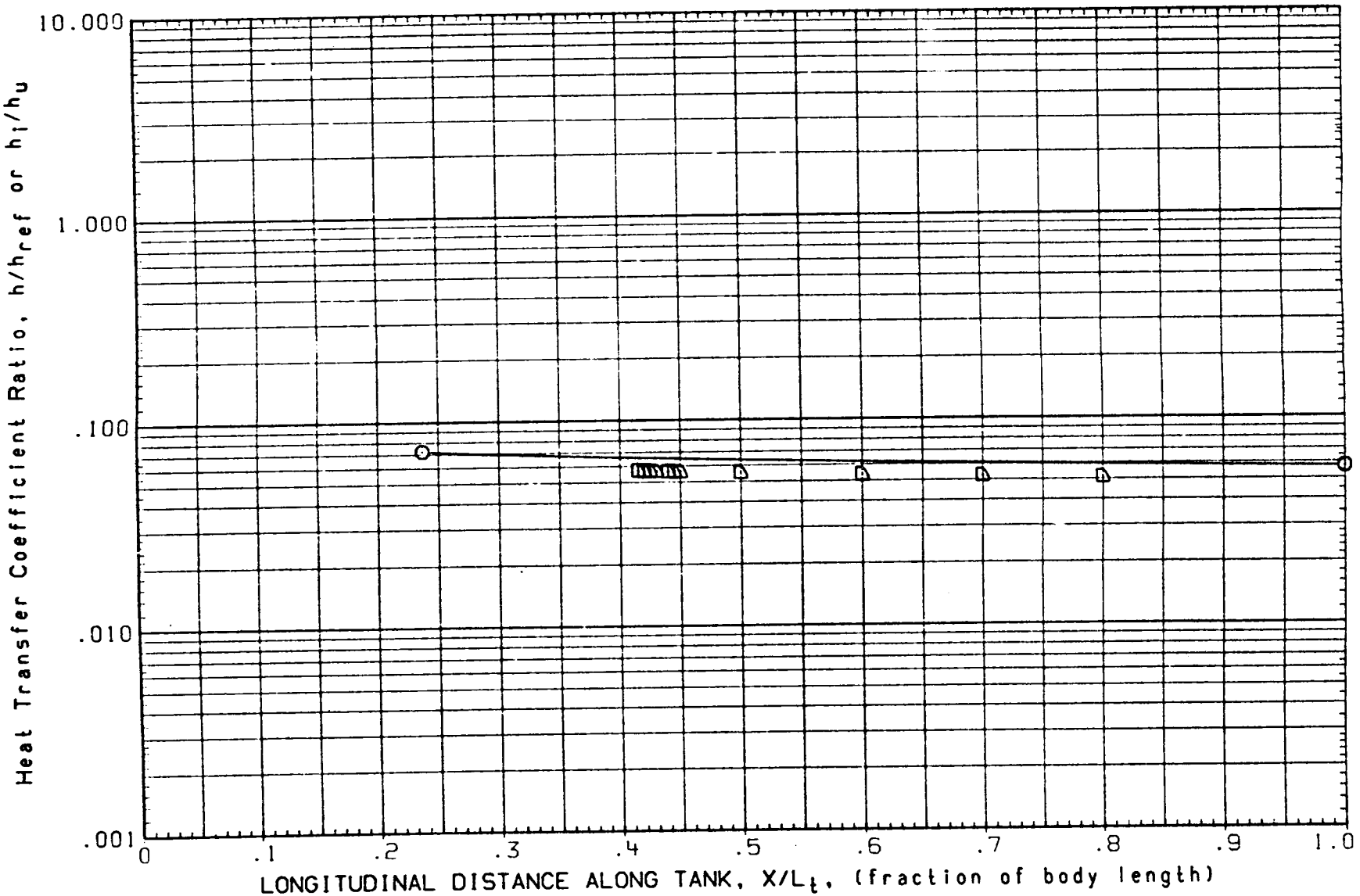

FIG. 4-17 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 343.120

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT55)	○	EXTERNAL TANK THEORY, N.S., TURBULENT	HU/HREF	4.020	5.000	3.000
(C9NT55)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	3.000
(V4LT55)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	3.000
(X4LT55)	◇	IH85 (W.L. TEST) OTS/ET = V4LT55/C9NT55=	HI/HU	4.020	5.000	3.000
(Y4LT55)	△	IH85 (W.L. THEORY) OTS/ET = V4LT55/A9NT55=	HI/HU	4.020	5.000	3.000

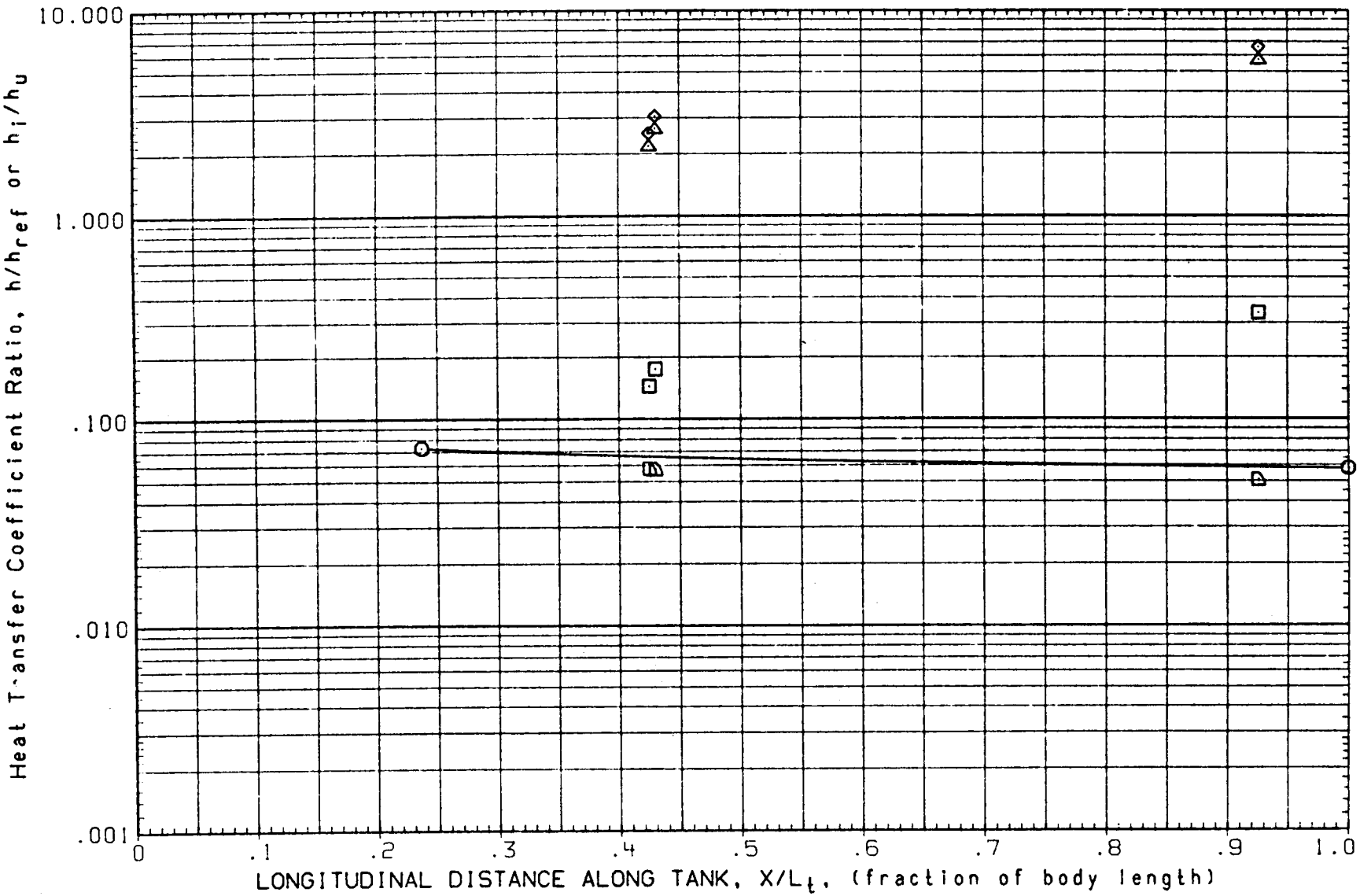

FIG. 4-17 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 345.560

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT55)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	3.000
(C9NT55)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	3.000
(V4LT55)	□	IH85, AEDC V4IA-W5, CONFIGURATION 0 (T) S		4.020	5.000	3.000
(X4LT55)	◇	IH85 (W.L. TEST) OTS/ET = V4LT55/C9NT55= HI/HU		4.020	5.000	3.000
(Y4LT55)	△	IH85 (W.L. THEORY) OTS/ET = V4LT55/A9NT55= HI/HU		4.020	5.000	3.000

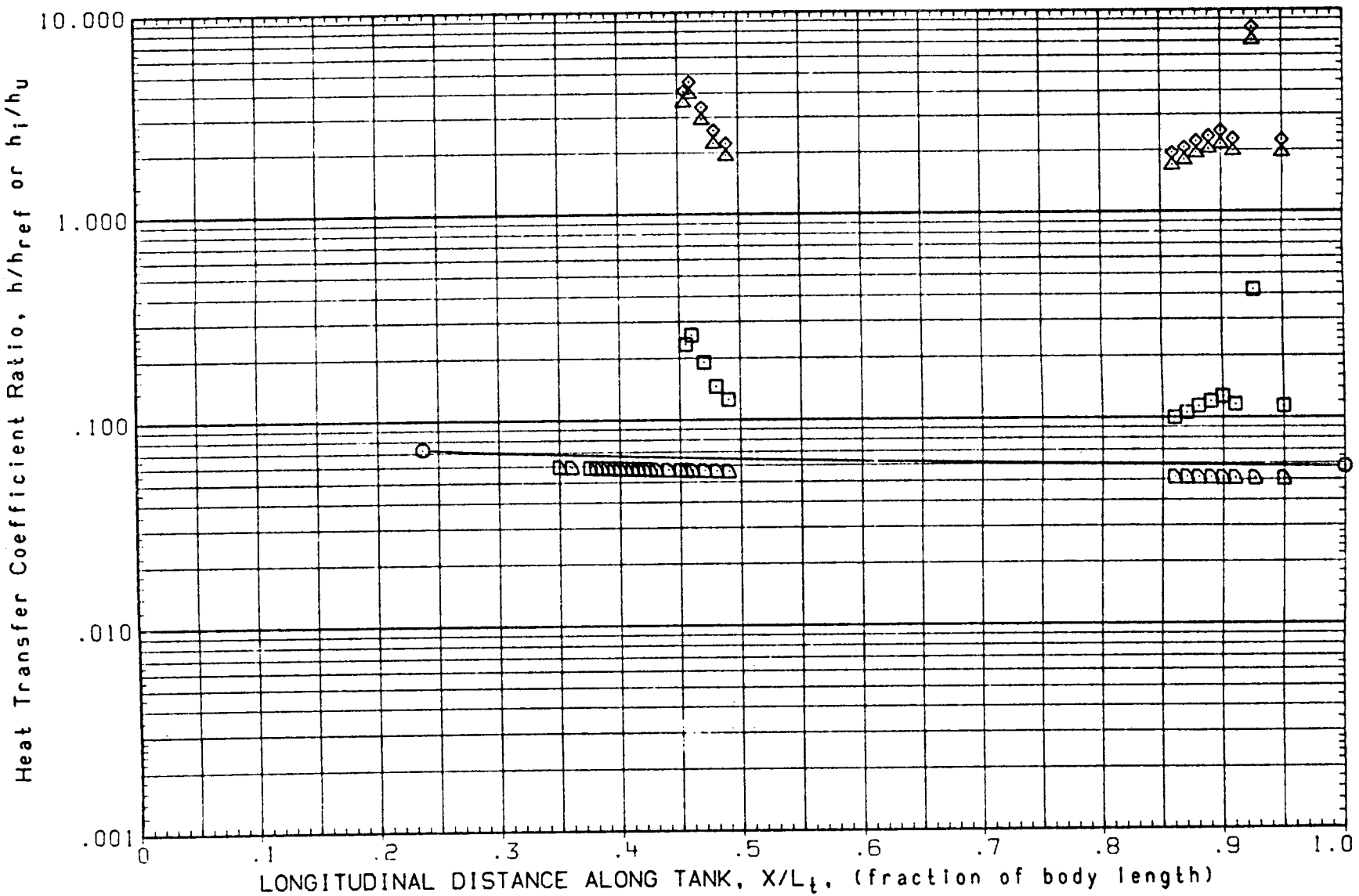

FIG. 4-17 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 348.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT55)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	3.000
(C9NT55)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	3.000
(Y4LT55)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	3.000
(X4LT55)	◇	IH85 (W.L. TEST) OTS/ET = V4LT55/C9NT55=	HI/HU	4.020	5.000	3.000
(Y4LT55)	△	IH85 (W.L. THEORY) OTS/ET = V4LT55/A9NT55=	HI/HU	4.020	5.000	3.000

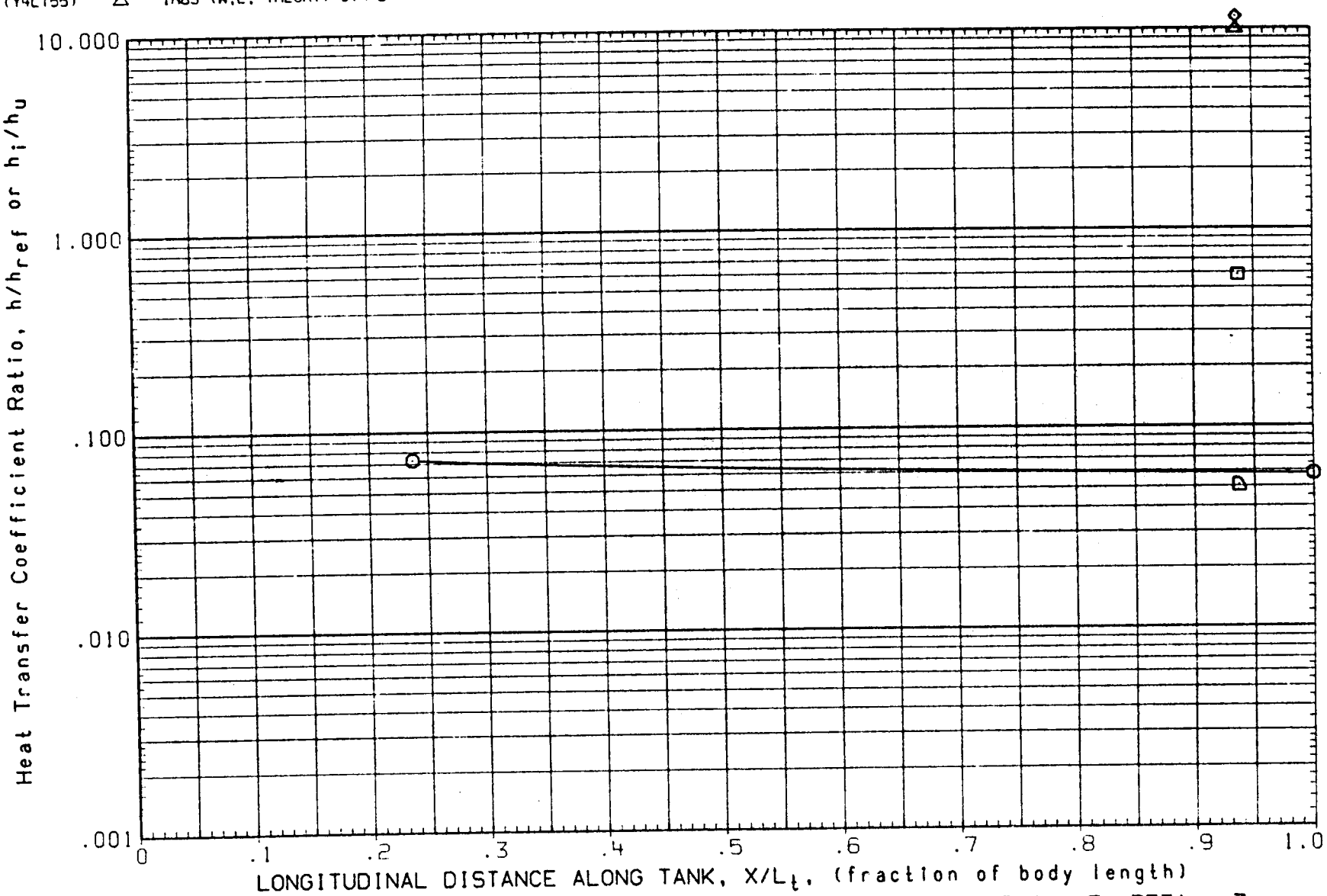

FIG. 4-17 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 352.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT55)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	3.000
(C9NT55)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	3.000
(V4LT55)	□	IH85, AEDC V4IA-W5, CONFIGURATION 0 (T) S		4.020	5.000	3.000
(X4LT55)	◇	IH85 (W.L. TEST) OTS/ET = V4LT55/C9NT55=	HI/HU	4.020	5.000	3.000
(Y4LT55)	△	IH85 (W.L. THEORY) OTS/ET = V4LT55/A9NT55=	HI/HU	4.020	5.000	3.000

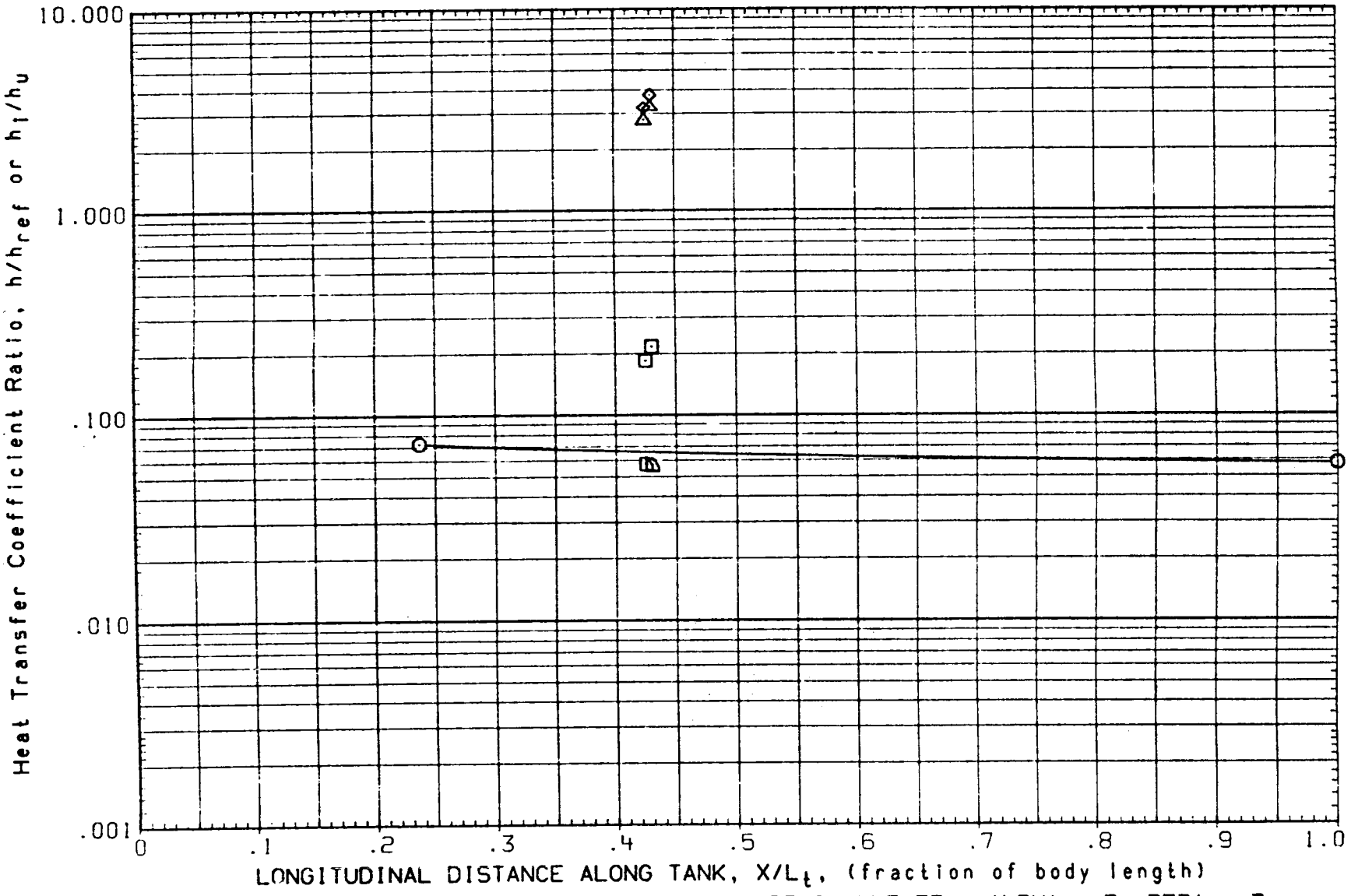

FIG. 4-17 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 354.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT55)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	3.000
(C9NT55)	⬠	DATA NOT AVAILABLE		4.020	5.000	3.000
(V4LT55)	□	DATA NOT AVAILABLE		4.020	5.000	3.000
(X4LT55)	◇	DATA NOT AVAILABLE		4.020	5.000	3.000
(Y4LT55)	△	DATA NOT AVAILABLE		4.020	5.000	3.000

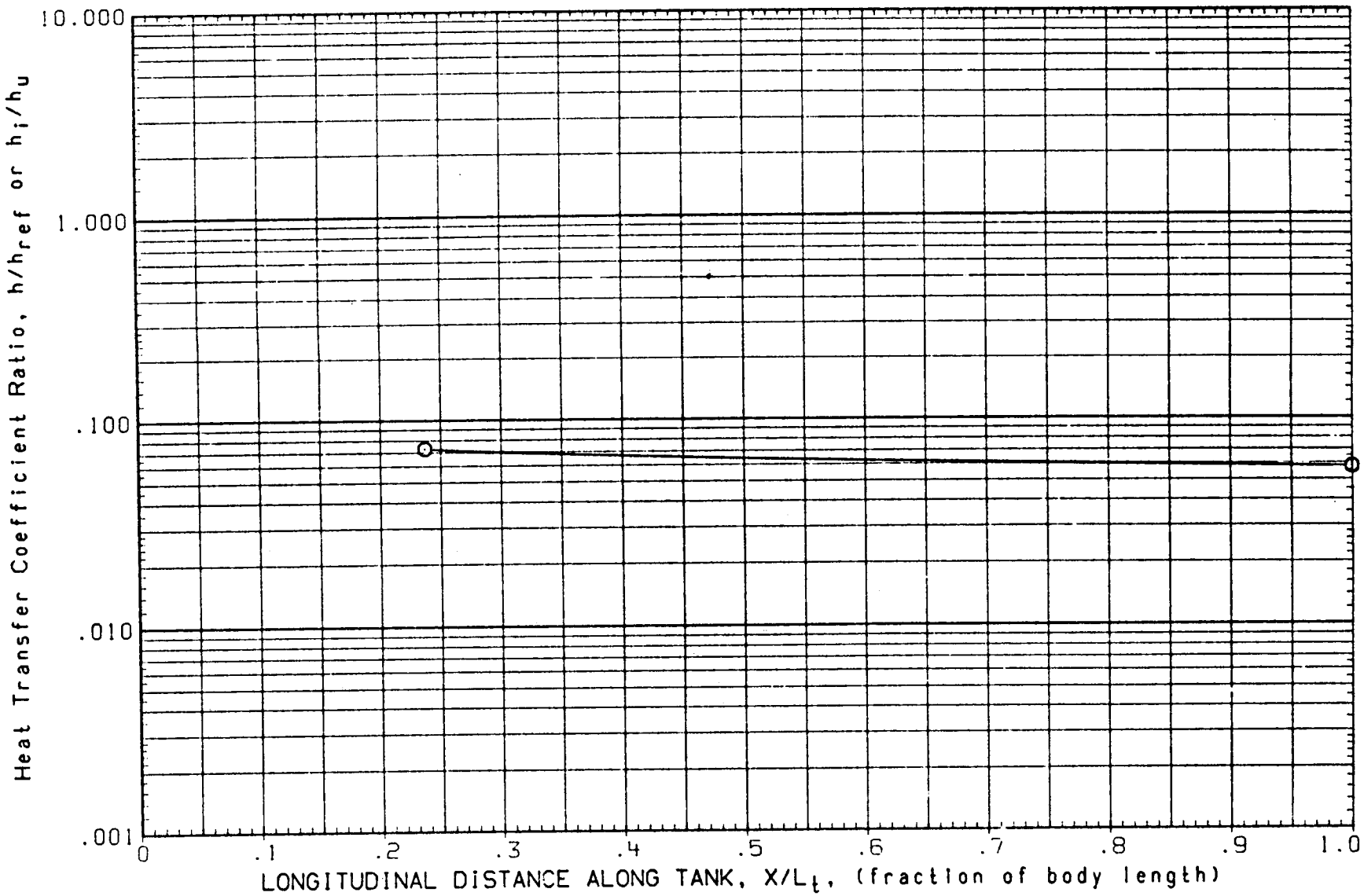

FIG. 4-17 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 355.160

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT55)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	3.000
(C9NT55)	◐	DATA NOT AVAILABLE		4.020	5.000	3.000
(V4LT55)	□	DATA NOT AVAILABLE		4.020	5.000	3.000
(X4LT55)	◇	DATA NOT AVAILABLE		4.020	5.000	3.000
(Y4LT55)	△	DATA NOT AVAILABLE		4.020	5.000	3.000

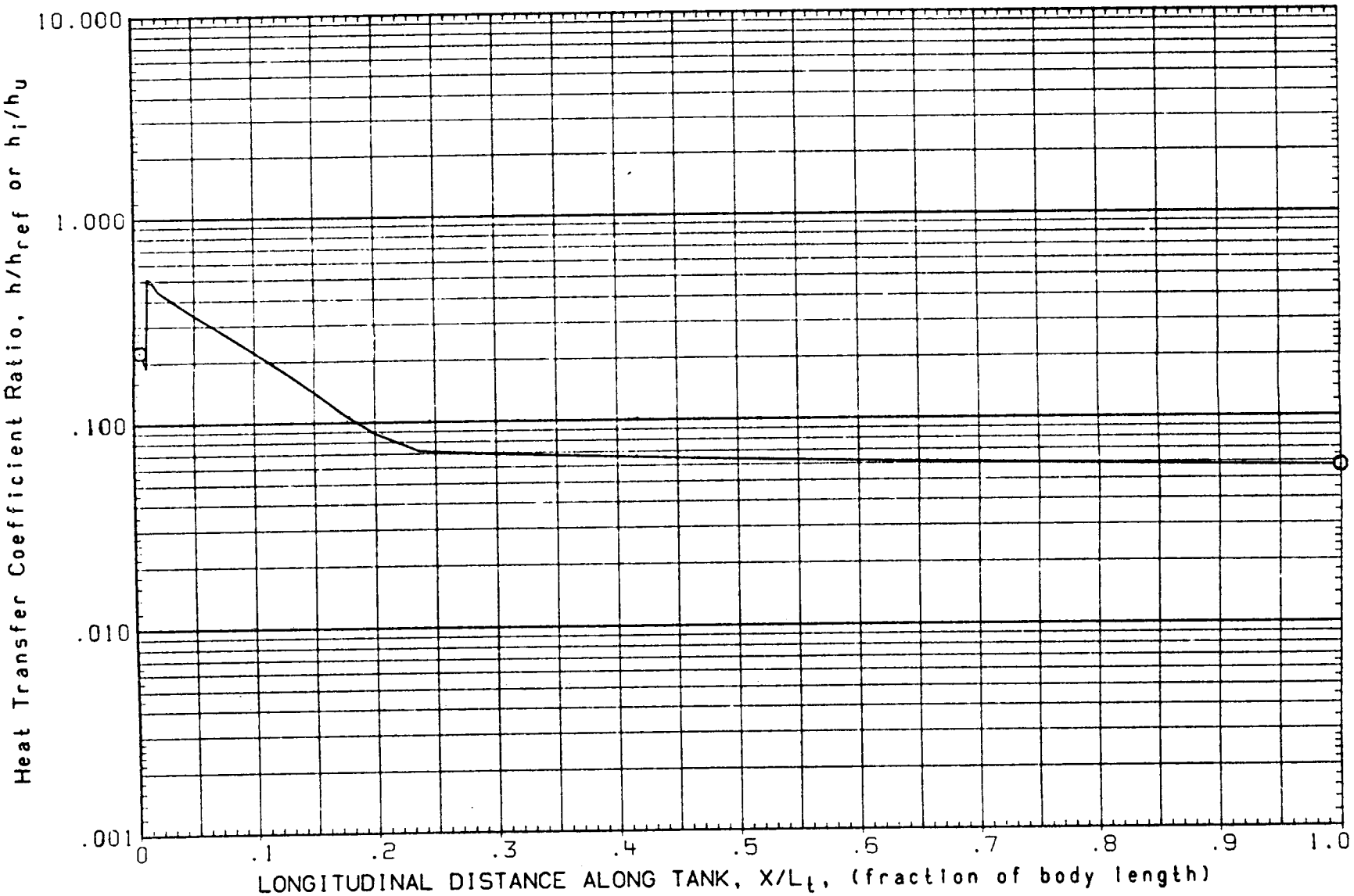

FIG. 4-17 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 360.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT56)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	4.500
(C9NT56)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	4.500
(V4LT56)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	4.500
(X4LT56)	◇	IH85 (W.L. TEST) OTS/ET = V4LT56/C9NT56=	HI/HU	4.020	5.000	4.500
(Y4LT56)	△	IH85 (W.L. THEORY) OTS/ET = V4LT56/A9NT56=	HI/HU	4.020	5.000	4.500

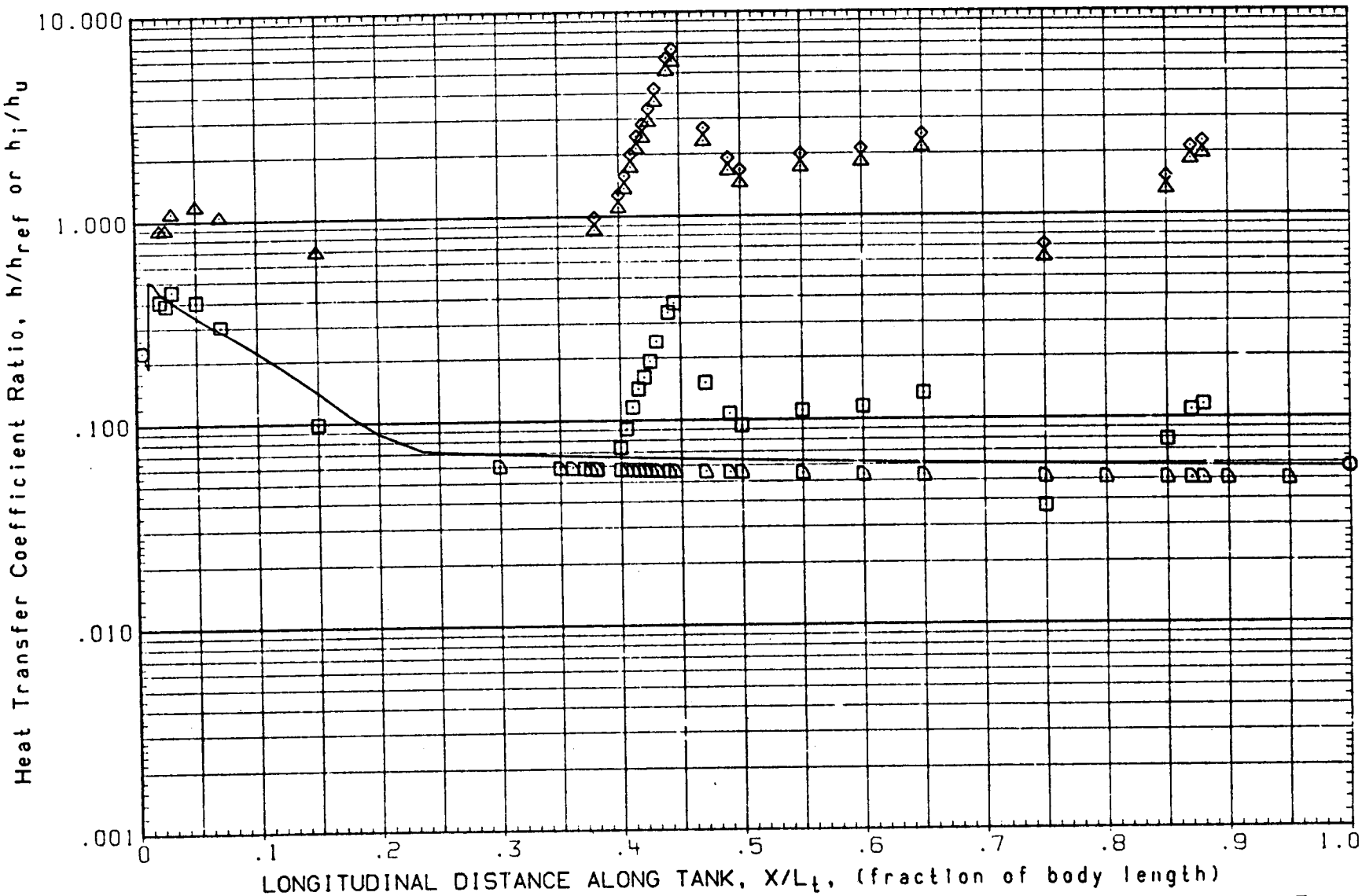

FIG. 4-18 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 4.5
0 < X/L < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = .000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT56)	○	DATA NOT AVAILABLE	4.020	5.000	4.500
(C9NT56)	⬠	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	4.020	5.000	4.500
(V4LT56)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	5.000	4.500
(X4LT56)	◇	IH85 (W.L. TEST) OTS/ET = V4LT56/C9NT56= HI/HU	4.020	5.000	4.500
(Y4LT56)	△	IH85 (W.L. THEORY) OTS/ET = V4LT56/A9NT56= HI/HU	4.020	5.000	4.500

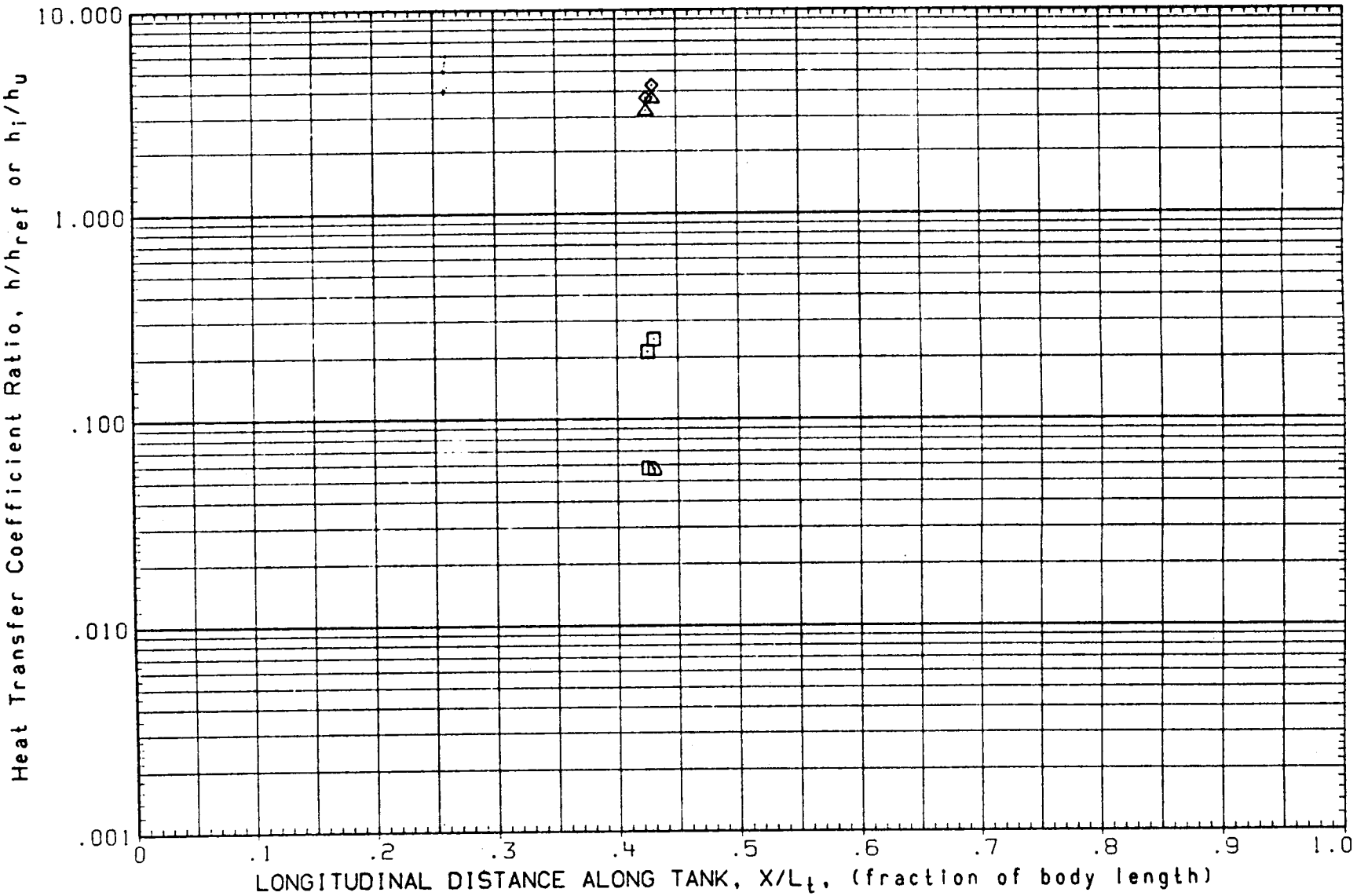

FIG. 4-18 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 5.625

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT56)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	4.500
(C9NT56)	◐	DATA NOT AVAILABLE		4.020	5.000	4.500
(Y4LT56)	□	DATA NOT AVAILABLE		4.020	5.000	4.500
(X4LT56)	◇	DATA NOT AVAILABLE		4.020	5.000	4.500
(Y4LT56)	△	DATA NOT AVAILABLE		4.020	5.000	4.500

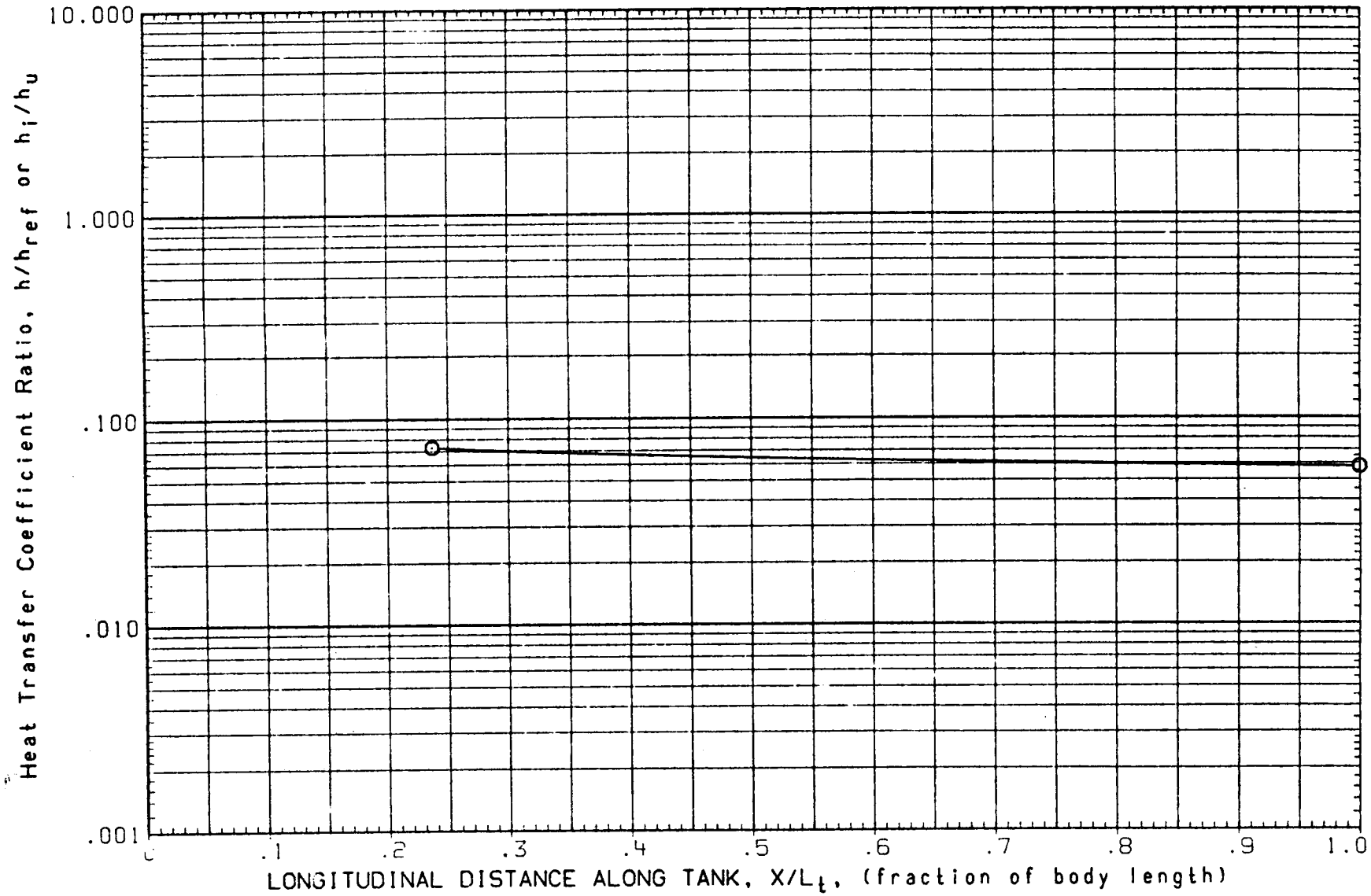

FIG. 4-18 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 5.630

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT56)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	4.500
(C9NT56)	▷	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	4.500
(V4LT56)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	4.500
(X4LT56)	◇	IH85 (W.L. TEST) OTS/ET = V4LT56/C9NT56=	HI/HU	4.020	5.000	4.500
(Y4LT56)	△	IH85 (W.L. THEORY) OTS/ET = V4LT56/A9NT56=	HI/HU	4.020	5.000	4.500

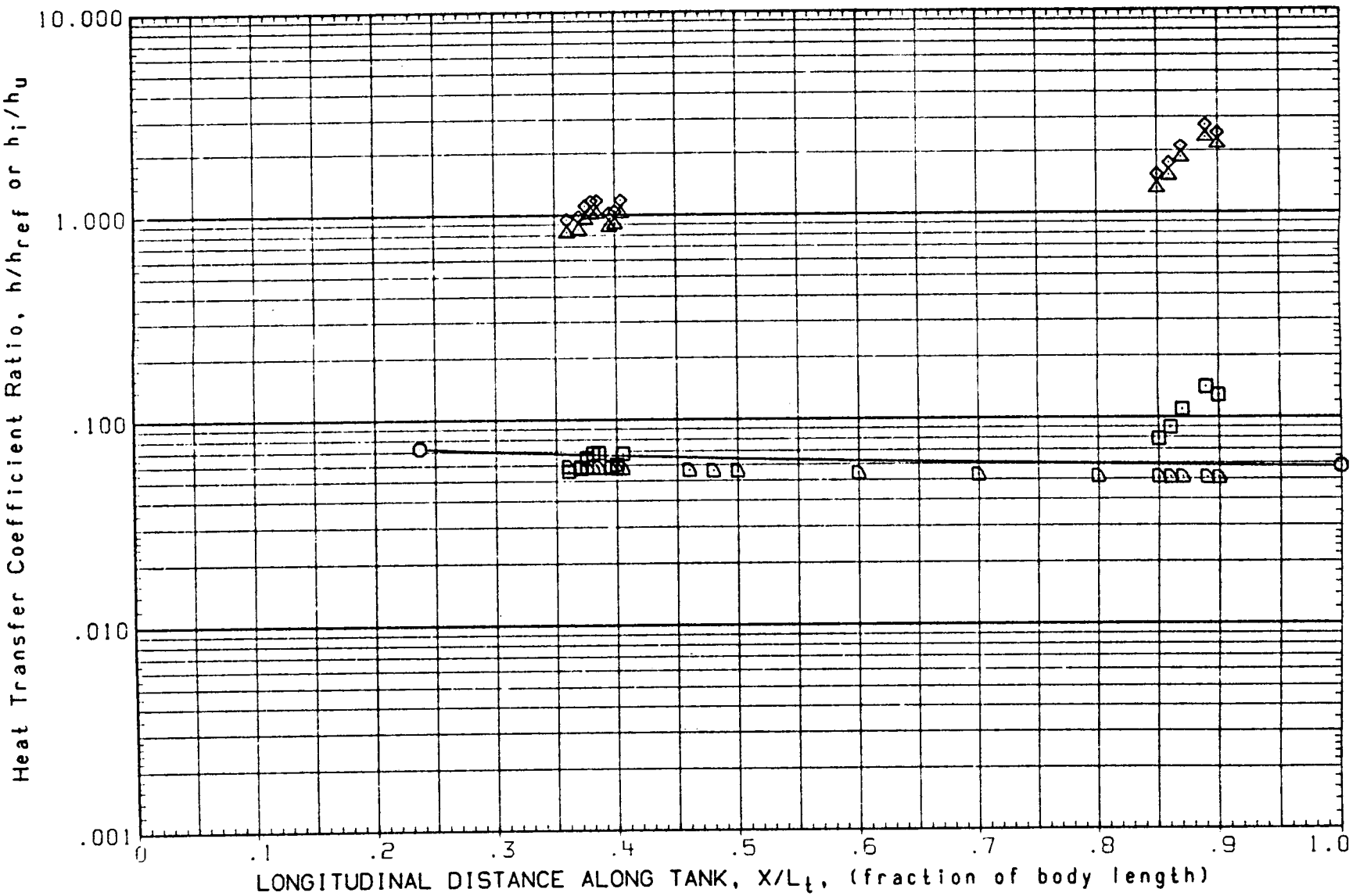

FIG. 4-18 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 11.250

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT56)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	4.500
(C9NT56)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	4.500
(V4LT56)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	4.500
(X4LT56)	◇	IH85 (W.L. TEST) OTS/ET = V4LT56/C9NT56= HI/HU		4.020	5.000	4.500
(Y4LT56)	△	IH85 (W.L. THEORY) OTS/ET = V4LT56/A9NT56= HI/HU		4.020	5.000	4.500

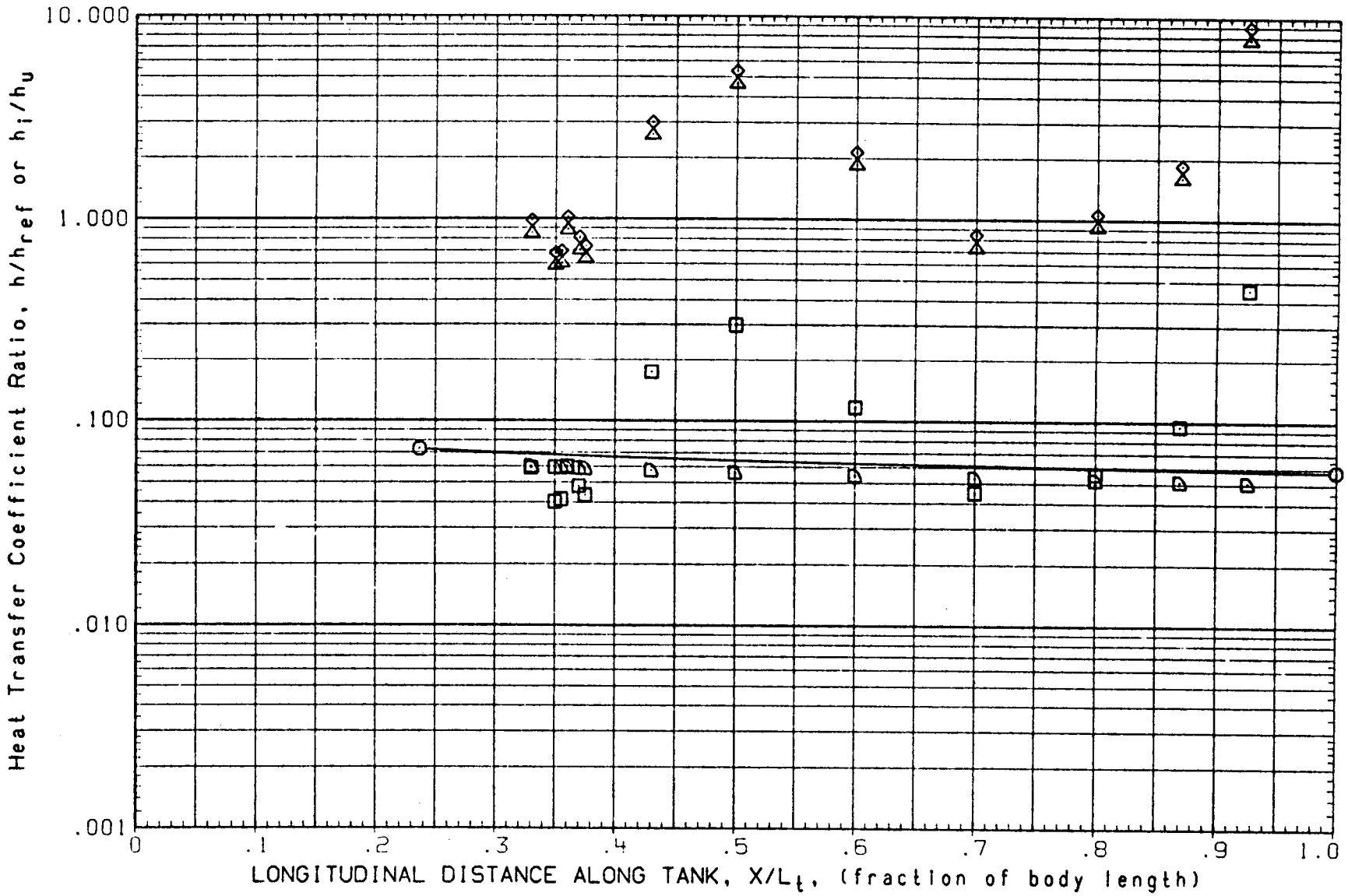

FIG. 4-18 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 17.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT56)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	4.500
(C9NT56)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	4.500
(V4LT56)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	4.500
(X4LT56)	◇	IH85 (W.L. TEST) OTS/ET = V4LT56/C9NT56=	HI/HU	4.020	5.000	4.500
(Y4LT56)	△	IH85 (W.L. THEORY) OTS/ET = V4LT56/A9NT56=	HI/HU	4.020	5.000	4.500

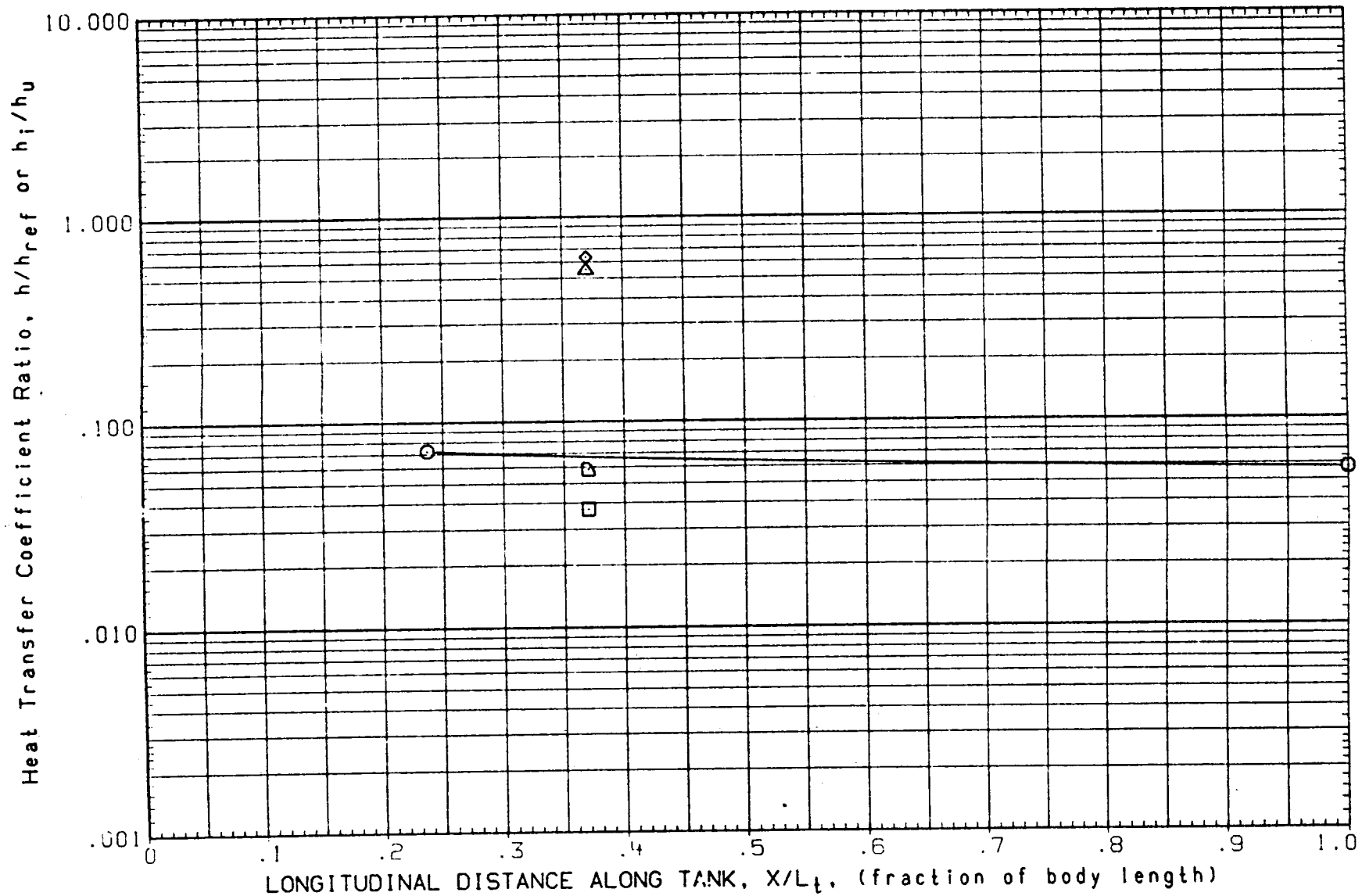

FIG. 4-18 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 20.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT56)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	4.500
(C9NT56)	⊿	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	4.500
(V4LT56)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	4.500
(X4LT56)	◇	IH85 (W.L. TEST) OTS/ET = V4LT56/C9NT56=	HI/HU	4.020	5.000	4.500
(Y4LT56)	△	IH85 (W.L. THEORY) OTS/ET = V4LT56/A9NT56=	HI/HU	4.020	5.000	4.500

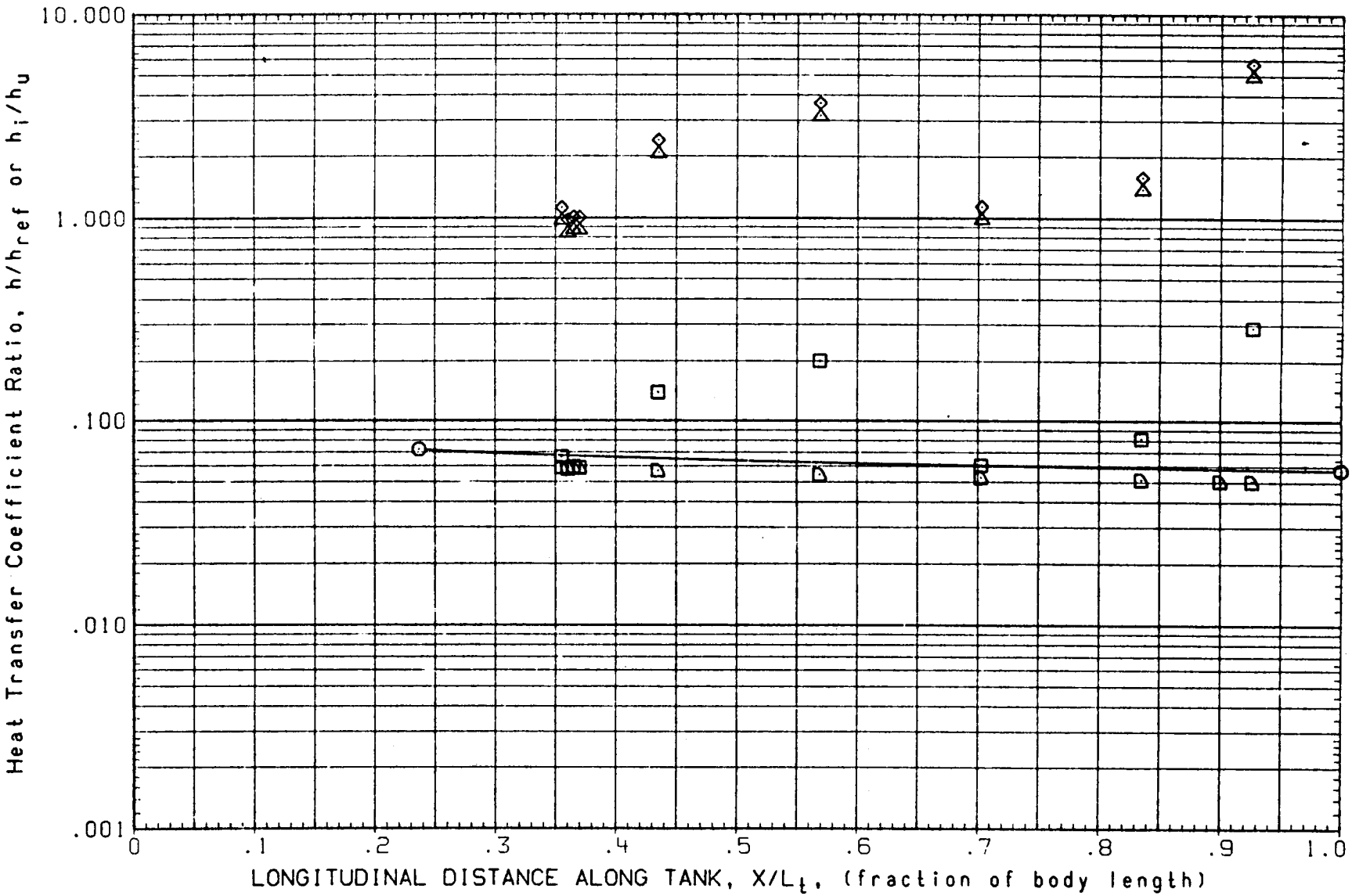

FIG. 4-18 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 23.070

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT56)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	4.500
(C9NT56)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	4.500
(V4LT56)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	4.500
(X4LT56)	◇	IH85 (W.L. TEST)	OTS/ET = V4LT56/C9NT56= HI/HU	4.020	5.000	4.500
(Y4LT56)	△	IH85 (W.L. THEORY)	OTS/ET = V4LT56/A9NT56= HI/HU	4.020	5.000	4.500

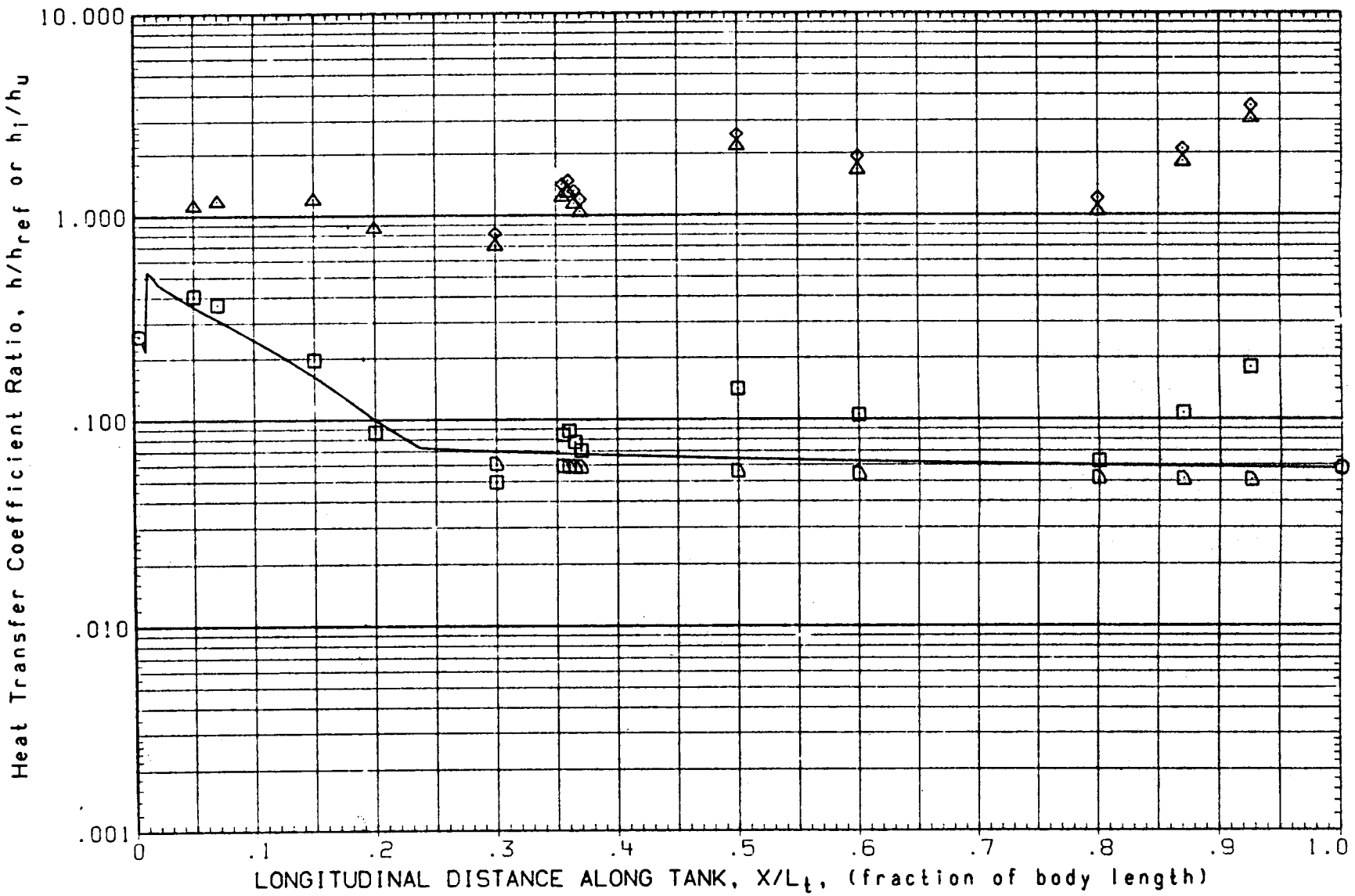

FIG. 4-18 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 29.800

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT56)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	4.500
(C9NT56)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	4.500
(V4LT56)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	4.500
(X4LT56)	◇	IH85 (W.L. TEST) OTS/ET = V4LT56/C9NT56=	HI/HU	4.020	5.000	4.500
(Y4LT56)	△	IH85 (W.L. THEORY) OTS/ET = V4LT56/A9NT56=	HI/HU	4.020	5.000	4.500

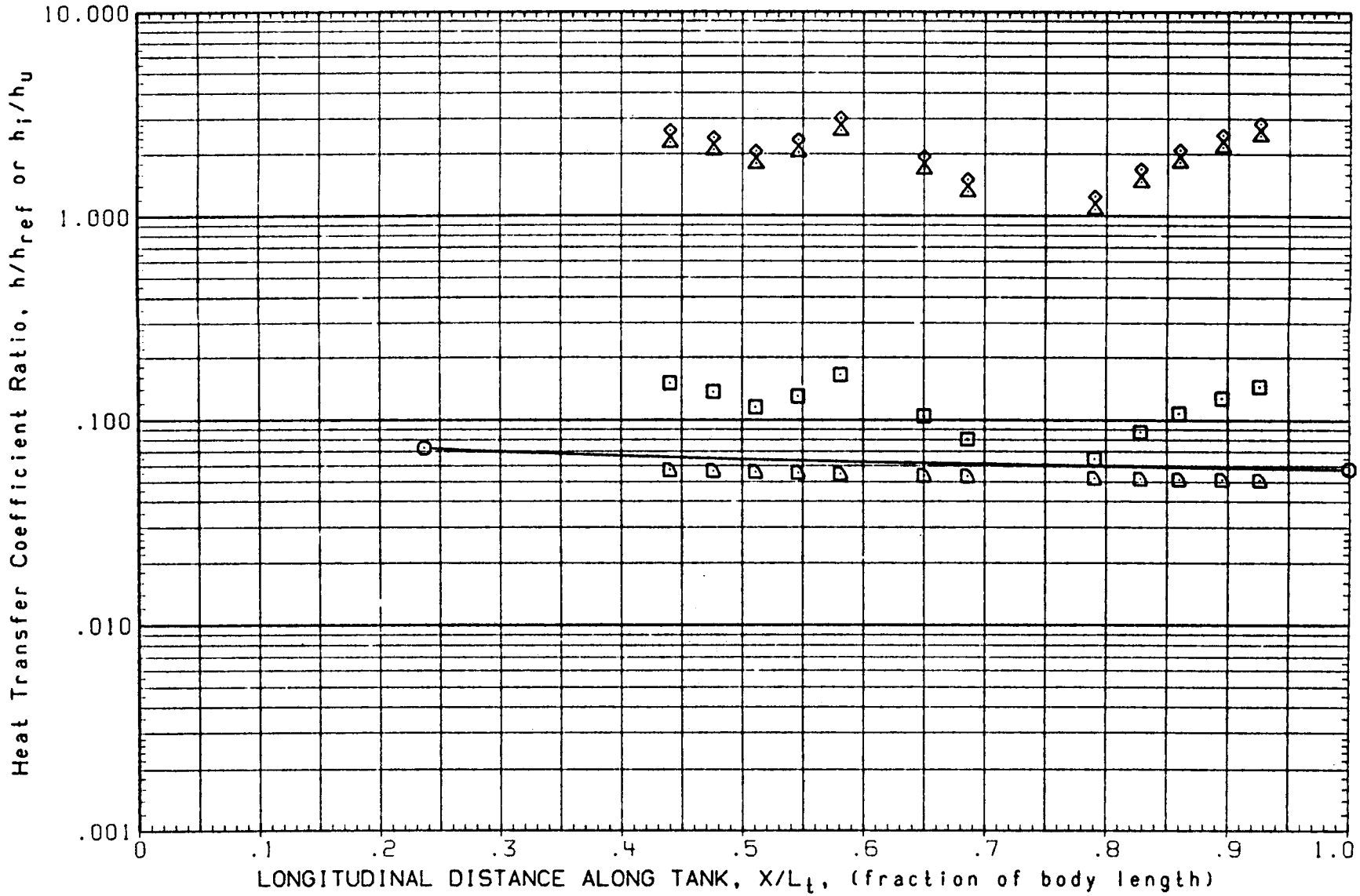

FIG. 4-18 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 31.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT56)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	4.500
(C9NT56)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	4.500
(V4LT56)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	4.500
(X4LT56)	◇	IH85 (W.L. TEST) OTS/ET = V4LT56/C9NT56=	HI/HU	4.020	5.000	4.500
(Y4LT56)	△	IH85 (W.L. THEORY) OTS/ET = V4LT56/A9NT56=	HI/HU	4.020	5.000	4.500

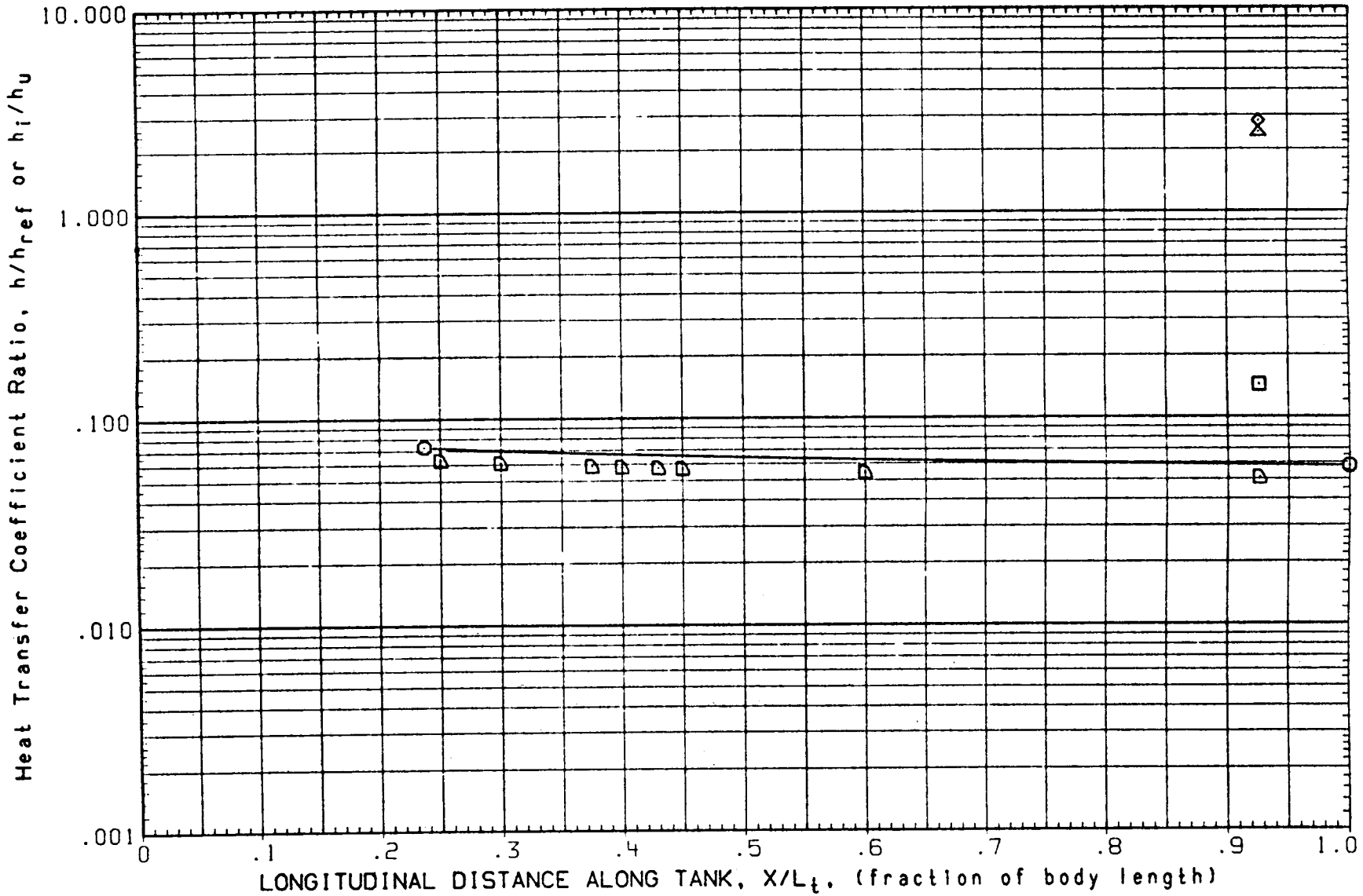

FIG. 4-18 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 33.750

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT56)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	4.500
(C9NT56)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	4.500
(V4LT56)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	4.500
(X4LT56)	◇	IH85 (W.L. TEST) OTS/ET = V4LT56/C9NT56= HI/HU		4.020	5.000	4.500
(Y4LT56)	△	IH85 (W.L. THEORY) OTS/ET = V4LT56/A9NT56= HI/HU		4.020	5.000	4.500

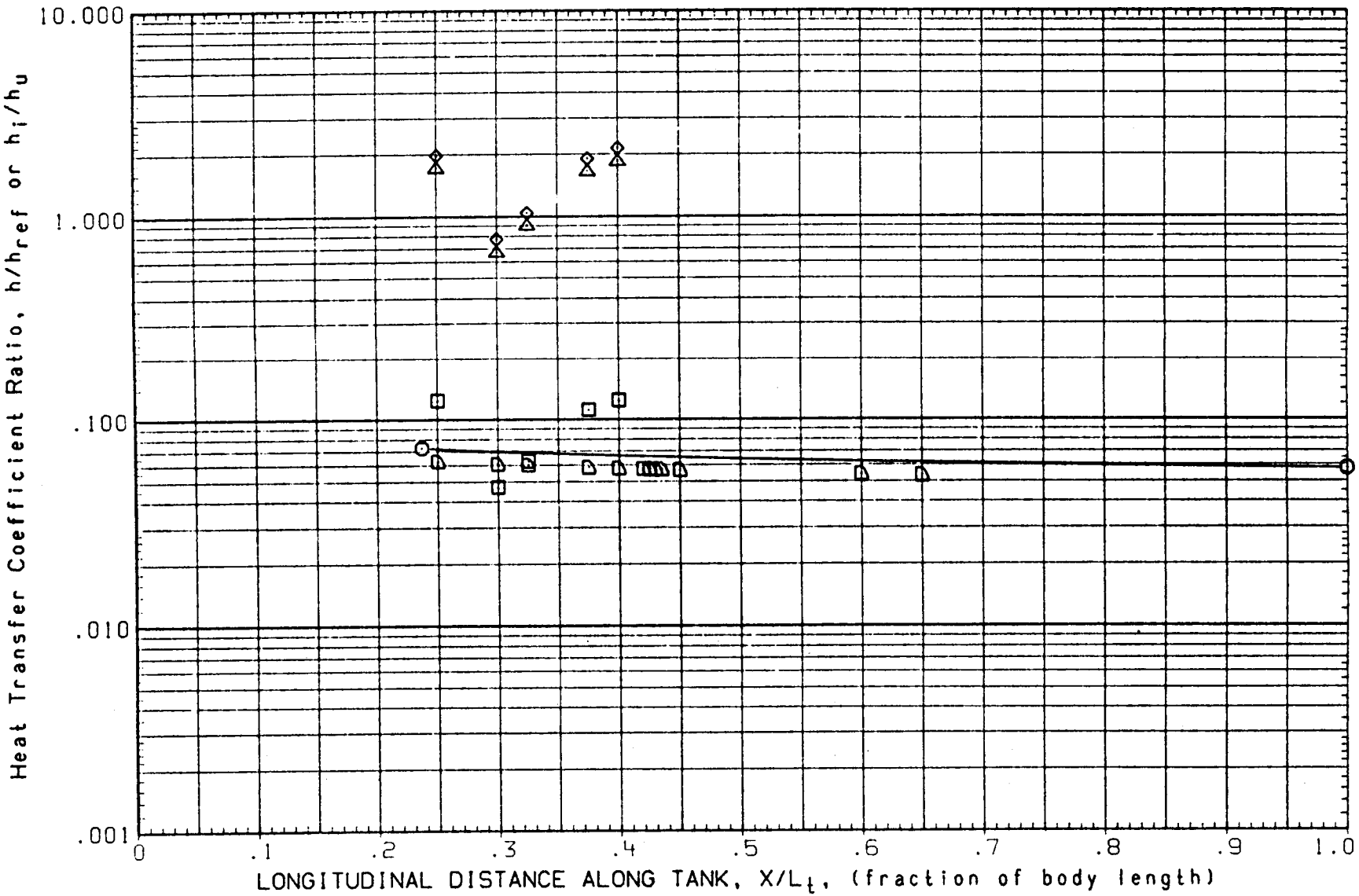

FIG. 4-18 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 36.320

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT56)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	4.500
(C9NT56)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	4.500
(V4LT56)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	4.500
(X4LT56)	◇	IH85 (W.L. TEST)	OTS/ET = V4LT56/C9NT56= HI/HU	4.020	5.000	4.500
(Y4LT56)	△	IH85 (W.L. THEORY)	OTS/ET = V4LT56/A9NT56= HI/HU	4.020	5.000	4.500

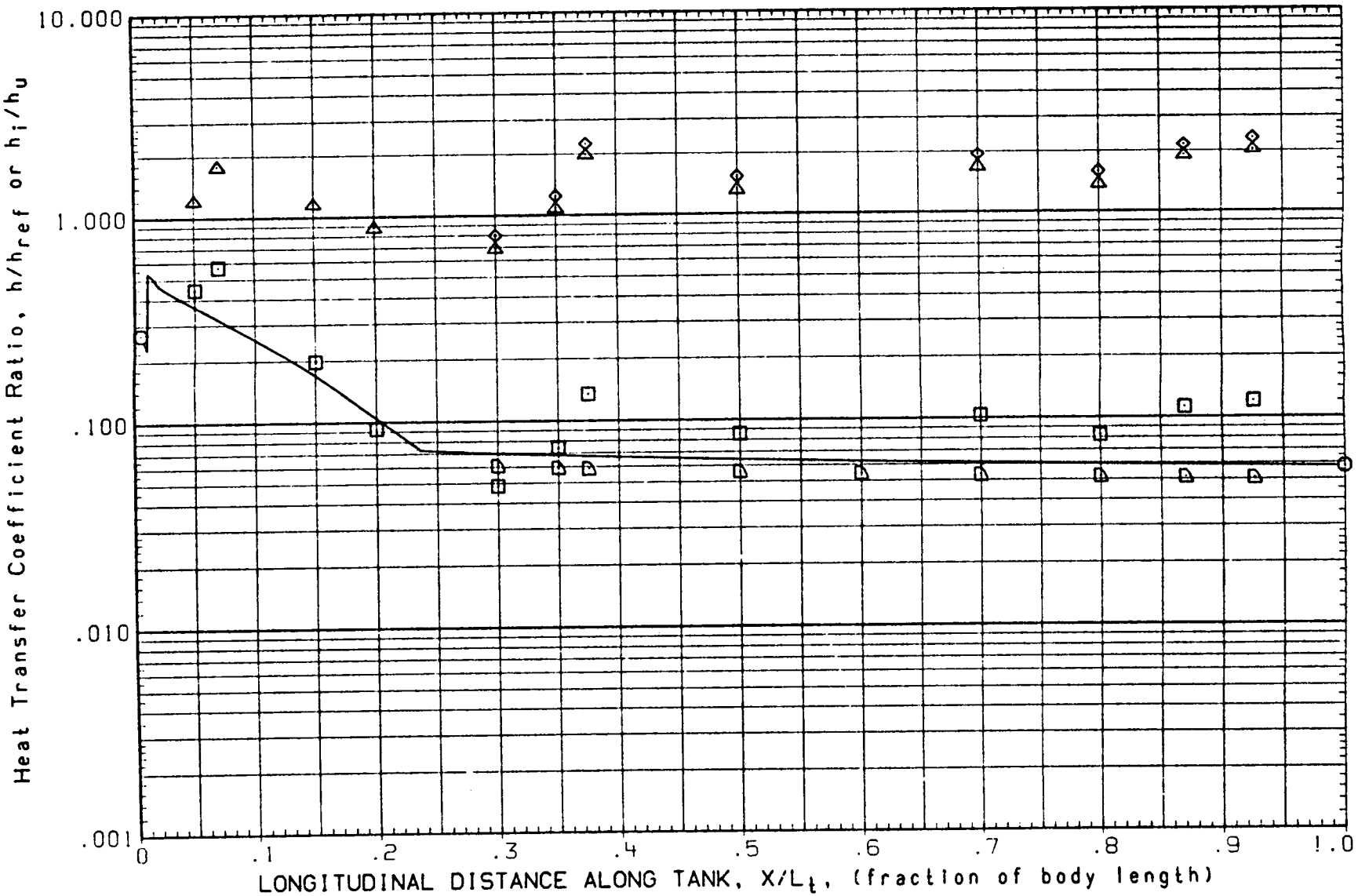

FIG. 4-18 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 HI = 37.700

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT56)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	4.500
(C9NT56)	⬠	DATA NOT AVAILABLE		4.020	5.000	4.500
(V4LT56)	□	DATA NOT AVAILABLE		4.020	5.000	4.500
(X4LT56)	◇	DATA NOT AVAILABLE		4.020	5.000	4.500
(Y4LT56)	△	DATA NOT AVAILABLE		4.020	5.000	4.500

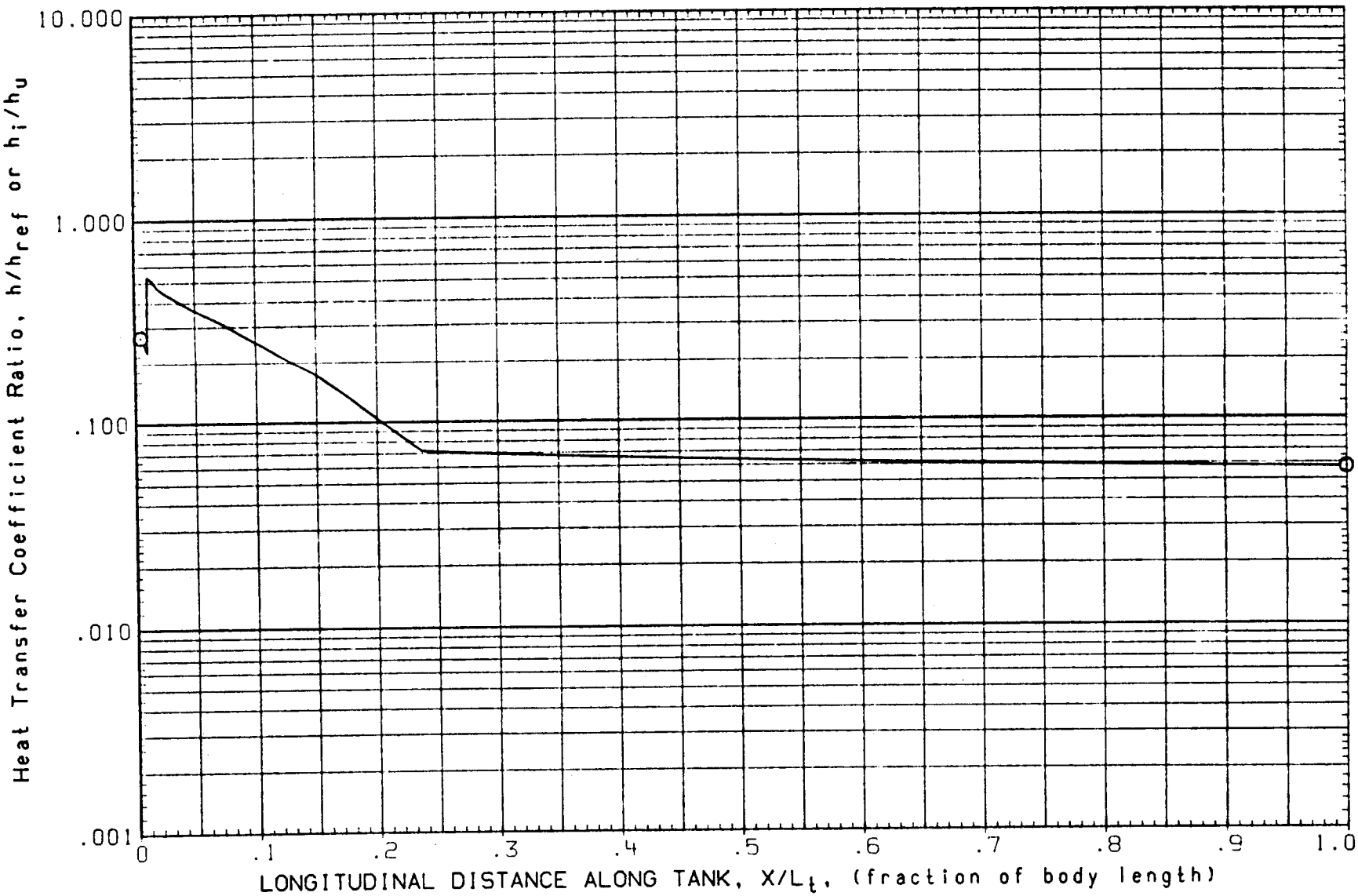

FIG. 4-18 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 39.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT56)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	4.500
(C9NT56)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	4.500
(V4LT56)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	4.500
(X4LT56)	◇	IH85 (W.L. TEST) OTS/ET = V4LT56/C9NT56= HI/HU		4.020	5.000	4.500
(Y4LT56)	△	IH85 (W.L. THEORY) OTS/ET = V4LT56/A9NT56= HI/HU		4.020	5.000	4.500

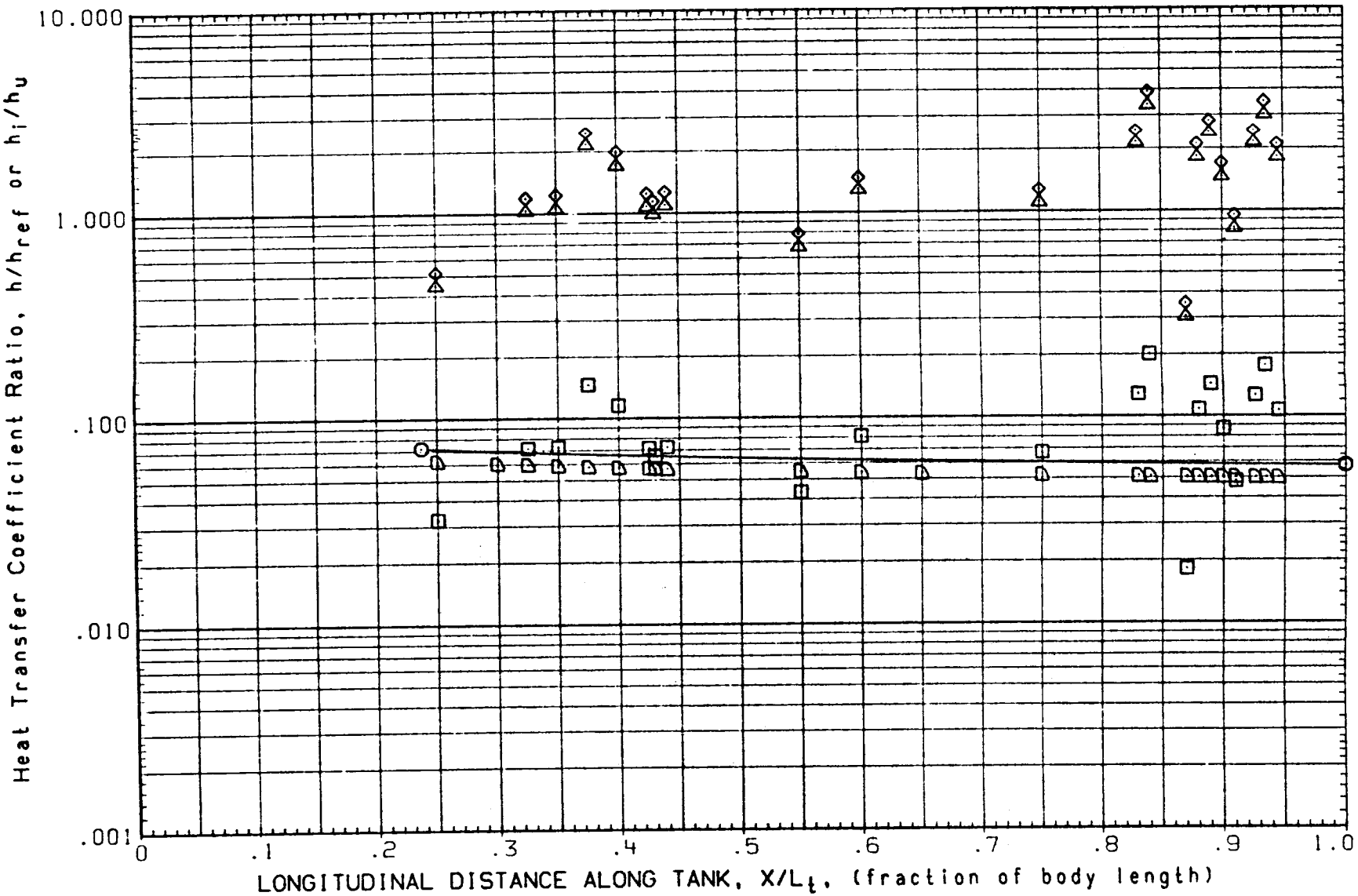

FIG. 4-18 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 4.5
0 < X/LT < 1. (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 45.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT56)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	4.500
(C9NT56)	⌂	DATA NOT AVAILABLE		4.020	5.000	4.500
(V4LT56)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	4.500
(X4LT56)	◇	DATA NOT AVAILABLE		4.020	5.000	4.500
(Y4LT56)	△	IH85 (W.L. THEORY) OTS/ET = V4LT56/A9NT56= HI/HU		4.020	5.000	4.500

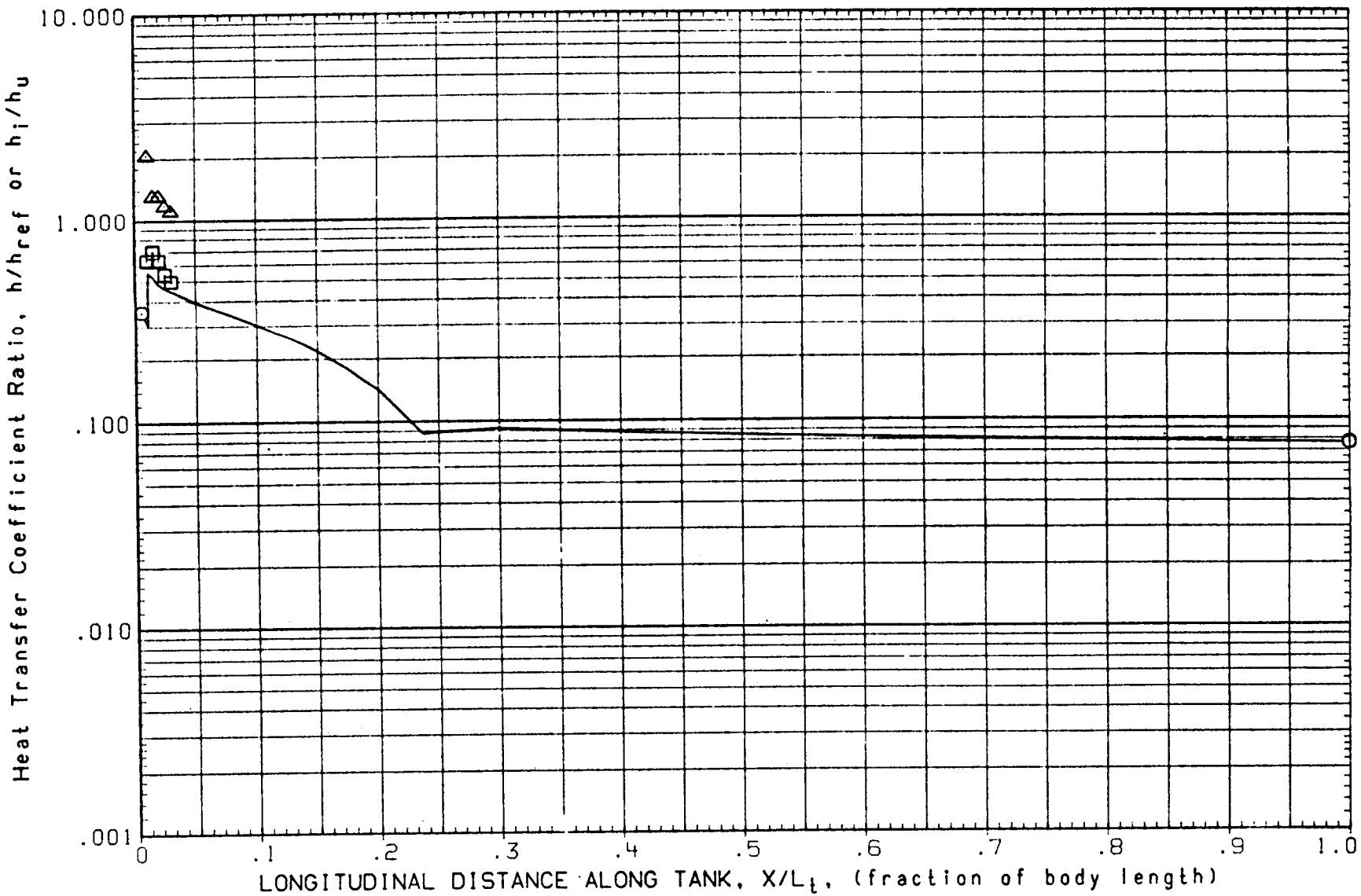

FIG. 4-18 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 180.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT56)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	4.500
(C9NT56)	⬡	DATA NOT AVAILABLE		4.020	5.000	4.500
(V4LT56)	□	DATA NOT AVAILABLE		4.020	5.000	4.500
(X4LT56)	◇	DATA NOT AVAILABLE		4.020	5.000	4.500
(Y4LT56)	△	DATA NOT AVAILABLE		4.020	5.000	4.500

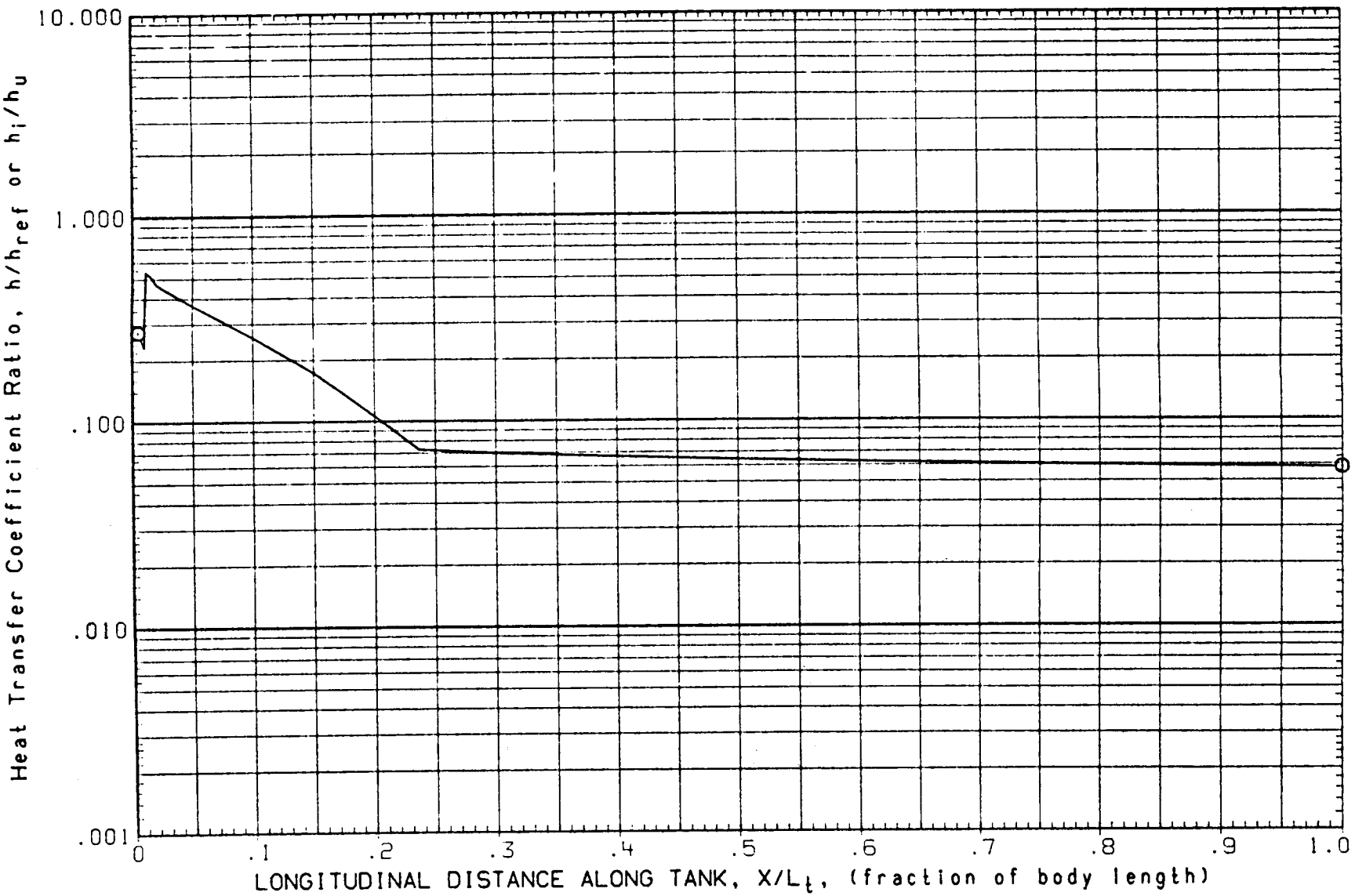

FIG. 4-18 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 235.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT56)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	4.500
(C9NT56)	⊿	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	4.500
(V4LT56)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	4.500
(X4LT56)	◇	IH85 (W.L. TEST) OTS/ET = V4LT56/C9NT56=	HI/HU	4.020	5.000	4.500
(Y4LT56)	△	IH85 (W.L. THEORY) OTS/ET = V4LT56/A9NT56=	HI/HU	4.020	5.000	4.500

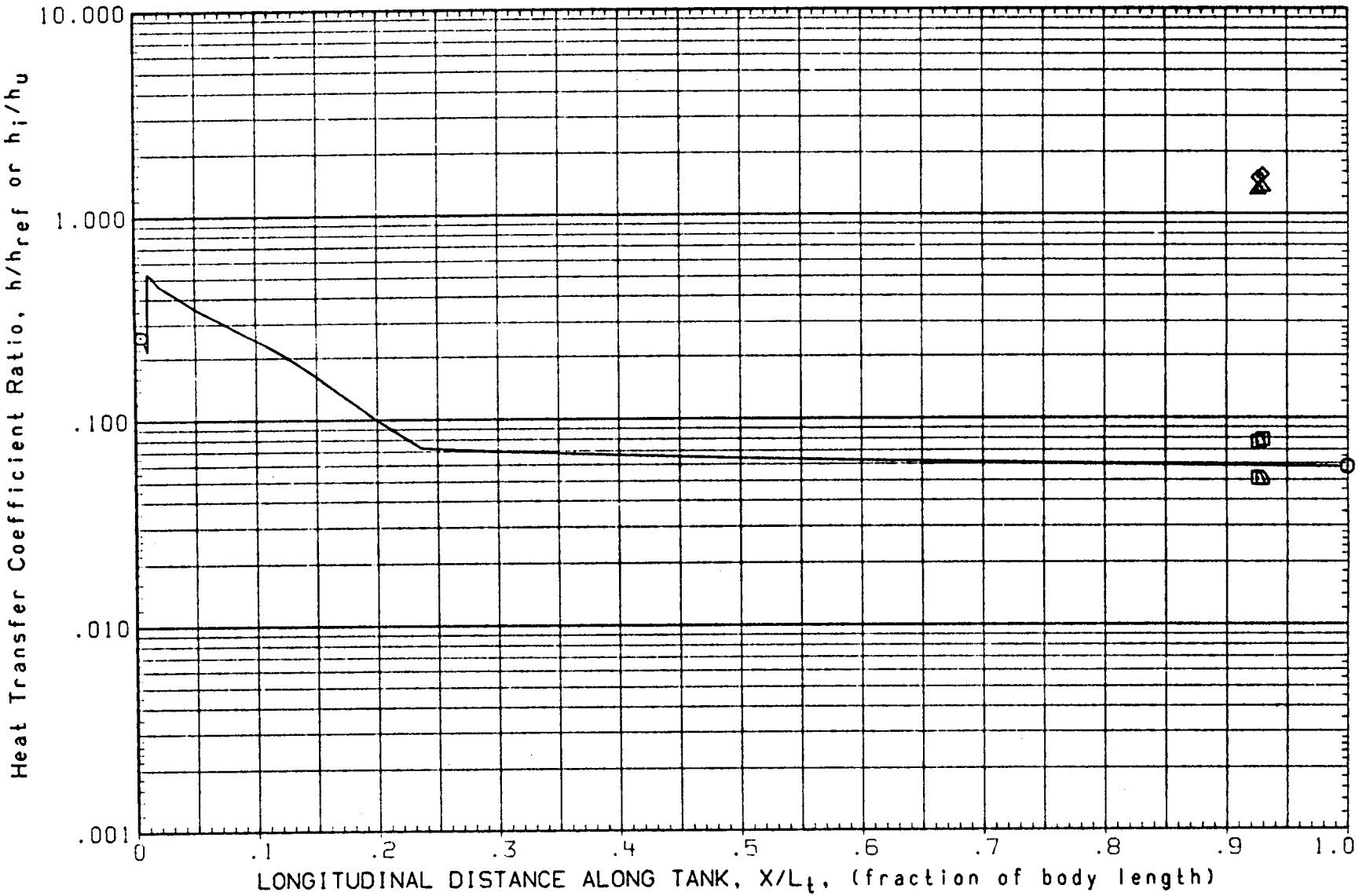

FIG. 4-18 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 247.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT56)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	4.500
(C9NT56)	⌂	DATA NOT AVAILABLE		4.020	5.000	4.500
(V4LT56)	□	DATA NOT AVAILABLE		4.020	5.000	4.500
(X4LT56)	◇	DATA NOT AVAILABLE		4.020	5.000	4.500
(Y4LT56)	△	DATA NOT AVAILABLE		4.020	5.000	4.500

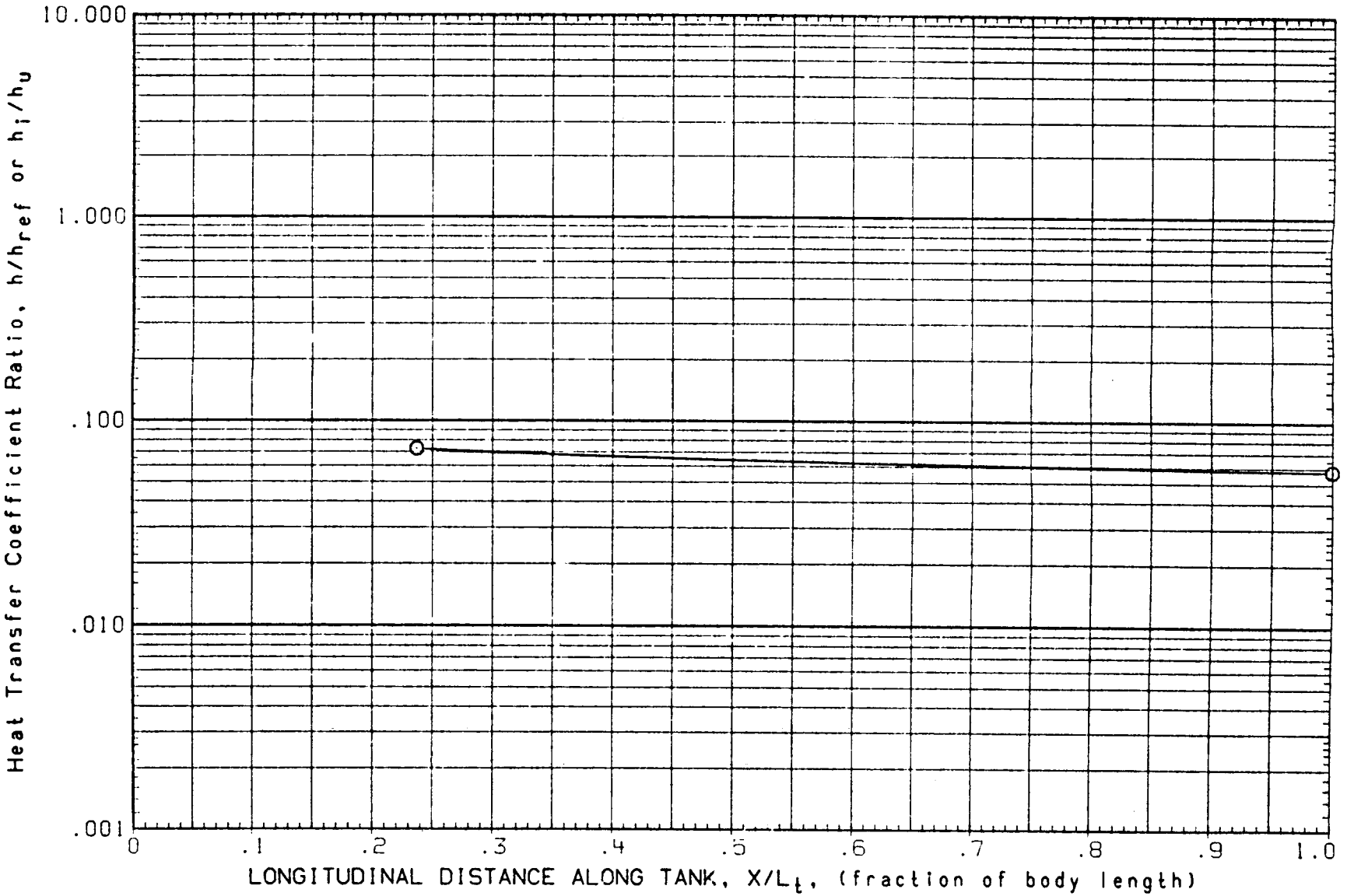

FIG. 4-18 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 247.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT56)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	4.500
(C9NT56)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	4.500
(V4LT56)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	4.500
(X4LT56)	◇	IH85 (W.L. TEST) OTS/ET = V4LT56/C9NT56=	HI/HU	4.020	5.000	4.500
(Y4LT56)	△	IH85 (W.L. THEORY) OTS/ET = V4LT56/A9NT56=	HI/HU	4.020	5.000	4.500

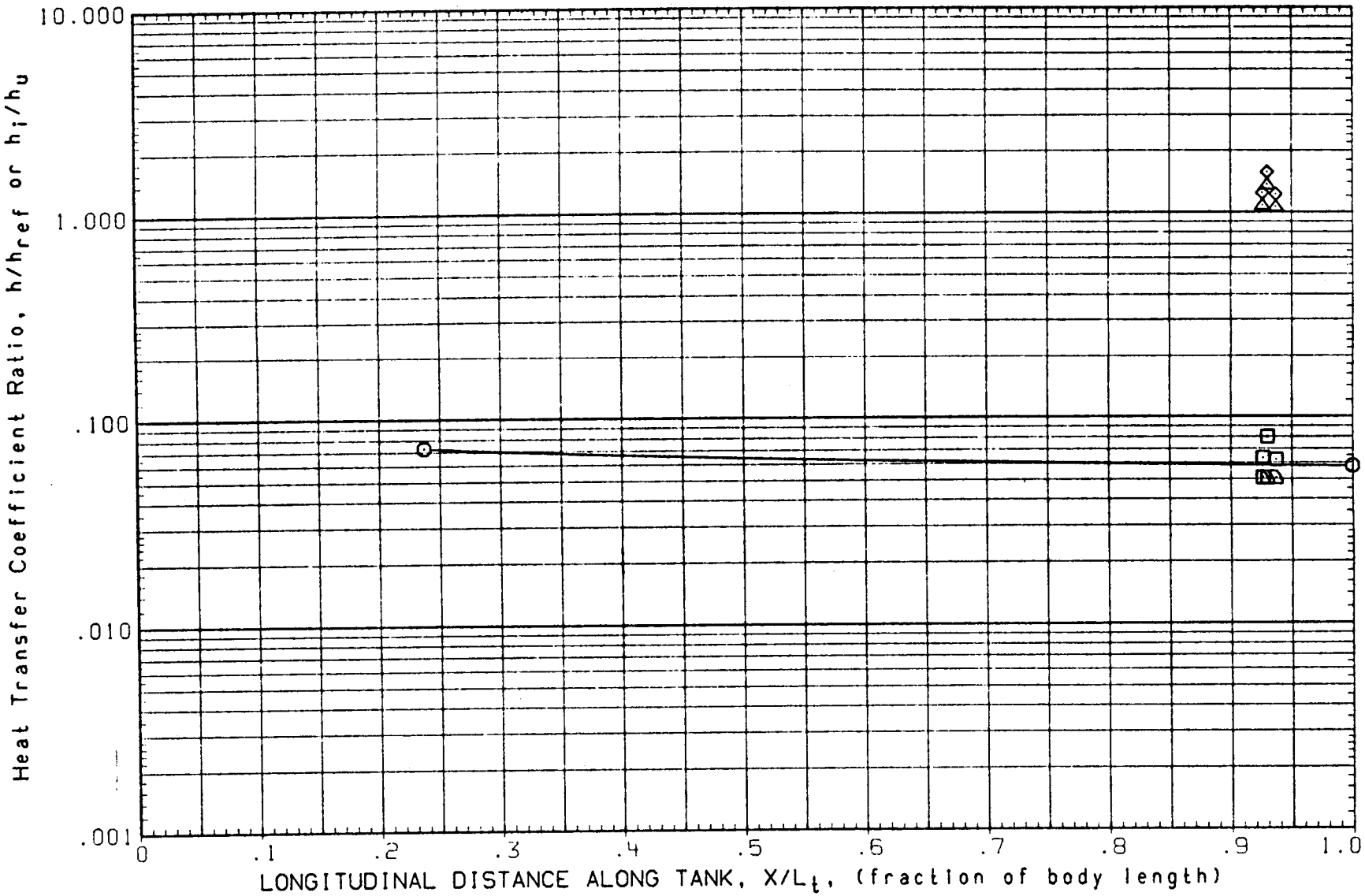

FIG. 4-18 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 250.570

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT56)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	4.500
(C9NT56)	□	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	4.500
(V4LT56)	⊡	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	4.500
(X4LT56)	◇	IH85 (W.L. TEST) OTS/ET = V4LT56/C9NT56=	HI/HU	4.020	5.000	4.500
(Y4LT56)	△	IH85 (W.L. THEORY) OTS/ET = V4LT56/A9NT56=	HI/HU	4.020	5.000	4.500

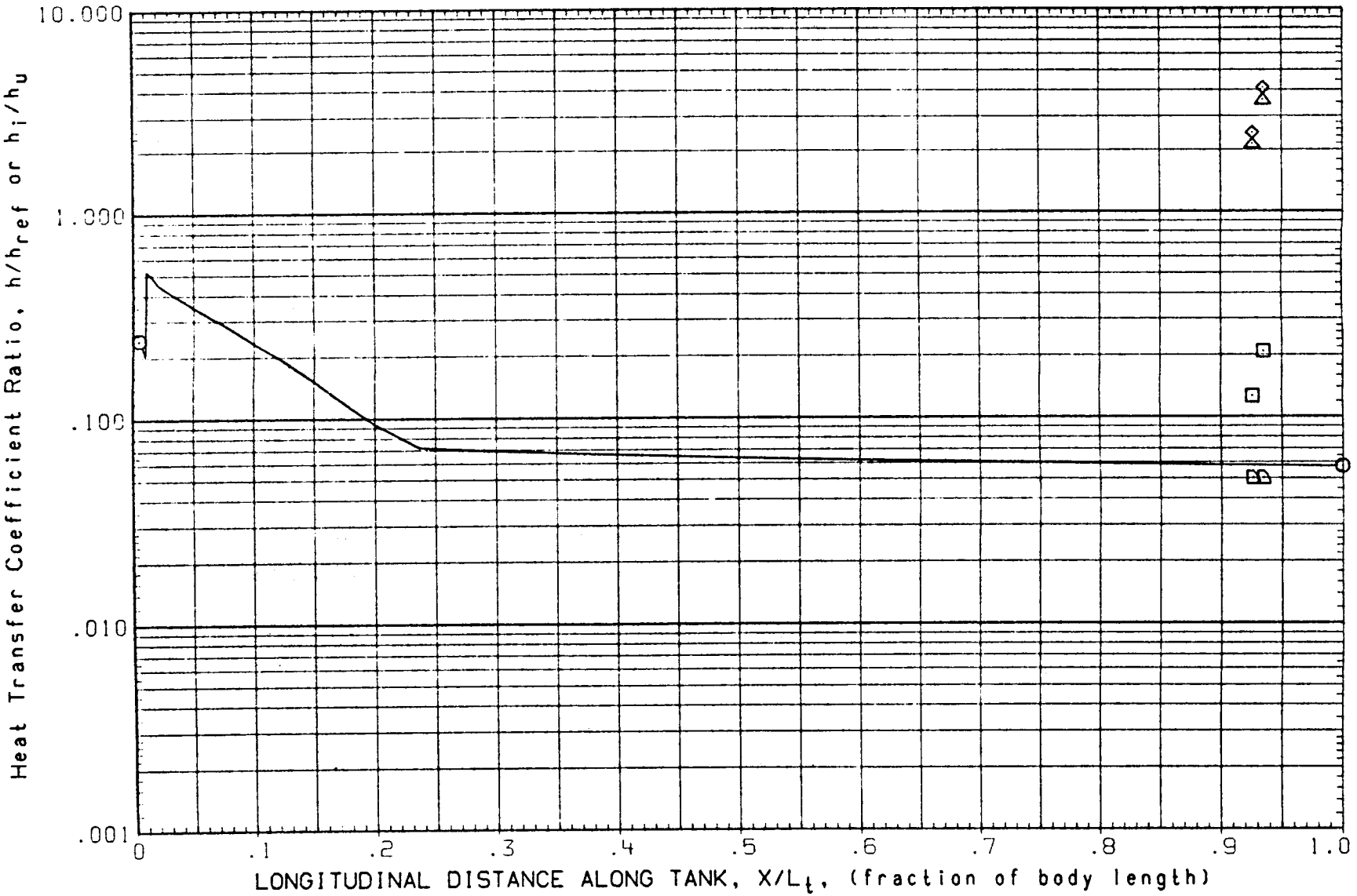

FIG. 4-18 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 258.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT56)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	4.020	5.000	4.500
(C9NT56)	◗	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	4.020	5.000	4.500
(V4LT56)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	5.000	4.500
(X4LT56)	◇	IH85 (W.L. TEST) OTS/ET = V4LT56/C9NT56= HI/HU	4.020	5.000	4.500
(Y4LT56)	△	IH85 (W.L. THEORY) OTS/ET = V4LT56/A9NT56= HI/HU	4.020	5.000	4.500

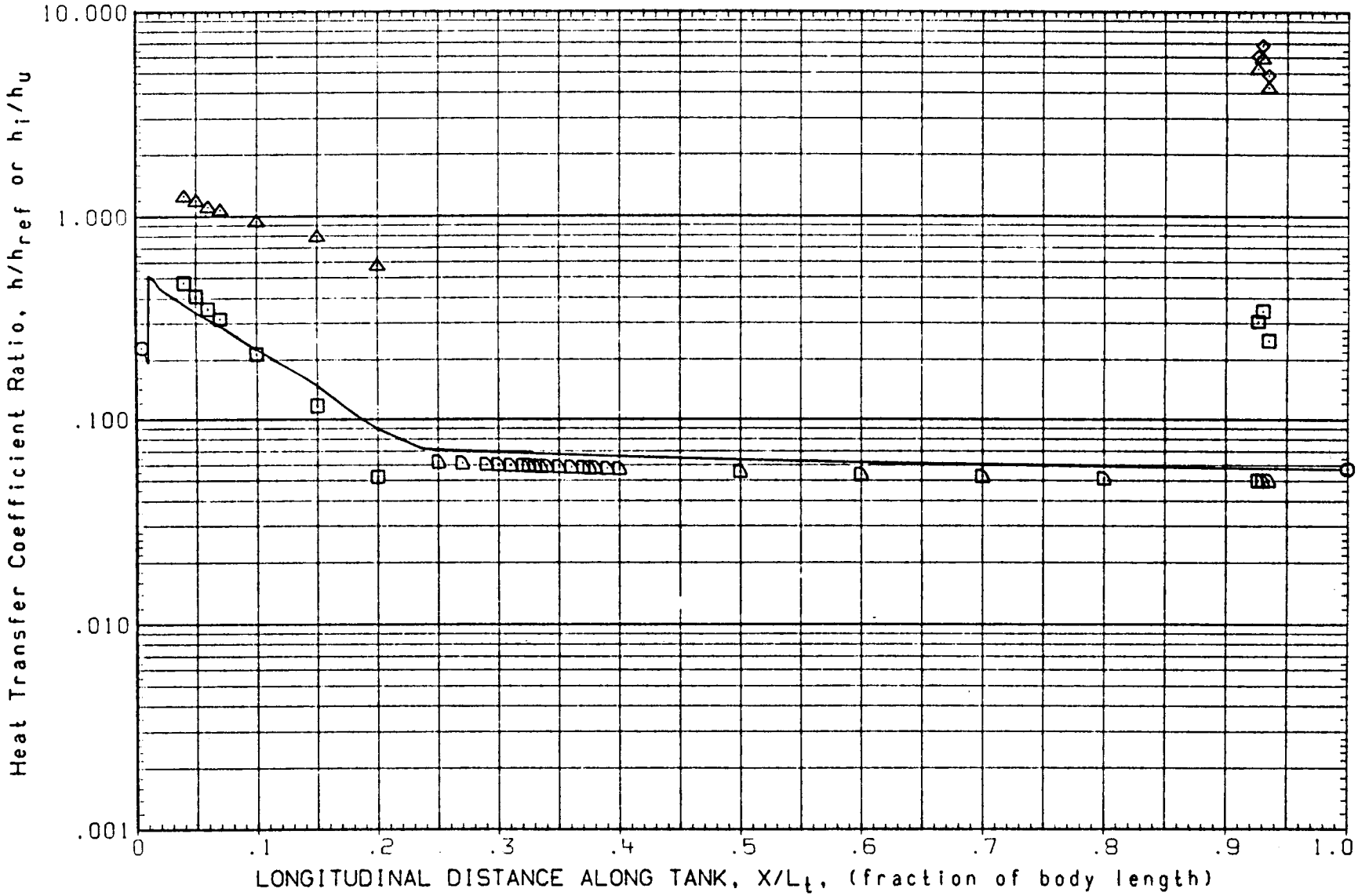

FIG. 4-18 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 270.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT56)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	4.500
(C9NT56)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	4.500
(V4LT56)	□	IH85, AEDC V4IA-W5, CONFIGURATION 0 (T) S		4.020	5.000	4.500
(X4LT56)	◇	IH85 (W.L. TEST) OTS/ET = V4LT56/C9NT56=	HI/HU	4.020	5.000	4.500
(Y4LT56)	△	IH85 (W.L. THEORY) OTS/ET = V4LT56/A9NT56=	HI/HU	4.020	5.000	4.500

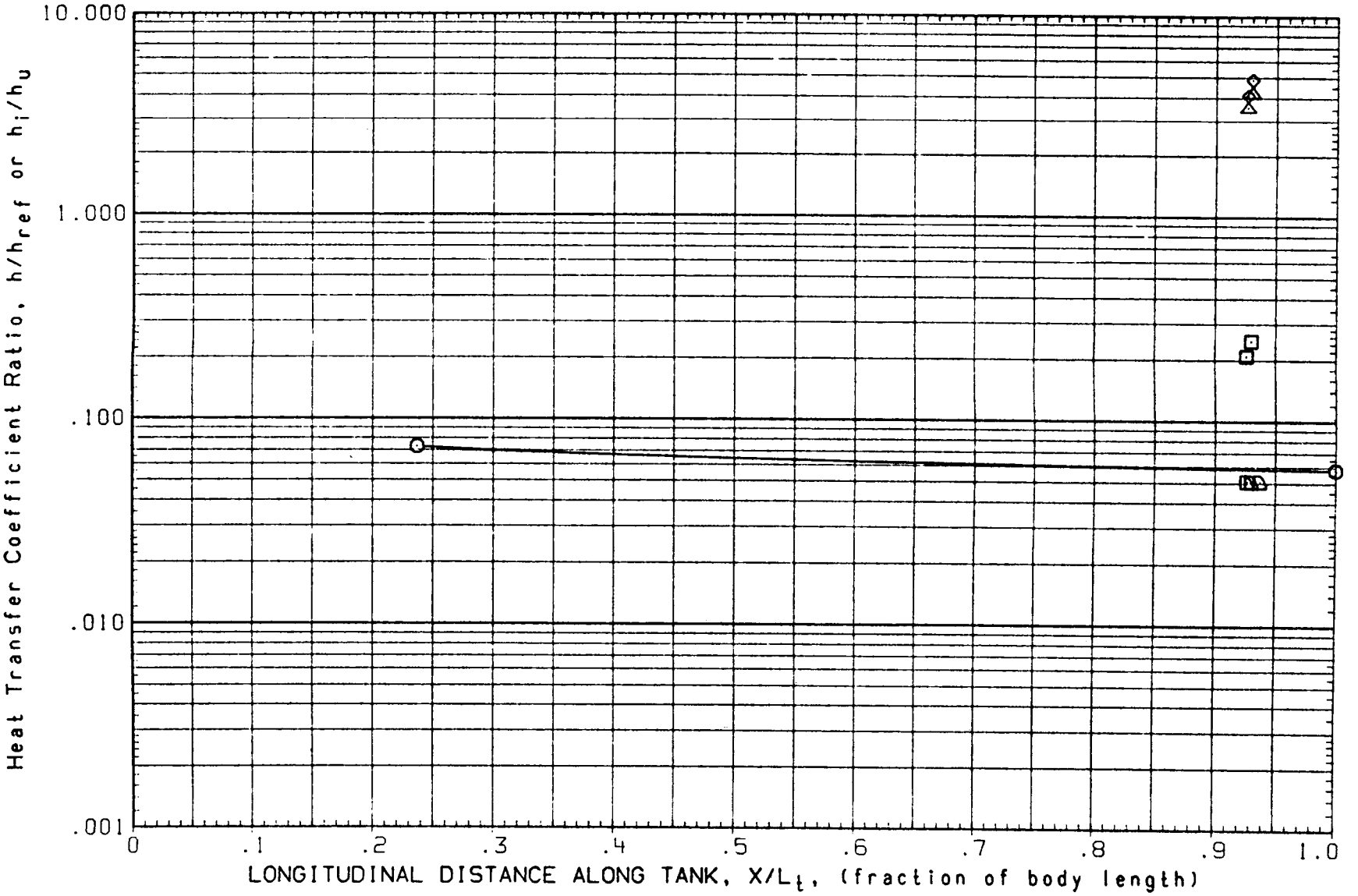

FIG. 4-18 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 289.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT56)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	4.020	5.000	4.500
(C9NT56)	⬠	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	4.020	5.000	4.500
(V4LT56)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	5.000	4.500
(X4LT56)	◇	IH85 (W.L. TEST) OTS/ET = V4LT56/C9NT56= HI/HU	4.020	5.000	4.500
(Y4LT56)	△	IH85 (W.L. THEORY) OTS/ET = V4LT56/A9NT56= HI/HU	4.020	5.000	4.500

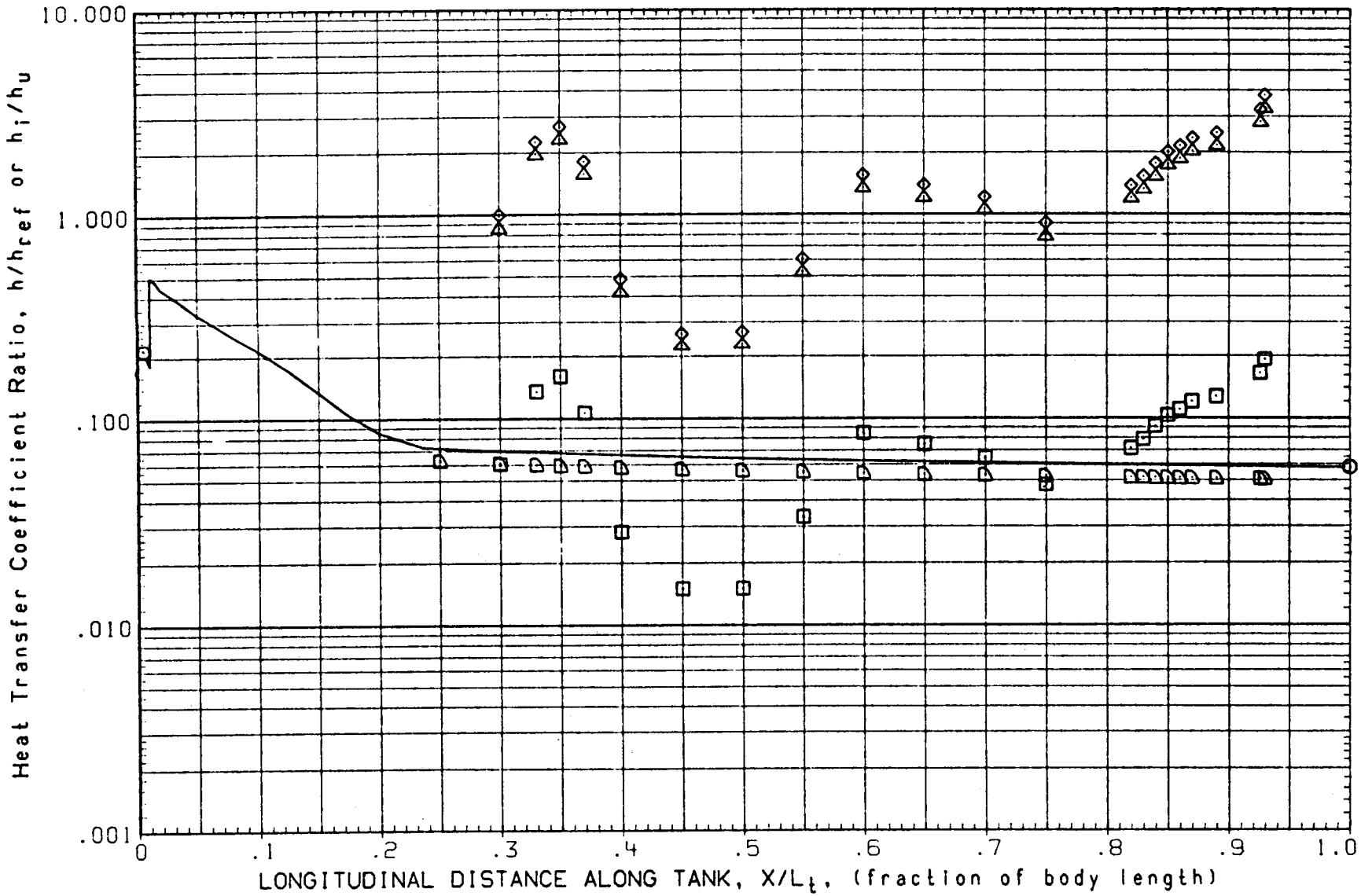

FIG. 4-18 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 292.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT56)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	4.500
(C9NT56)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	4.500
(V4LT56)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	4.500
(X4LT56)	◇	IH85 (W.L. TEST) OTS/ET = V4LT56/C9NT56=	HI/HU	4.020	5.000	4.500
(Y4LT56)	△	IH85 (W.L. THEORY) OTS/ET = V4LT56/A9NT56=	HI/HU	4.020	5.000	4.500

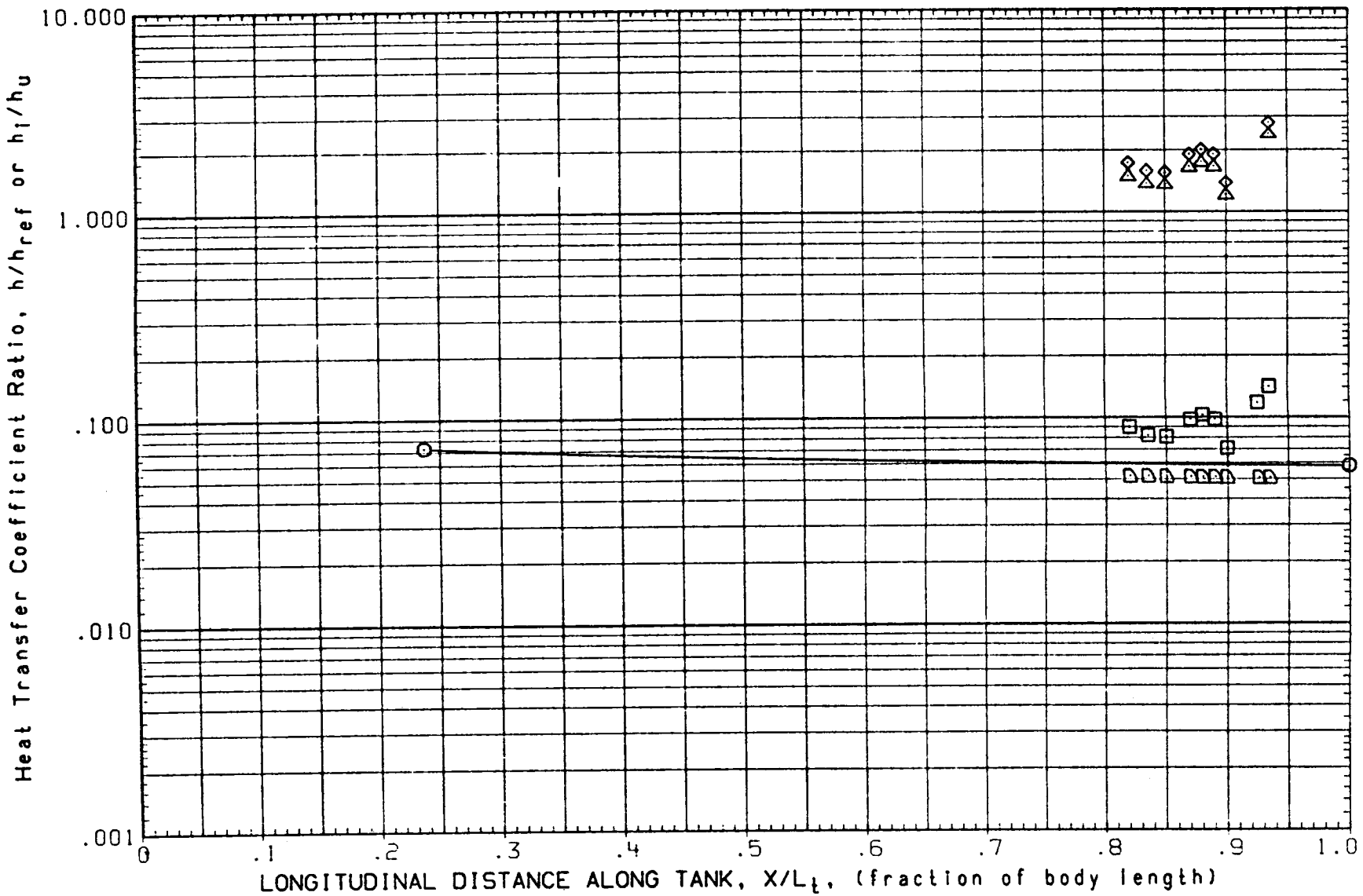

FIG. 4-18 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 301.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT56)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	4.500
(C9NT56)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	4.500
(V4LT56)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	4.500
(X4LT56)	◇	IH85 (W.L. TEST) OTS/ET = V4LT56/C9NT56=	HI/HU	4.020	5.000	4.500
(Y4LT56)	△	IH85 (W.L. THEORY) OTS/ET = V4LT56/A9NT56=	HI/HU	4.020	5.000	4.500

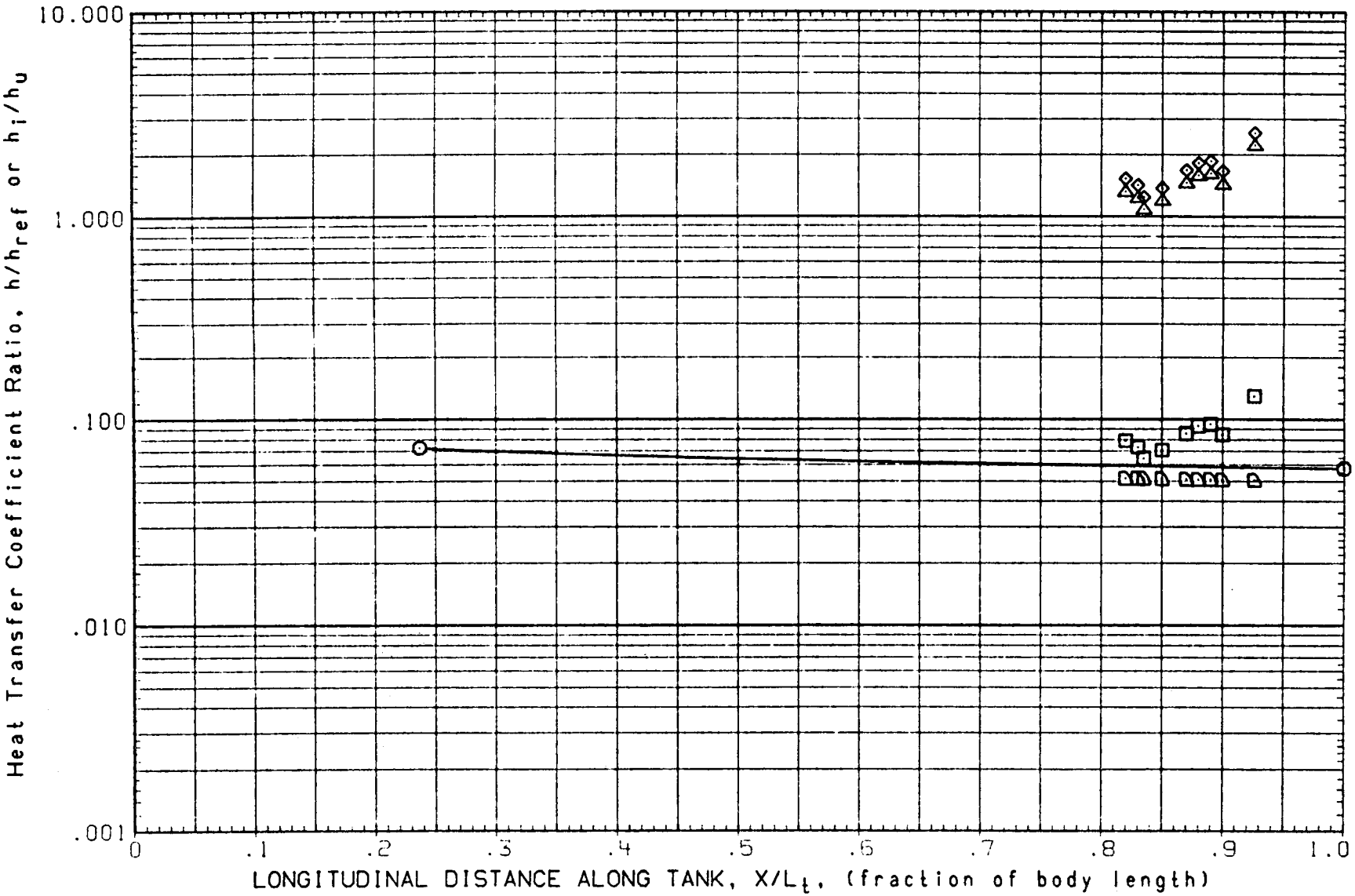

FIG. 4-18 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 305.400

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT56)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	4.500
(C9NT56)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	4.500
(V4LT56)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	4.500
(X4LT56)	◇	IH85 (W.L. TEST) OTS/ET = V4LT56/C9NT56=	HI/HU	4.020	5.000	4.500
(Y4LT56)	△	IH85 (W.L. THEORY) OTS/ET = V4LT56/A9NT56=	HI/HU	4.020	5.000	4.500

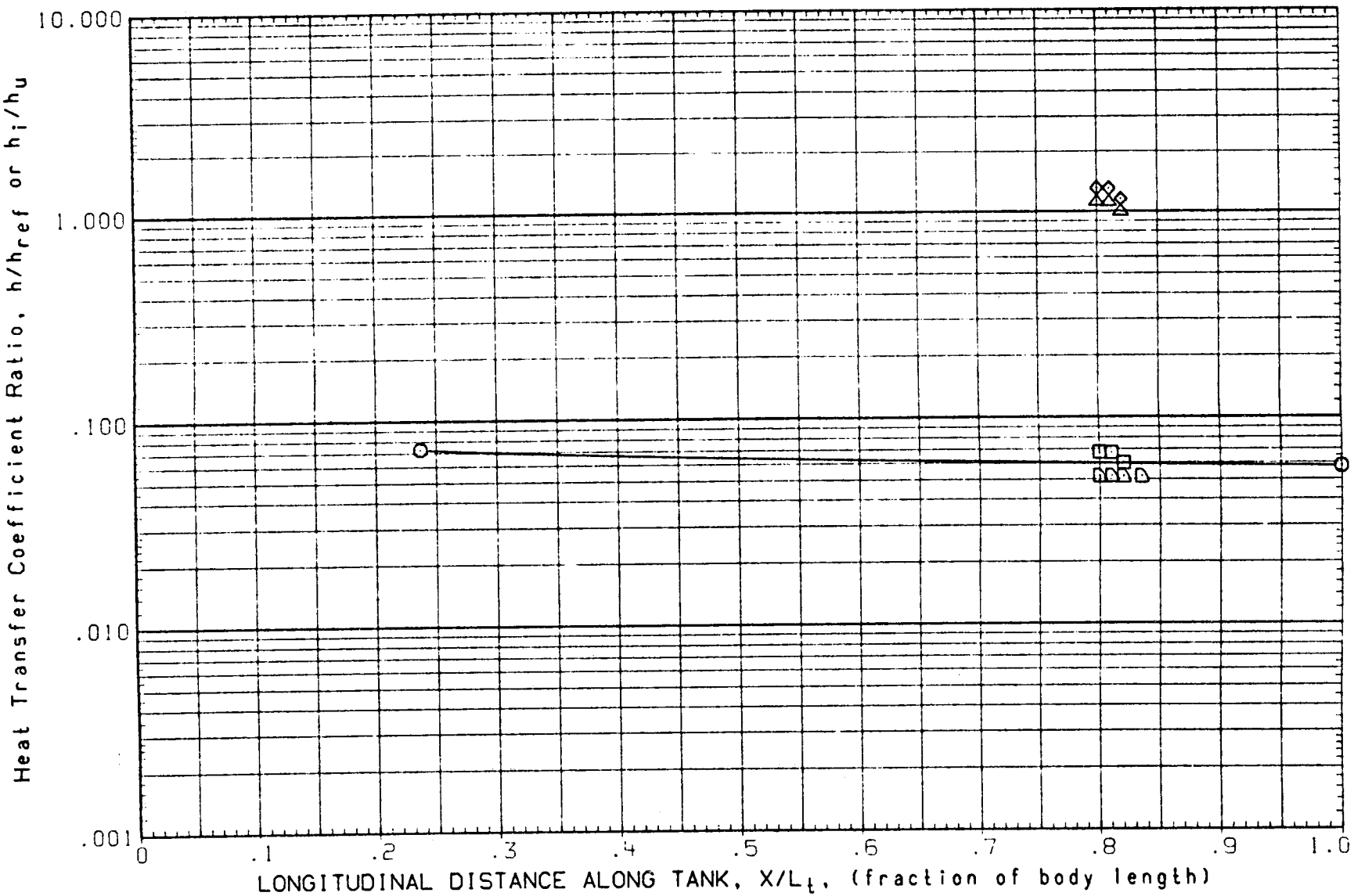

FIG. 4-18 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 309.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT56)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	4.500
(C9NT56)	D	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	4.500
(V4LT56)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (*) S		4.020	5.000	4.500
(X4LT56)	◇	IH85 (W.L. TEST) OTS/ET = V4LT56/C9NT56=	HI/HU	4.020	5.000	4.500
(Y4LT56)	△	IH85 (W.L. THEORY) OTS/ET = V4LT56/A9NT56=	HI/HU	4.020	5.000	4.500

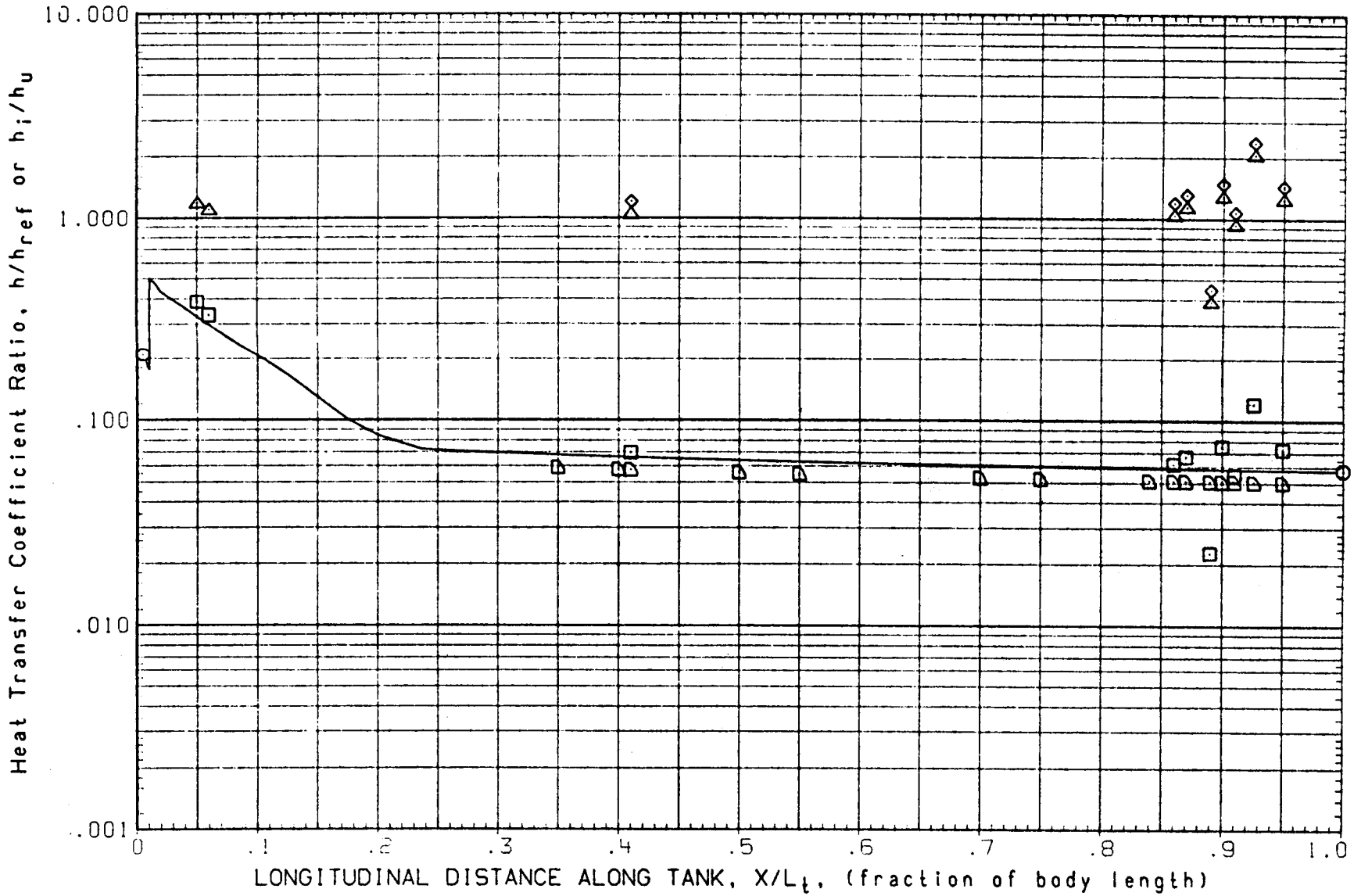

FIG. 4-18 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 315.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT56)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	4.500
(C9NT56)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	4.500
(V4LT56)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	4.500
(X4LT56)	◇	IH85 (W.L. TEST) OTS/ET = V4LT56/C9NT56= HI/HU		4.020	5.000	4.500
(Y4LT56)	△	IH85 (W.L. THEORY) OTS/ET = V4LT56/A9NT56= HI/HU		4.020	5.000	4.500

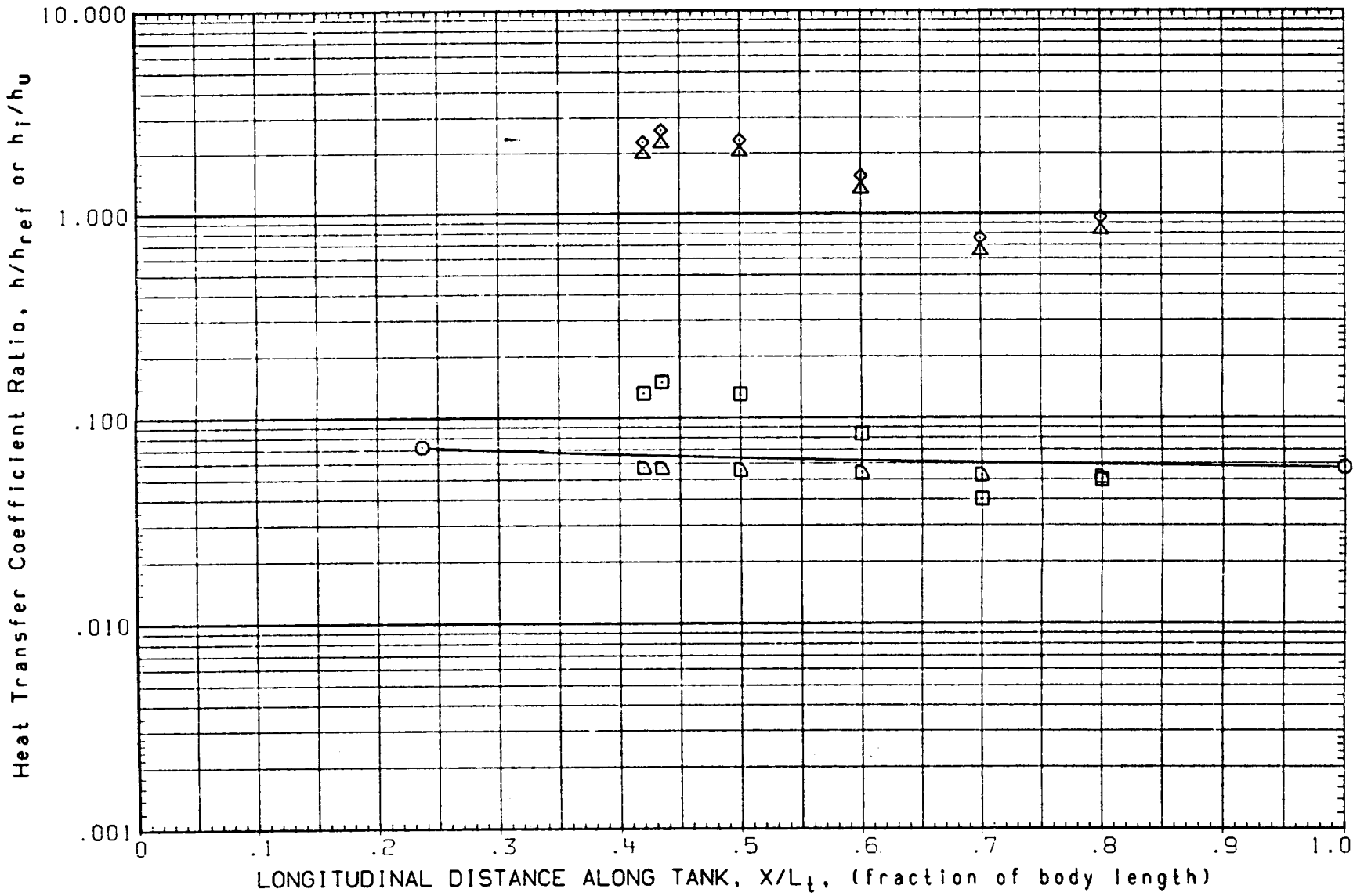

FIG. 4-18 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 322.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT56)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	4.500
(C9NT56)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	4.500
(V4LT56)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	4.500
(X4LT56)	◇	IH85 (W.L. TEST) OTS/ET = V4LT56/C9NT56=	HI/HU	4.020	5.000	4.500
(Y4LT56)	△	IH85 (W.L. THEORY) OTS/ET = V4LT56/A9NT56=	HI/HU	4.020	5.000	4.500

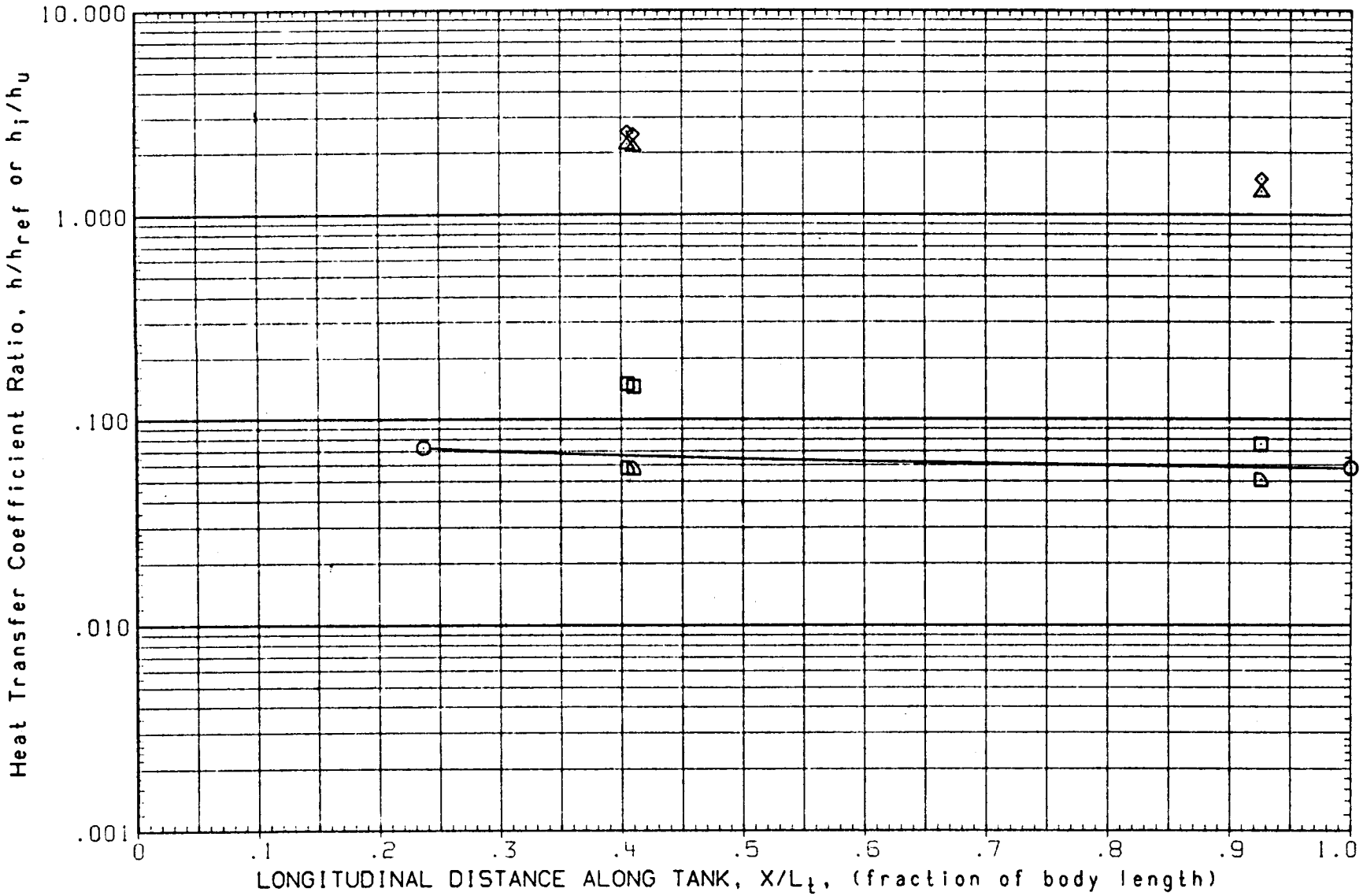

FIG. 4-18 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 324.450

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT56)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	4.500
(C9NT56)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	4.500
(V4LT56)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	4.500
(X4LT56)	◇	IH85 (W.L. TEST) OTS/ET = V4LT56/C9NT56=	HI/HU	4.020	5.000	4.500
(Y4LT56)	△	IH85 (W.L. THEORY) OTS/ET = V4LT56/A9NT56=	HI/HU	4.020	5.000	4.500

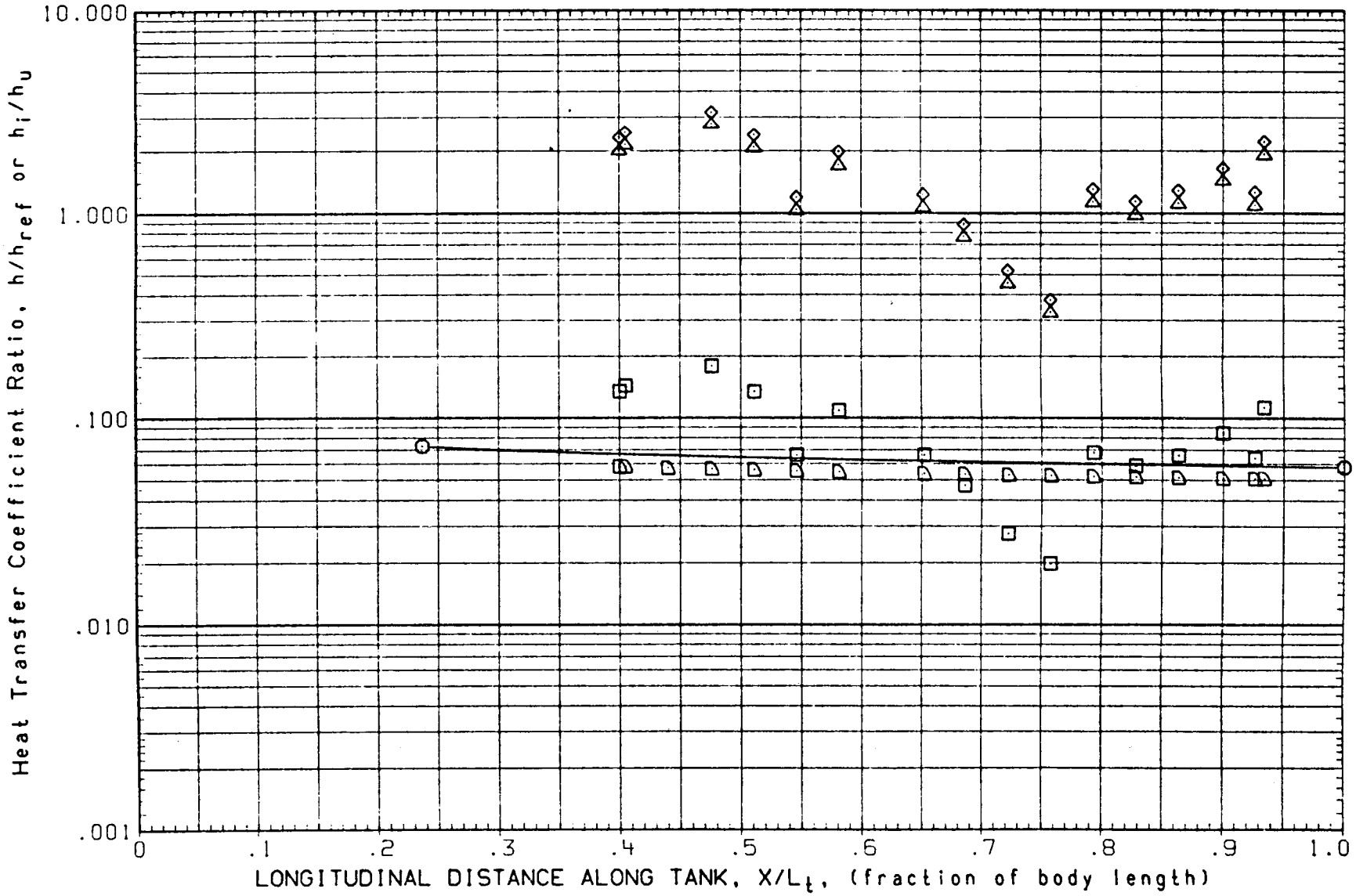

FIG. 4-18 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 326.850

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT56)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	4.500
(C9NT56)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	4.500
(V4LT56)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	4.500
(X4LT56)	◇	IH85 (W.L. TEST) OTS/ET = V4LT56/C9NT56=	HI/HU	4.020	5.000	4.500
(Y4LT56)	△	IH85 (W.L. THEORY) OTS/ET = V4LT56/A9NT56=	HI/HU	4.020	5.000	4.500

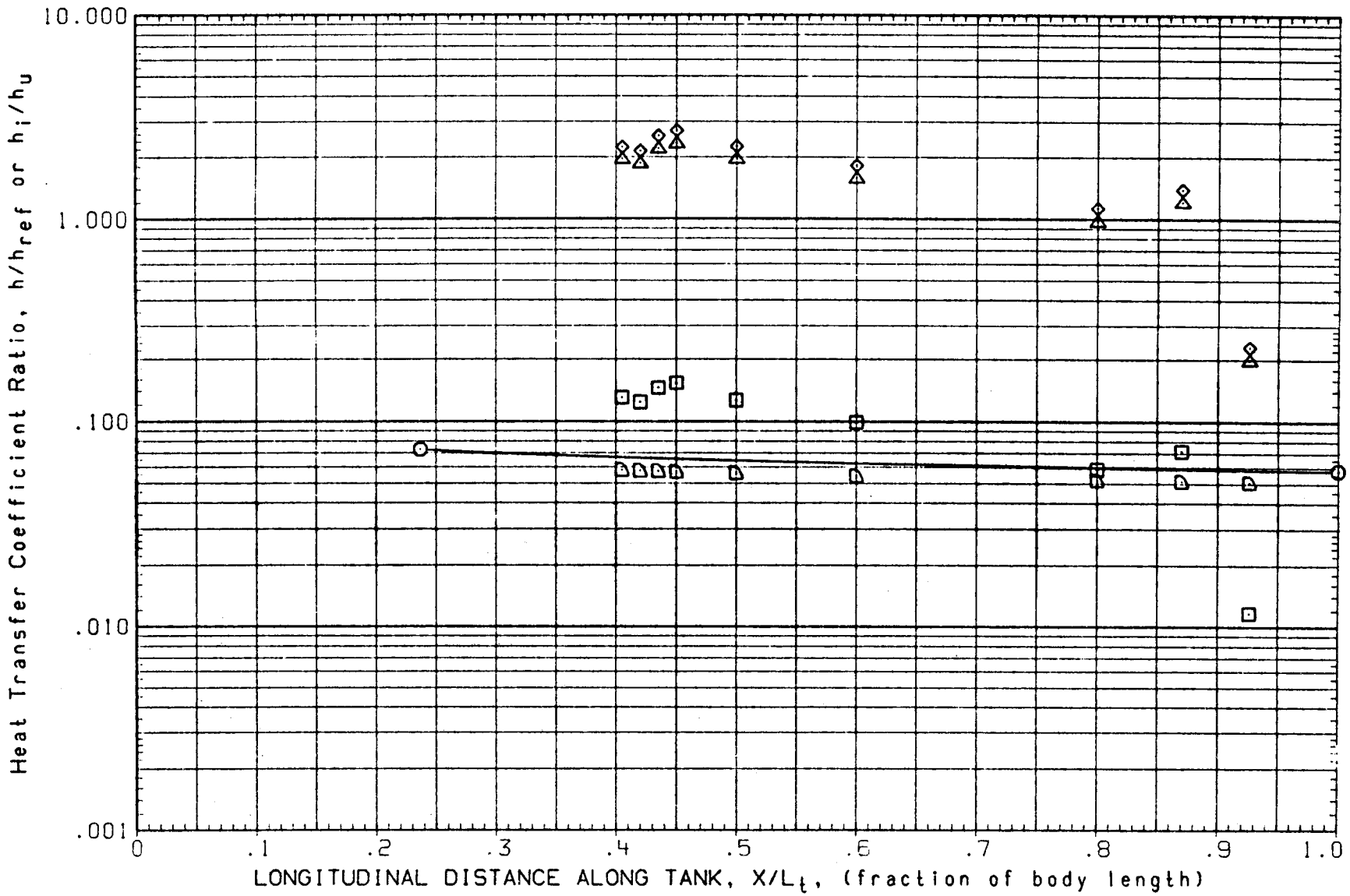

FIG. 4-18 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 330.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT56)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	4.020	5.000	4.500
(C9NT56)	⌂	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	4.020	5.000	4.500
(V4LT56)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	5.000	4.500
(X4LT56)	◇	IH85 (W.L. TEST) OTS/ET = V4LT56/C9NT56= HI/HU	4.020	5.000	4.500
(Y4LT56)	△	IH85 (W.L. THEORY) OTS/ET = V4LT56/A9NT56= HI/HU	4.020	5.000	4.500

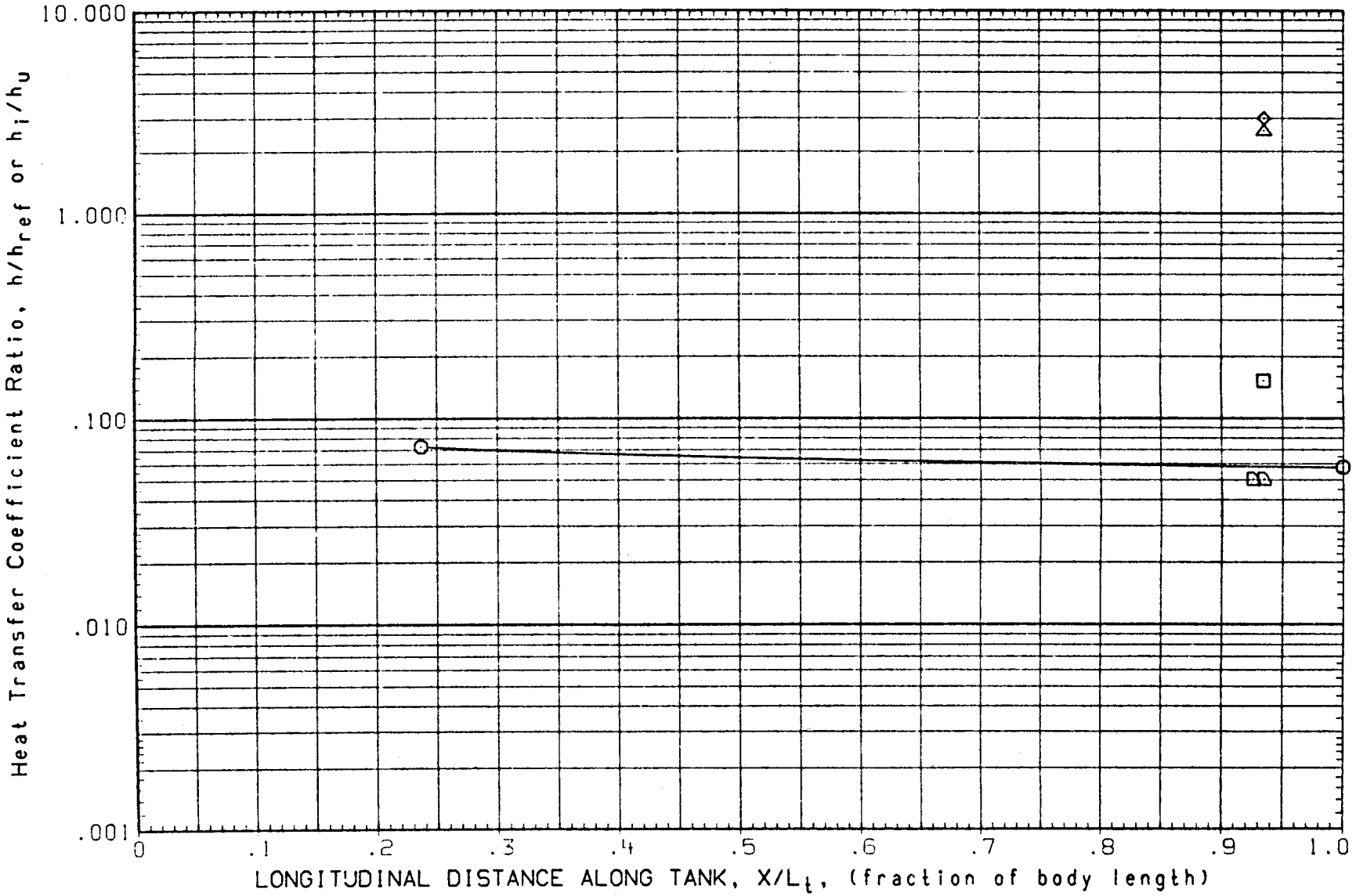

FIG. 4-18 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 334.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT56)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	4.500
(C9NT56)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	4.500
(V4LT56)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	4.500
(X4LT56)	◇	IH85 (W.L. TEST) OTS/ET = V4LT56/C9NT56=	HI/HU	4.020	5.000	4.500
(Y4LT56)	△	IH85 (W.L. THEORY) OTS/ET = V4LT56/A9NT56=	HI/HU	4.020	5.000	4.500

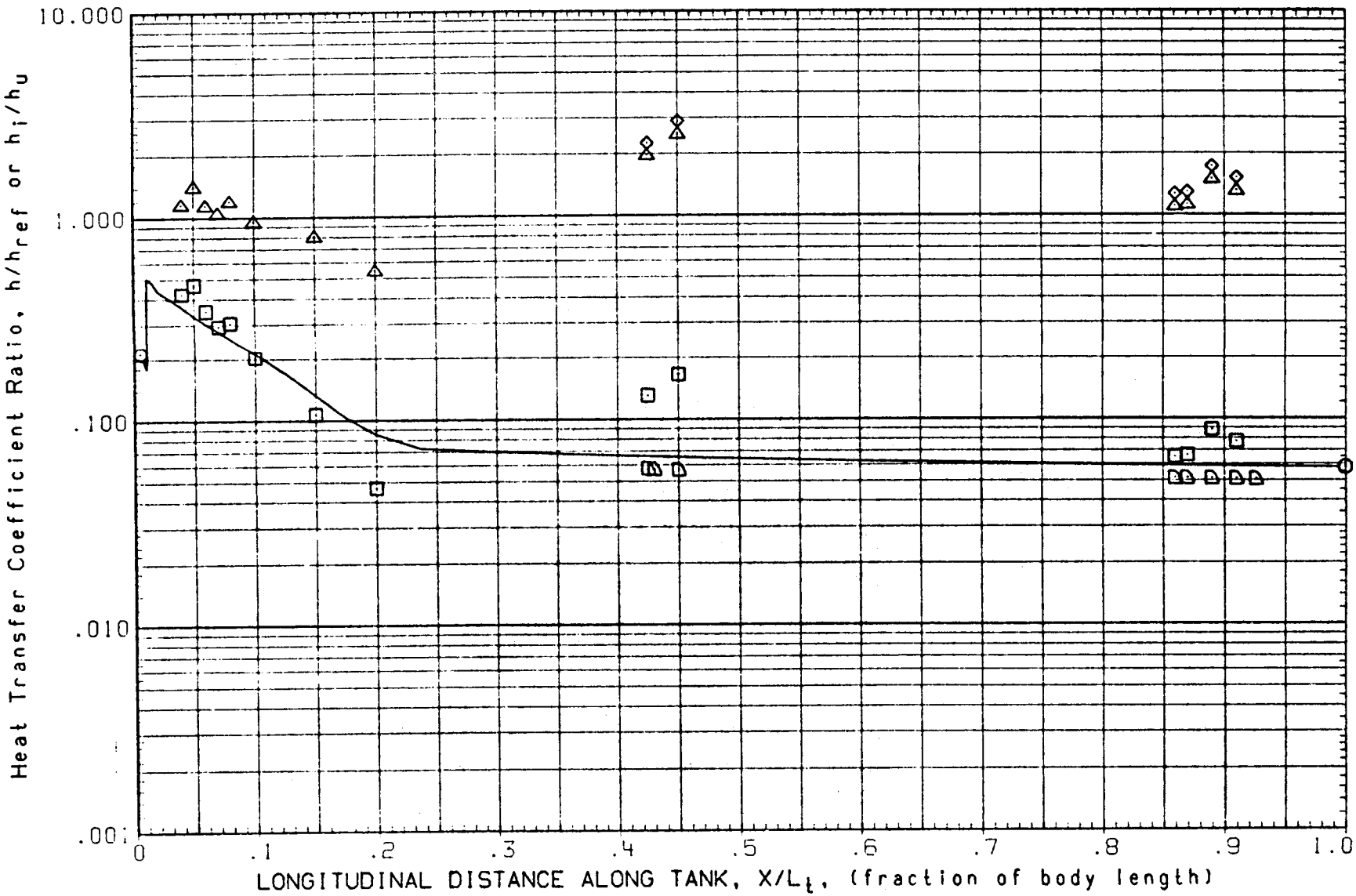

FIG. 4-18 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 337.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT56)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	4.500
(C9NT56)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	4.500
(V4LT56)	□	DATA NOT AVAILABLE		4.020	5.000	4.500
(X4LT56)	◇	DATA NOT AVAILABLE		4.020	5.000	4.500
(Y4LT56)	△	DATA NOT AVAILABLE		4.020	5.000	4.500

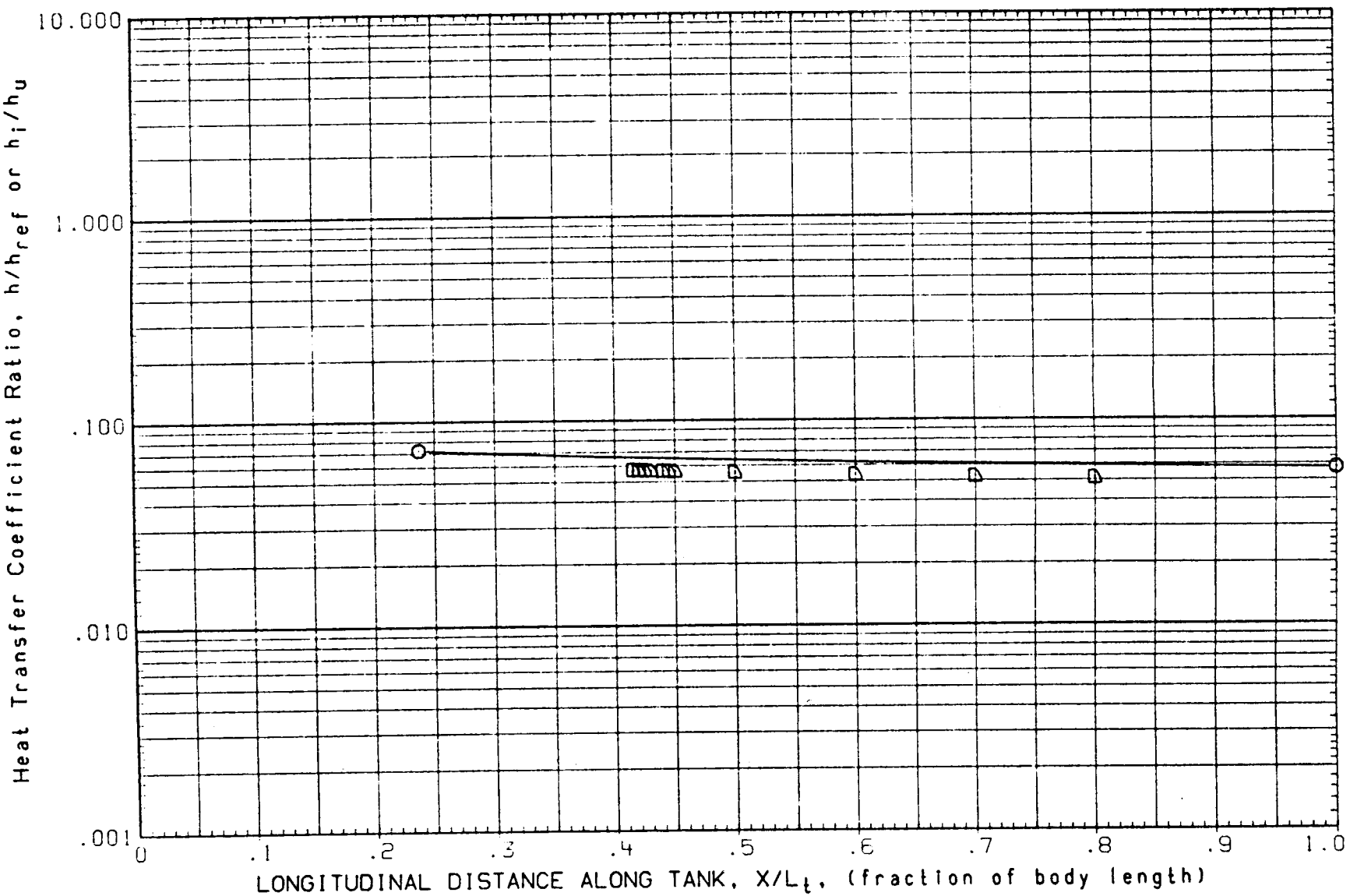

FIG. 4-18 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 343.120

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT56)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	4.500
(C9NT56)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	4.500
(V4LT56)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	4.500
(X4LT56)	◇	IH85 (W.L. TEST) OTS/ET = V4LT56/C9NT56=	HI/HU	4.020	5.000	4.500
(Y4LT56)	△	IH85 (W.L. THEORY) OTS/ET = V4LT56/A9NT56=	HI/HU	4.020	5.000	4.500

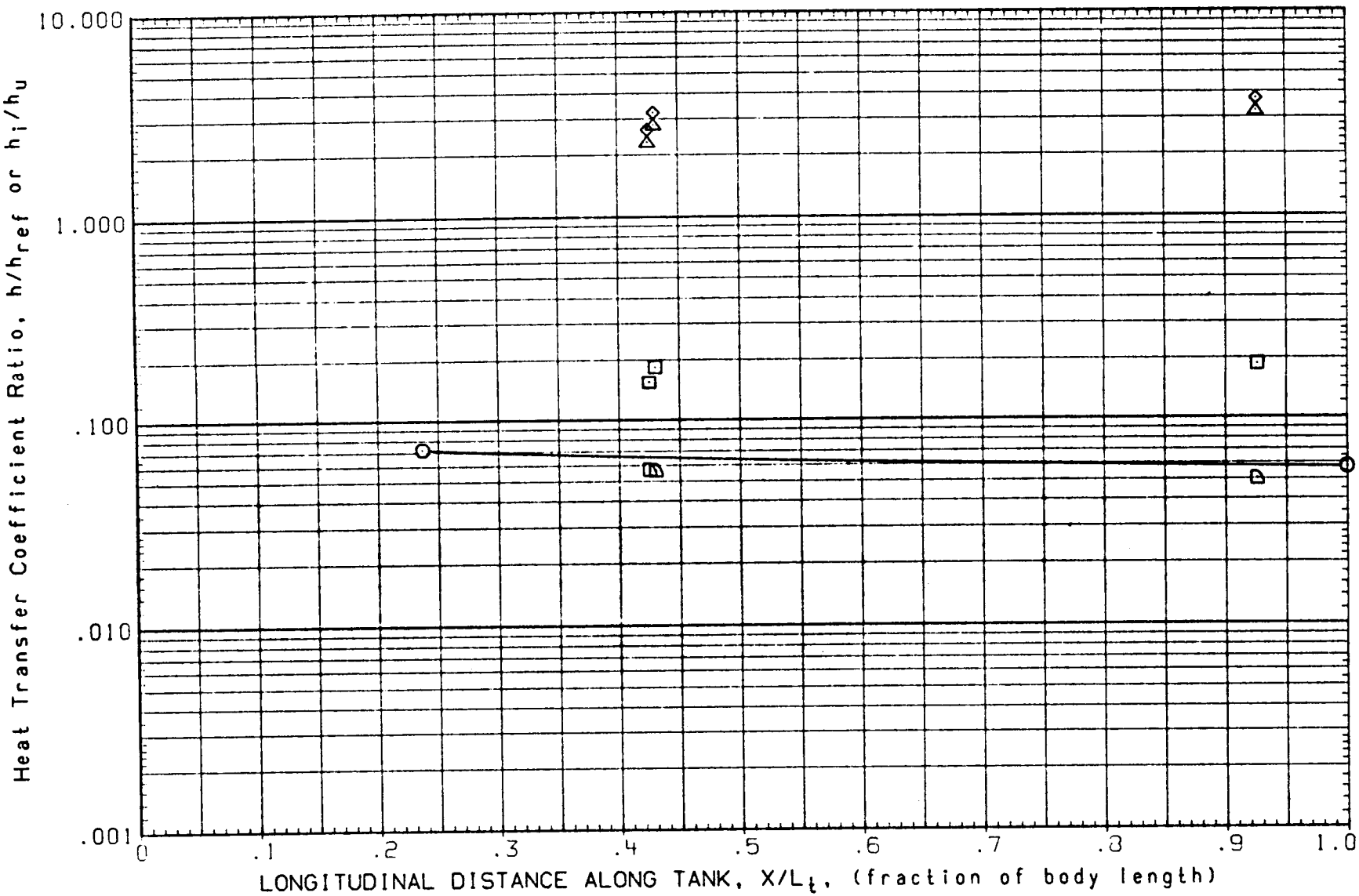

FIG. 4-18 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 345.560

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT56)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	4.500
(C9NT56)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	4.500
(V4LT56)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	4.500
(X4LT56)	◇	IH85 (W.L. TEST) OTS/ET = V4LT56/C9NT56=	HI/HU	4.020	5.000	4.500
(Y4LT56)	△	IH85 (W.L. THEORY) OTS/ET = V4LT56/A9NT56=	HI/HU	4.020	5.000	4.500

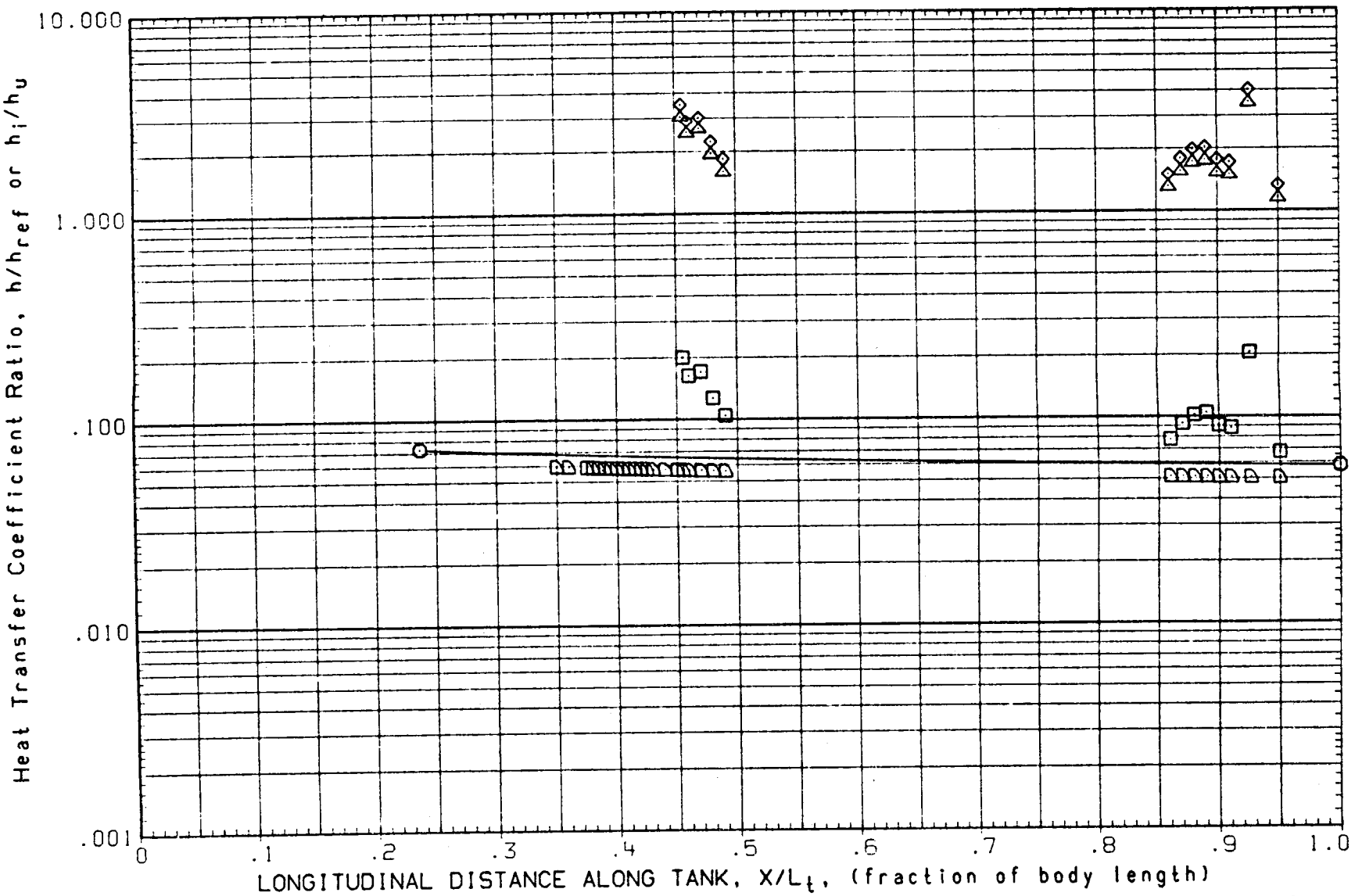

FIG. 4-18 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 348.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT56)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	4.500
(C9NT56)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	4.500
(V4LT56)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	4.500
(X4LT56)	◇	IH85 (W.L. TEST) OTS/ET = V4LT56/C9NT56=	HI/HU	4.020	5.000	4.500
(Y4LT56)	△	IH85 (W.L. THEORY) OTS/ET = V4LT56/A9NT56=	HI/HU	4.020	5.000	4.500

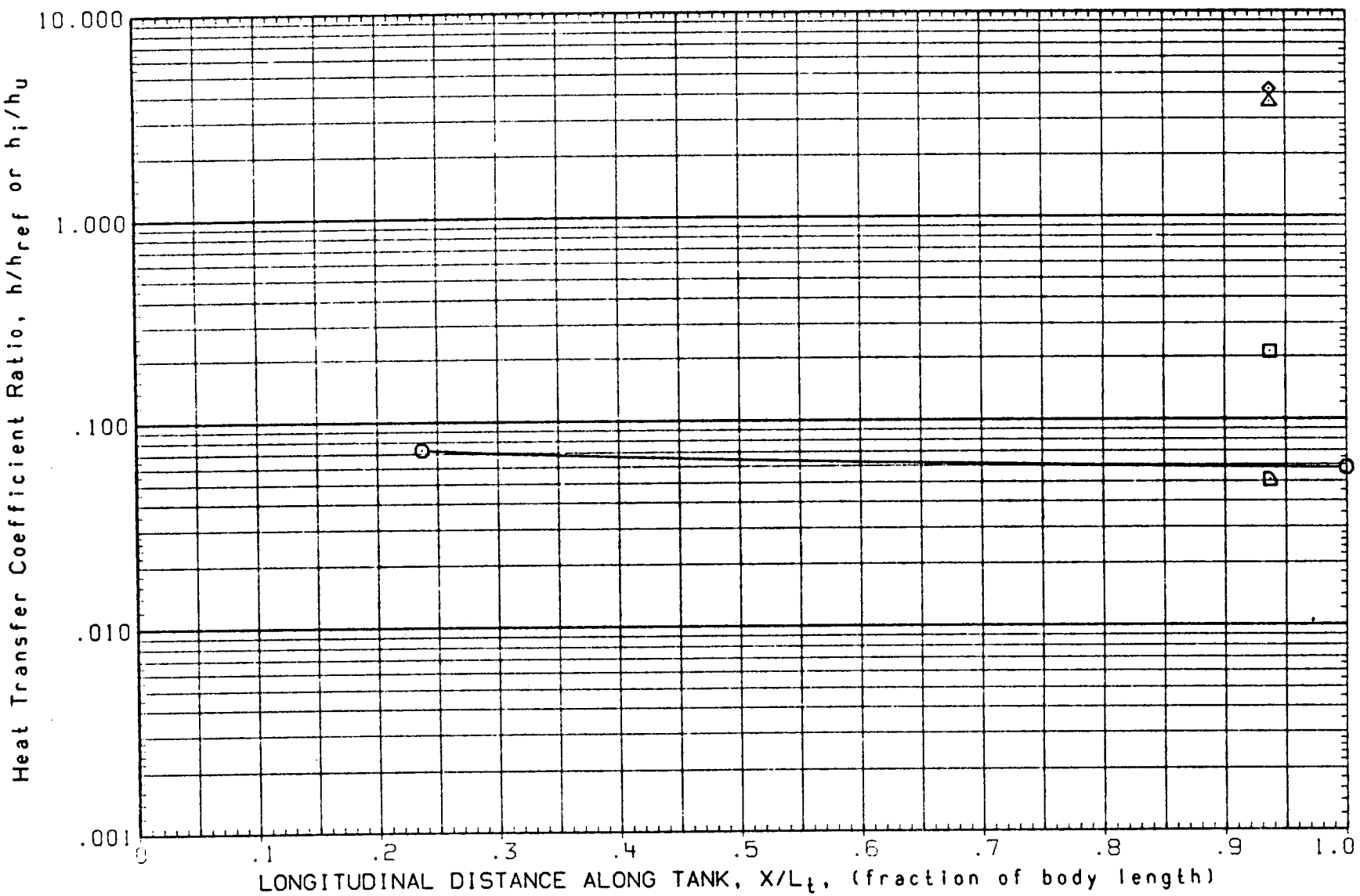

FIG. 4-18 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 352.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT56)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	4.500
(C9NT56)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	4.500
(V4LT56)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	4.500
(X4LT56)	◇	IH85 (W.L. TEST) OTS/ET = V4LT56/C9NT56=	HI/HU	4.020	5.000	4.500
(Y4LT56)	△	IH85 (W.L. THEORY) OTS/ET = V4LT56/A9NT56=	HI/HU	4.020	5.000	4.500

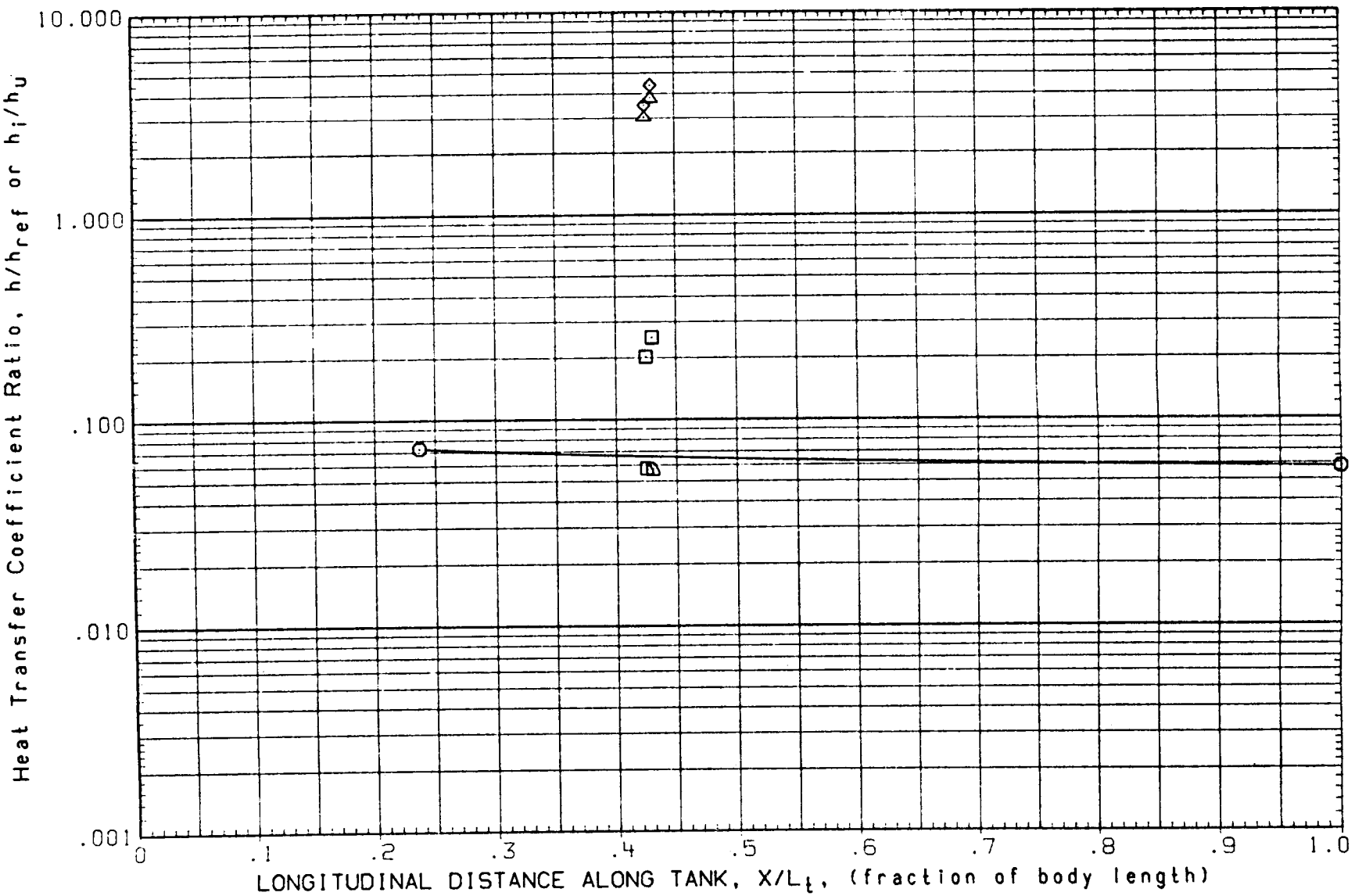

FIG. 4-18 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 354.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT56)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	4.500
(C9NT56)	◗	DATA NOT AVAILABLE		4.020	5.000	4.500
(V4LT56)	□	DATA NOT AVAILABLE		4.020	5.000	4.500
(X4LT56)	◇	DATA NOT AVAILABLE		4.020	5.000	4.500
(Y4LT56)	△	DATA NOT AVAILABLE		4.020	5.000	4.500

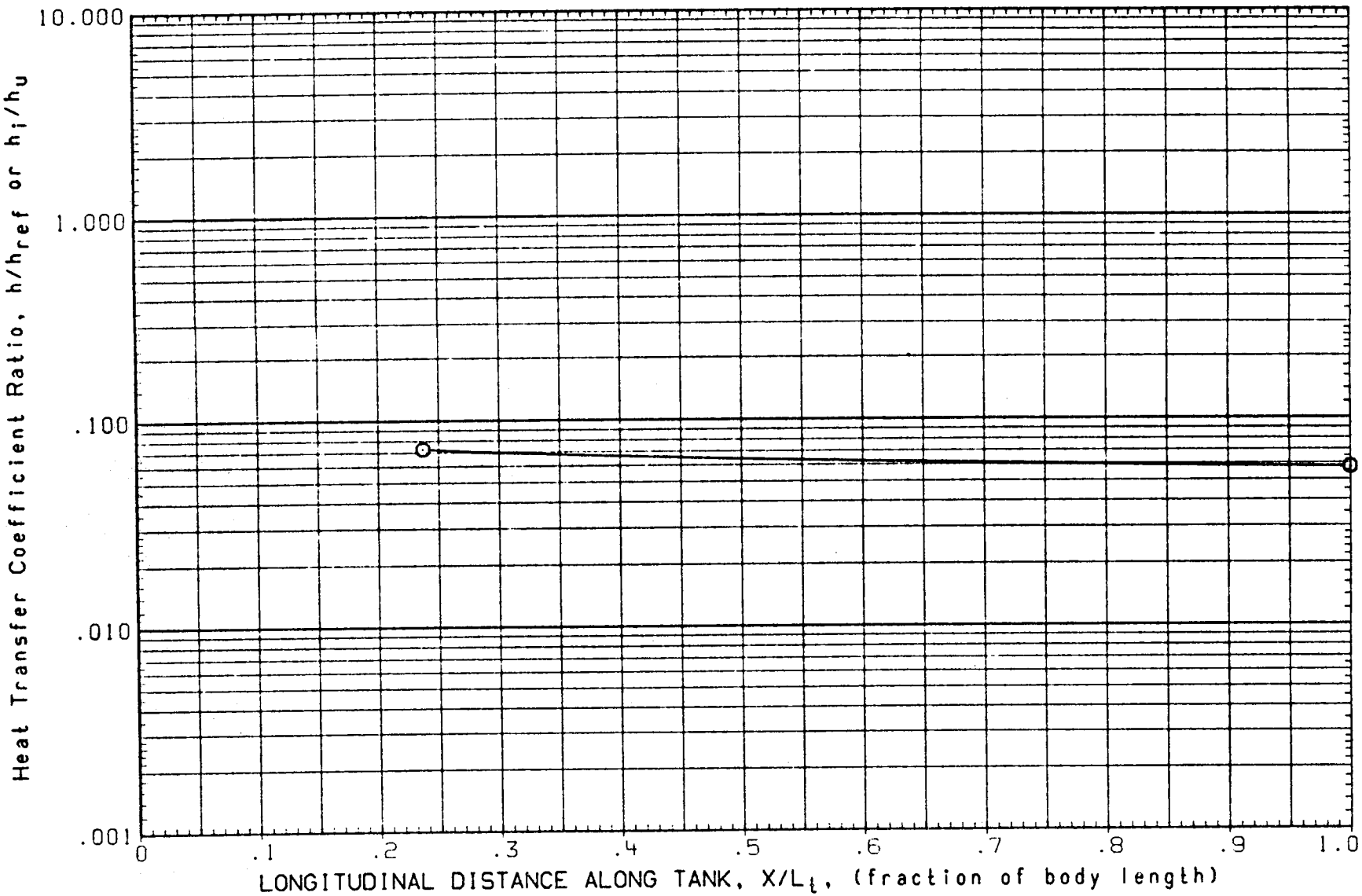

FIG. 4-18 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 355.160

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT56)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	4.500
(C9NT56)	⌂	DATA NOT AVAILABLE		4.020	5.000	4.500
(V4LT56)	□	DATA NOT AVAILABLE		4.020	5.000	4.500
(X4LT56)	◇	DATA NOT AVAILABLE		4.020	5.000	4.500
(Y4LT56)	△	DATA NOT AVAILABLE		4.020	5.000	4.500

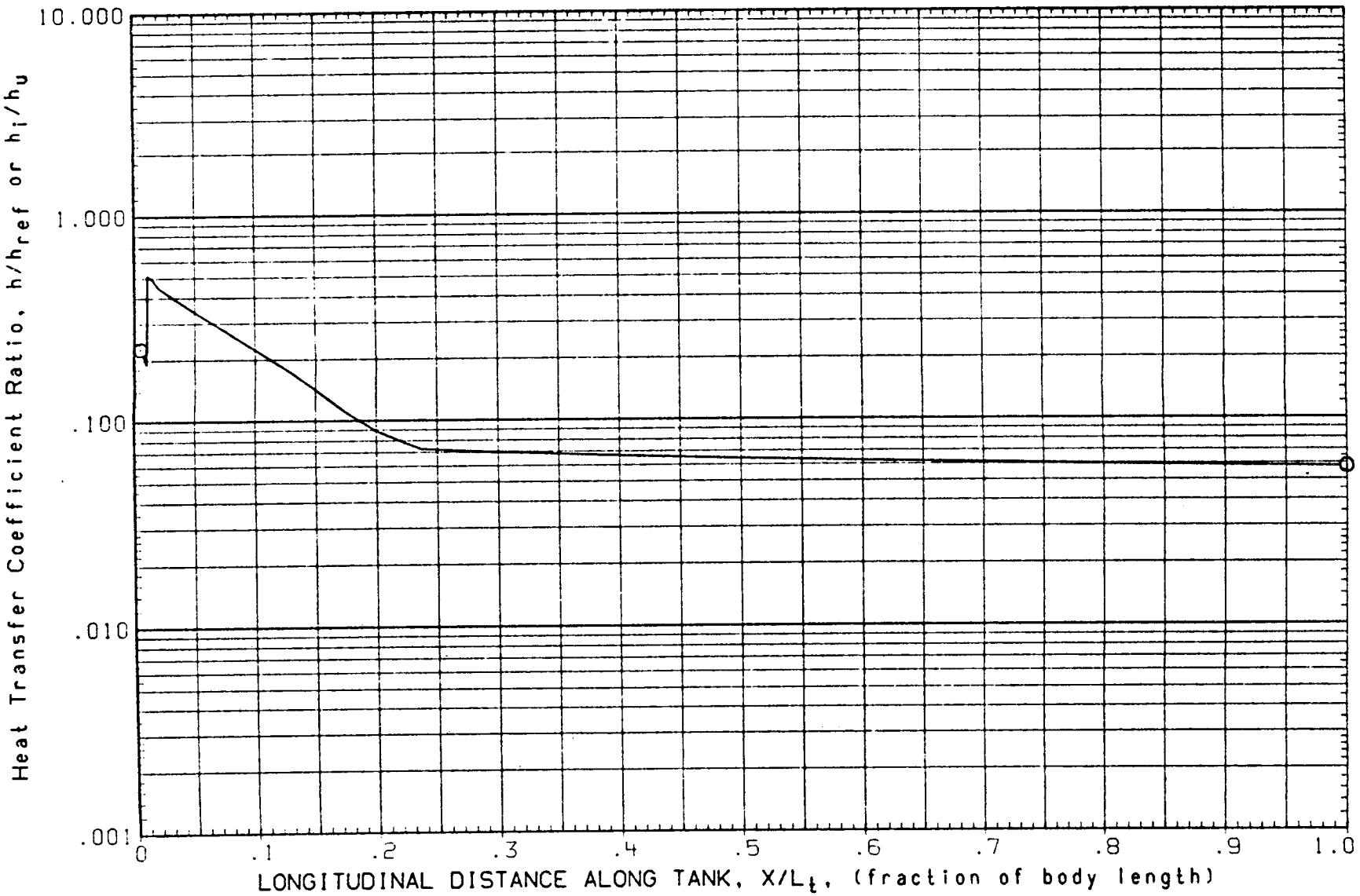

FIG. 4-18 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 4.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 360.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT58)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	7.500
(C9NT58)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	7.500
(V4LT58)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	7.500
(X4LT58)	◇	IH85 (W.L. TEST) OTS/ET = V4LT58/C9NT58=	HI/HU	4.020	5.000	7.500
(Y4LT58)	△	IH85 (W.L. THEORY) OTS/ET = V4LT58/A9NT58=	HI/HU	4.020	5.000	7.500

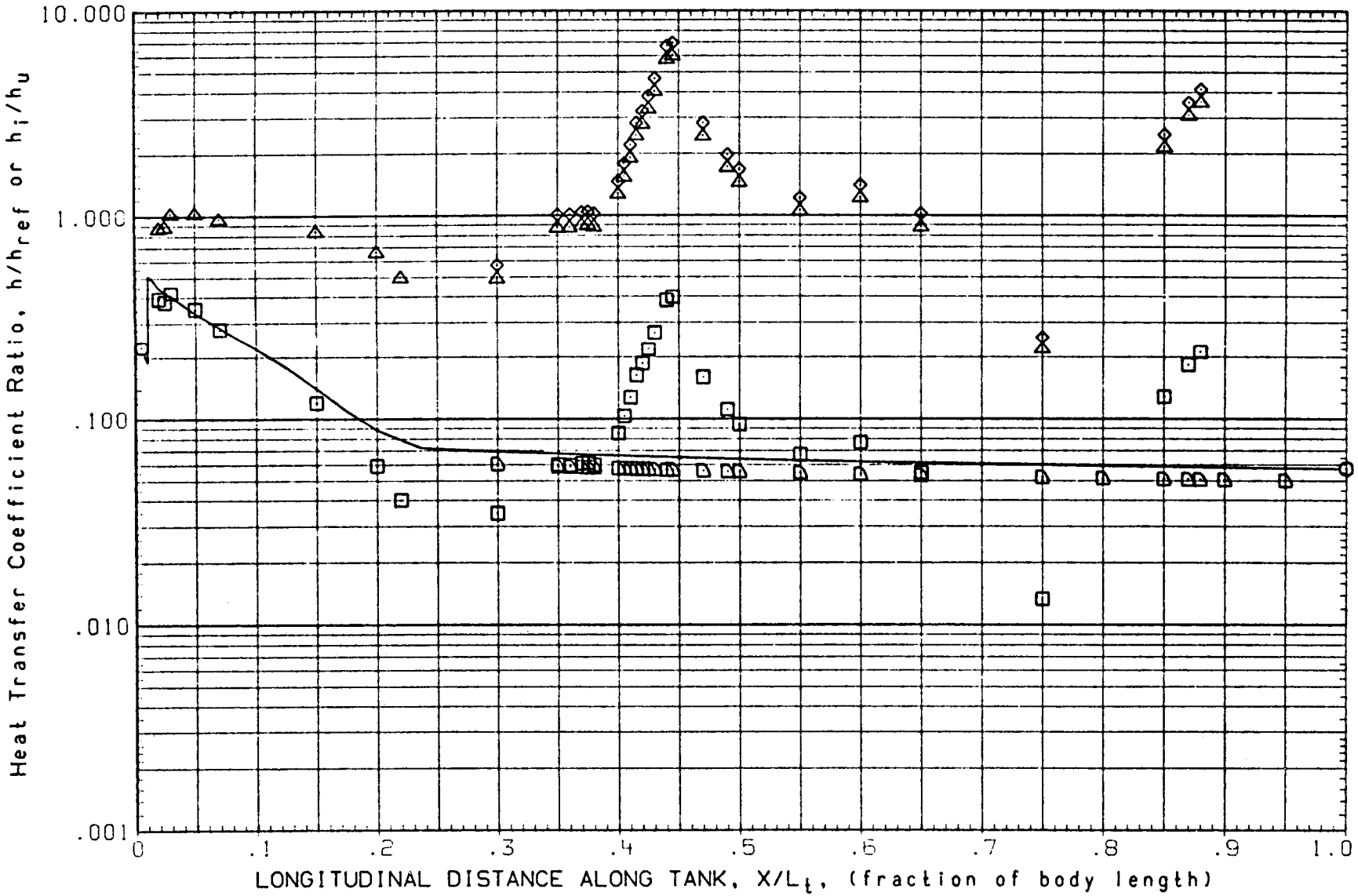

FIG. 4-19 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = .000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT58)	○	DATA NOT AVAILABLE	4.020	5.000	7.500
(C9NT58)	⬠	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	4.020	5.000	7.500
(V4LT58)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	5.000	7.500
(X4LT58)	◇	IH85 (W.L. TEST) OTS/ET = V4LT58/C9NT58= HI/HU	4.020	5.000	7.500
(Y4LT58)	△	IH85 (W.L. THEORY) OTS/ET = V4LT58/A9NT58= HI/HU	4.020	5.000	7.500

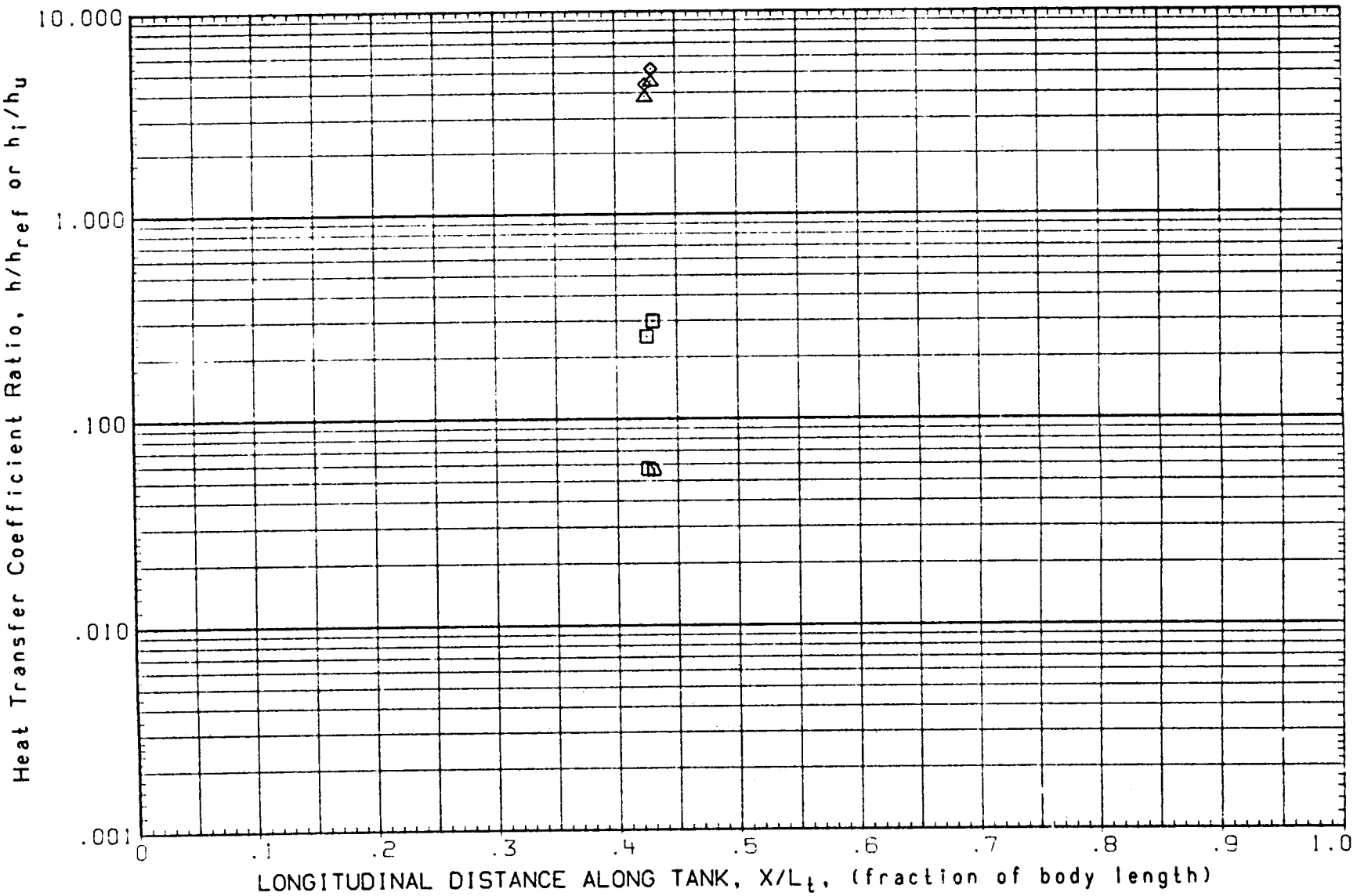

FIG. 4-19 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 5.625

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT58)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	7.500
(C9NT58)	⬡	DATA NOT AVAILABLE		4.020	5.000	7.500
(Y4LT58)	□	DATA NOT AVAILABLE		4.020	5.000	7.500
(X4LT58)	◇	DATA NOT AVAILABLE		4.020	5.000	7.500
(Y4LT58)	△	DATA NOT AVAILABLE		4.020	5.000	7.500

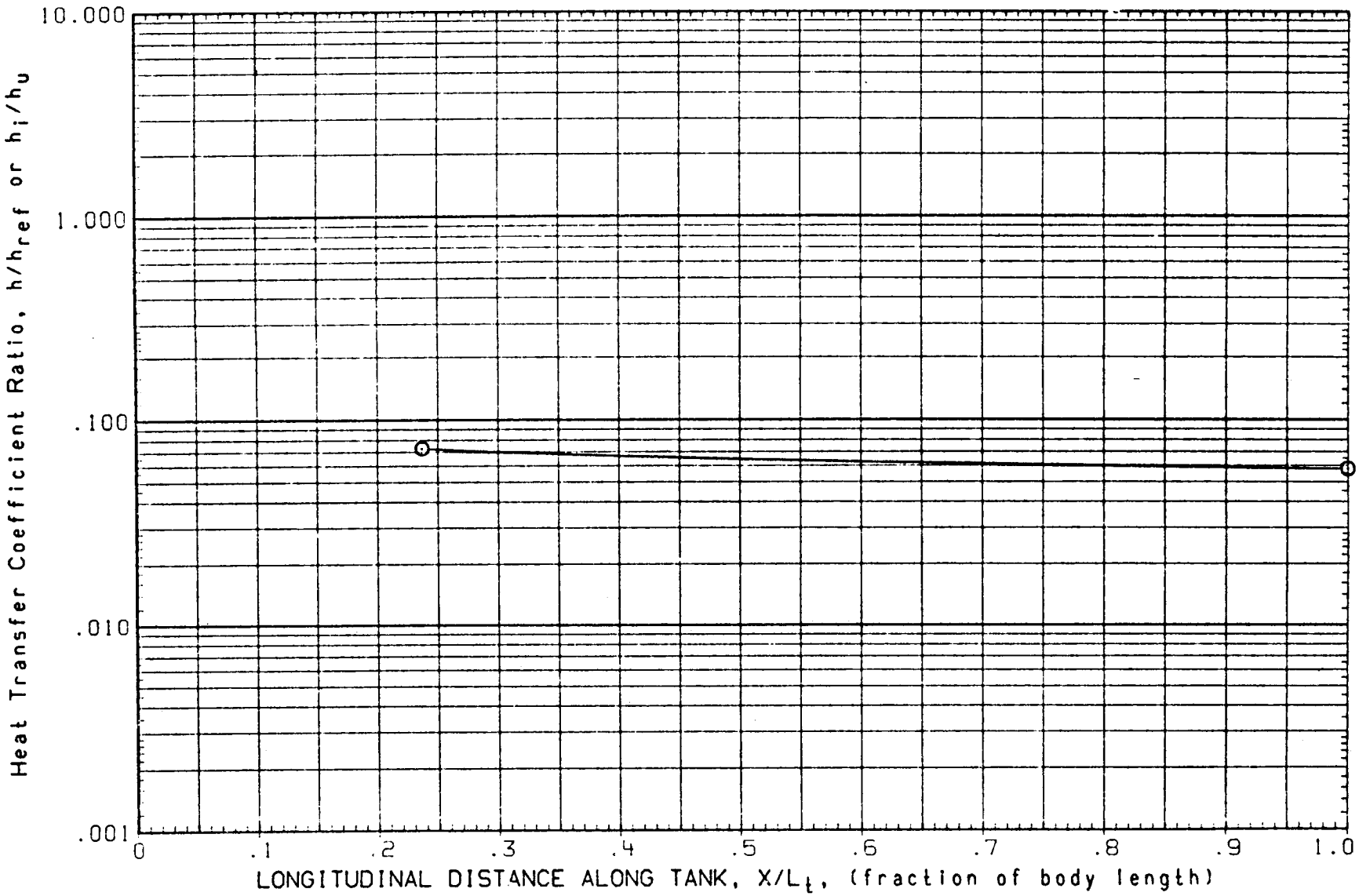

FIG. 4-19 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 5.630

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT58)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	7.500
(C9NT58)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	7.500
(V4LT58)	□	IH85, AEDC V41A-WS, CONFIGURATION 0 (T) S		4.020	5.000	7.500
(X4LT58)	◇	IH85 (W.L. TEST) OTS/ET = V4LT58/C9NT58=	HI/HU	4.020	5.000	7.500
(Y4LT58)	△	IH85 (W.L. THEORY) OTS/ET = V4LT58/A9NT58=	HI/HU	4.020	5.000	7.500

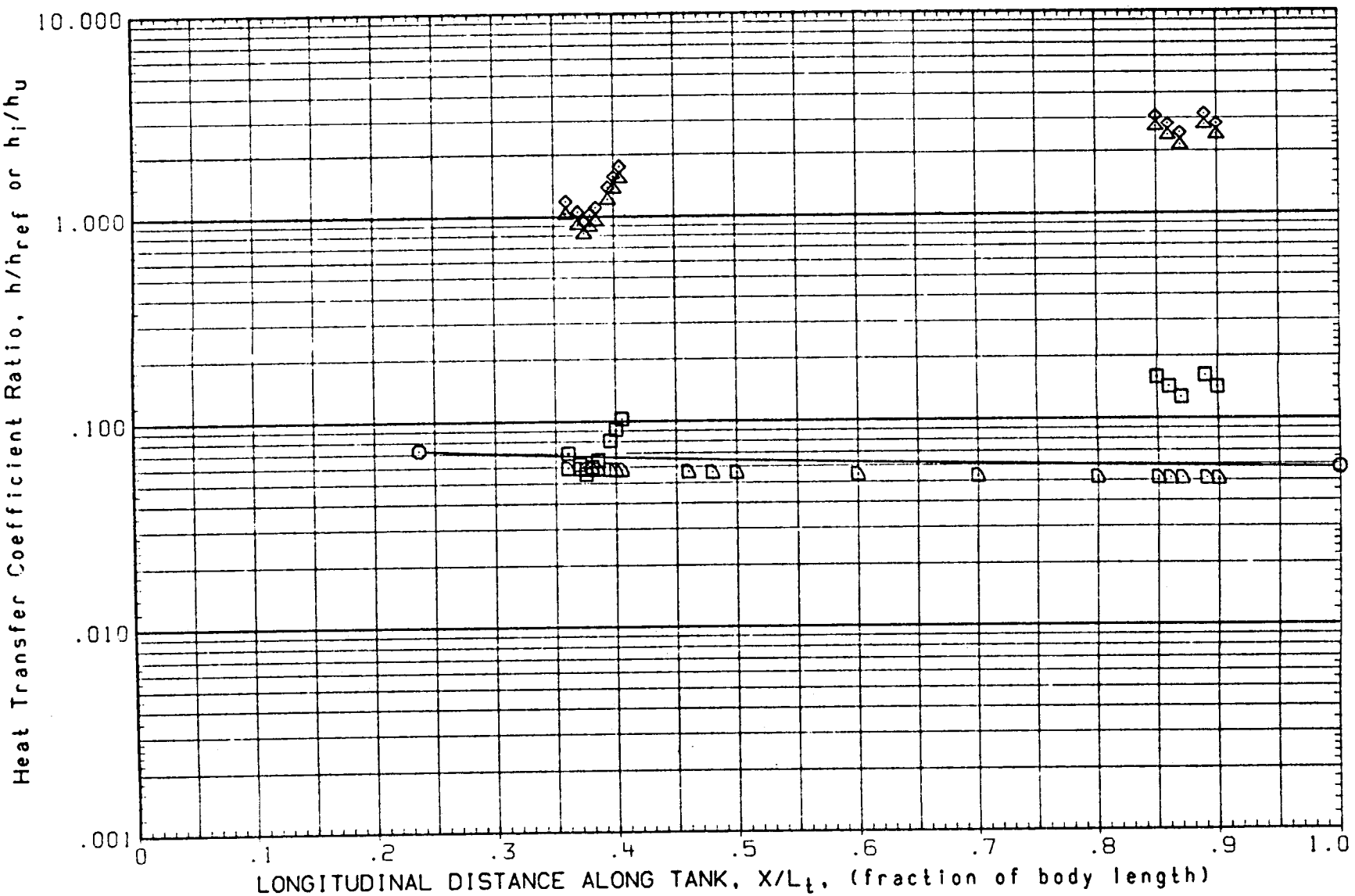

FIG. 4-19 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 11.250

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT58)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	7.500
(C9NT58)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	7.500
(V4LT58)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	7.500
(X4LT58)	◇	IH85 (W.L. TEST) OTS/ET = V4LT58/C9NT58=	HI/HU	4.020	5.000	7.500
(Y4LT58)	△	IH85 (W.L. THEORY) OTS/ET = V4LT58/A9NT58=	HI/HU	4.020	5.000	7.500

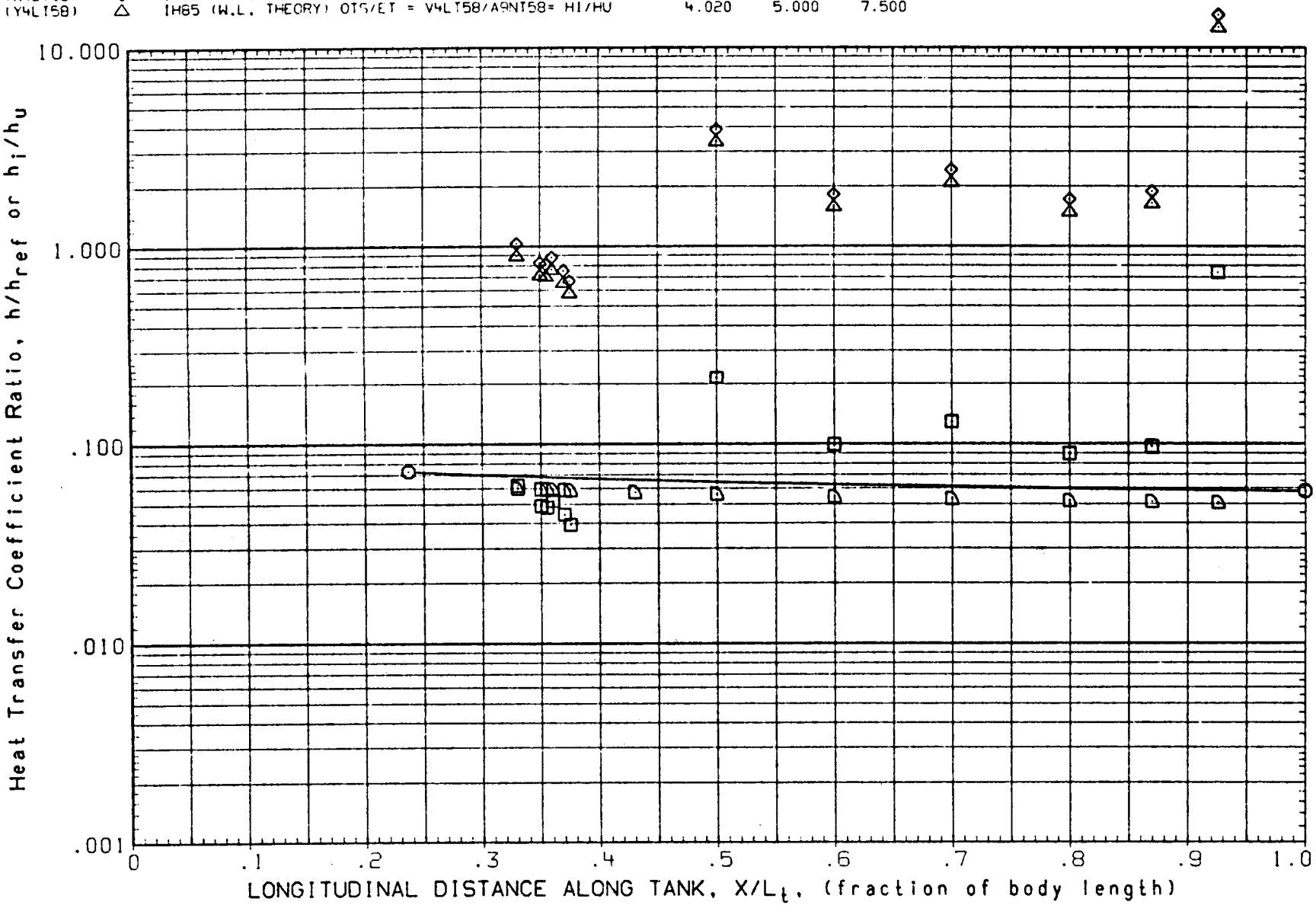

FIG. 4-19 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 17.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT58)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	7.500
(C9NT58)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	7.500
(V4LT58)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	7.500
(X4LT58)	◇	IH85 (W.L. TEST) OTS/ET = V4LT58/C9NT58=	HI/HU	4.020	5.000	7.500
(Y4LT58)	△	IH85 (W.L. THEORY) OTS/ET = V4LT58/A9NT58=	HI/HU	4.020	5.000	7.500

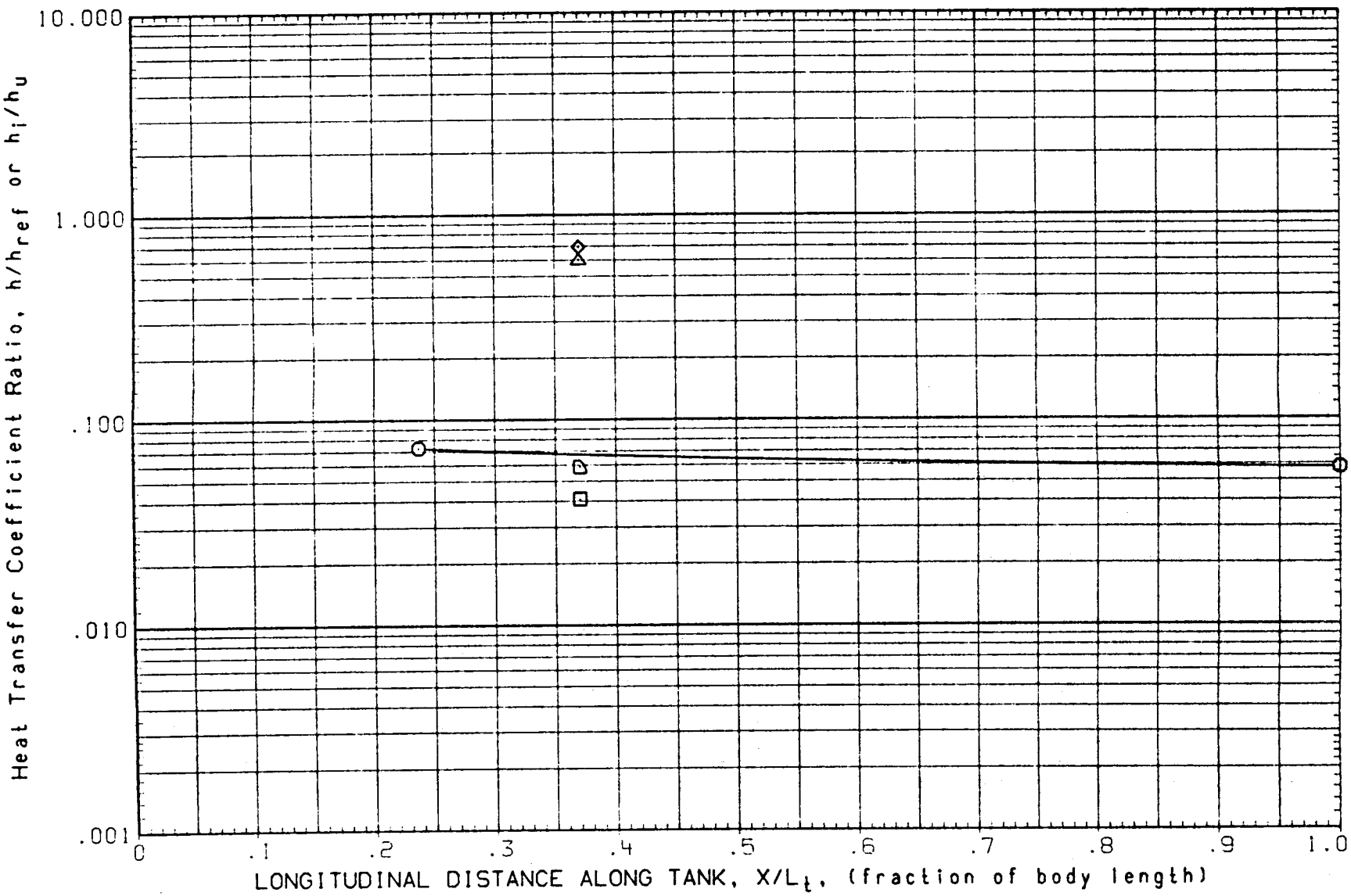

FIG. 4-19 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 20.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT58)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	7.500
(C9NT58)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	7.500
(V4LT58)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	7.500
(X4LT58)	◇	IH85 (W.L. TEST) OTS/ET = V4LT58/C9NT58=	HI/HU	4.020	5.000	7.500
(Y4LT58)	△	IH85 (W.L. THEORY) OTS/ET = V4LT58/A9NT58=	HI/HU	4.020	5.000	7.500

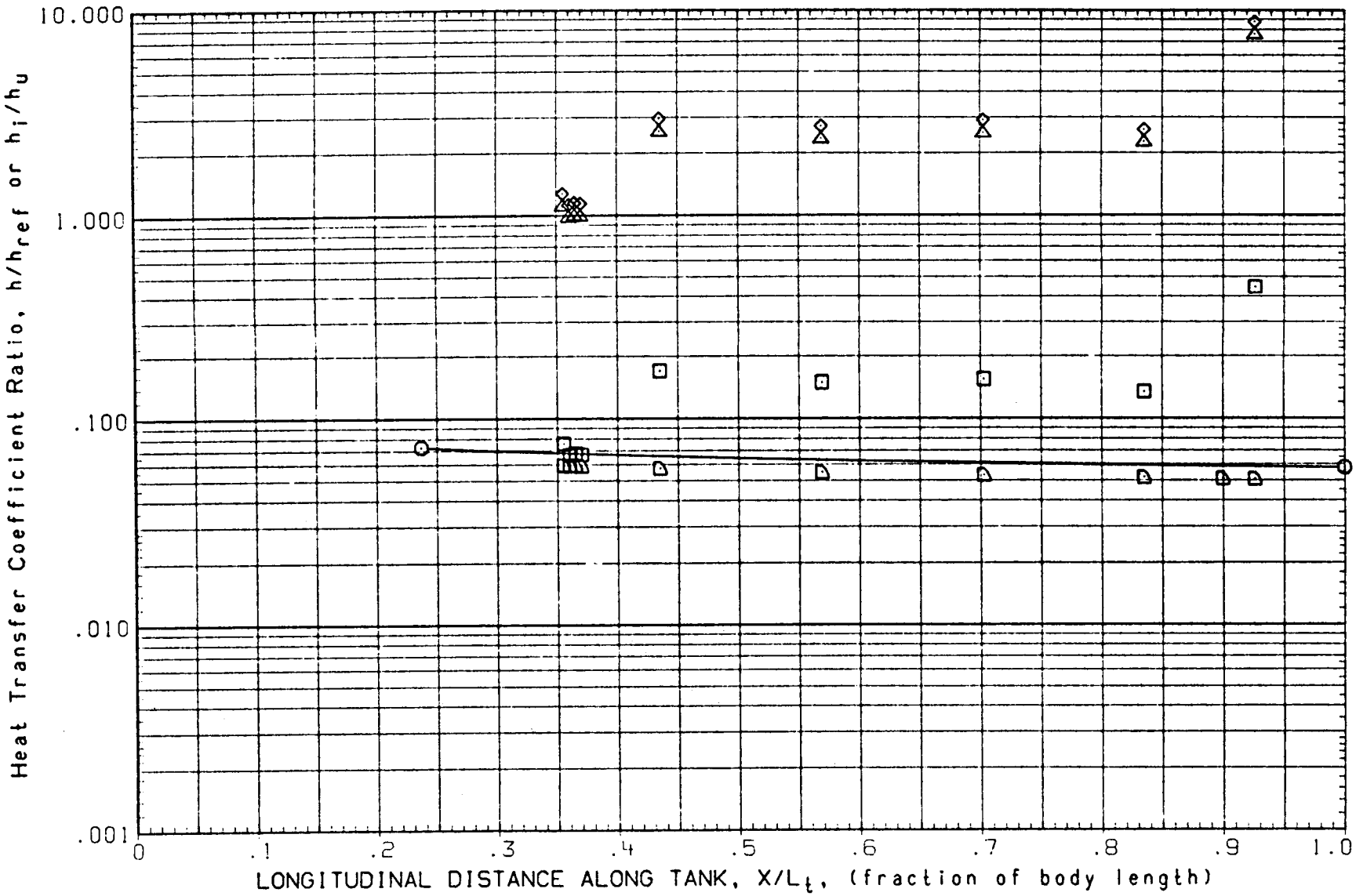

FIG. 4-19 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 23.070

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT58)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	7.500
(C9NT58)	□	TANK ALONE CREATED DATA (.97 * THEORY)	HU/HREF	4.020	5.000	7.500
(V4LT58)	⊡	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	7.500
(X4LT58)	◇	IH85 (W.L. TEST) OTS/ET = V4LT58/C9NT58=	HI/HU	4.020	5.000	7.500
(Y4LT58)	△	IH85 (W.L. THEORY) OTS/ET = V4LT58/A9NT58=	HI/HU	4.020	5.000	7.500

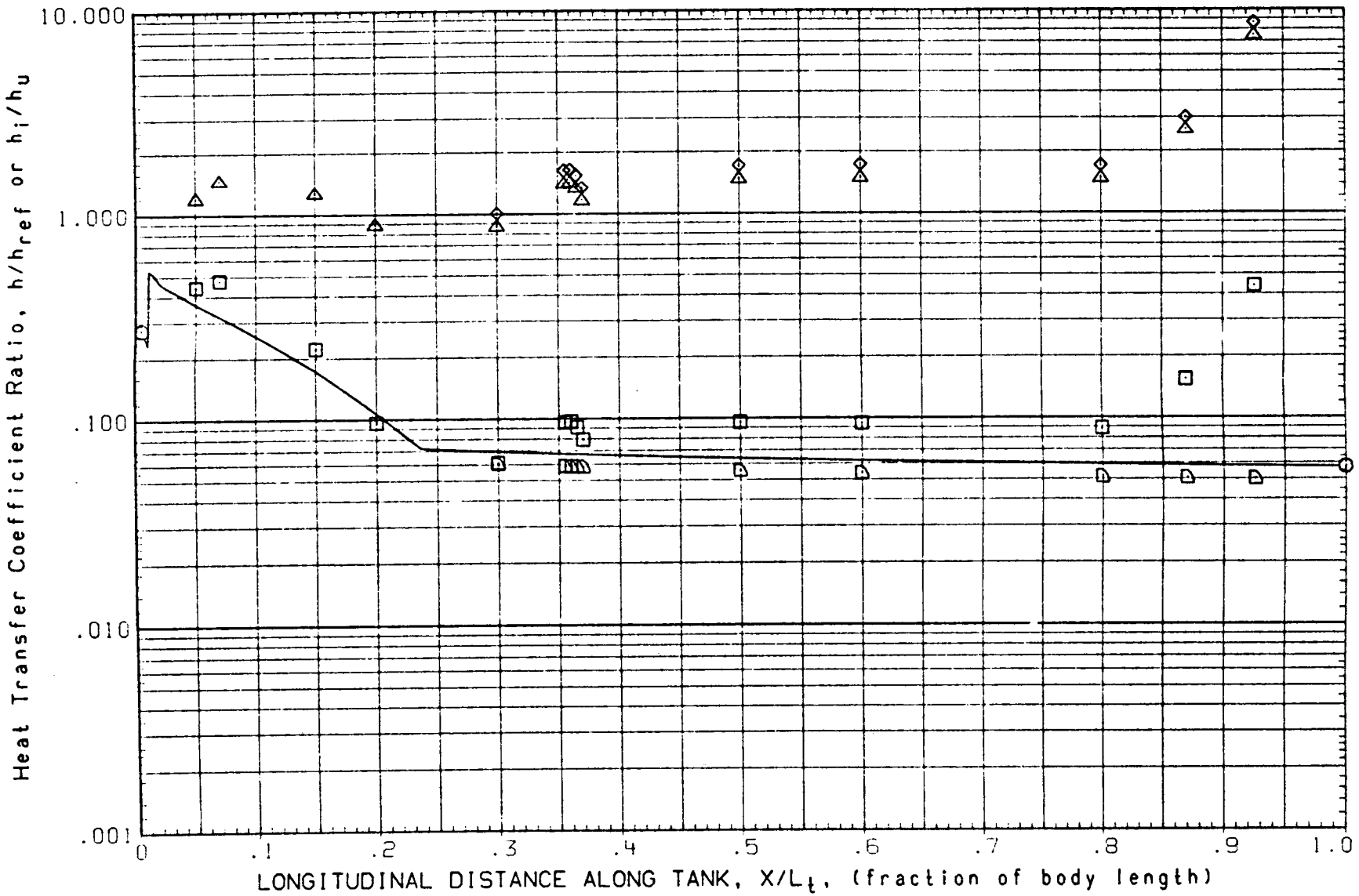

FIG. 4-19 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 29.800

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT58)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	7.500
(C9NT58)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	7.500
(V4LT58)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	7.500
(X4LT58)	◇	IH85 (W.L. TEST) OTS/ET = V4LT58/C9NT58= HI/HU		4.020	5.000	7.500
(Y4LT58)	△	IH85 (W.L. THEORY) OTS/ET = V4LT58/A9NT58= HI/HU		4.020	5.000	7.500

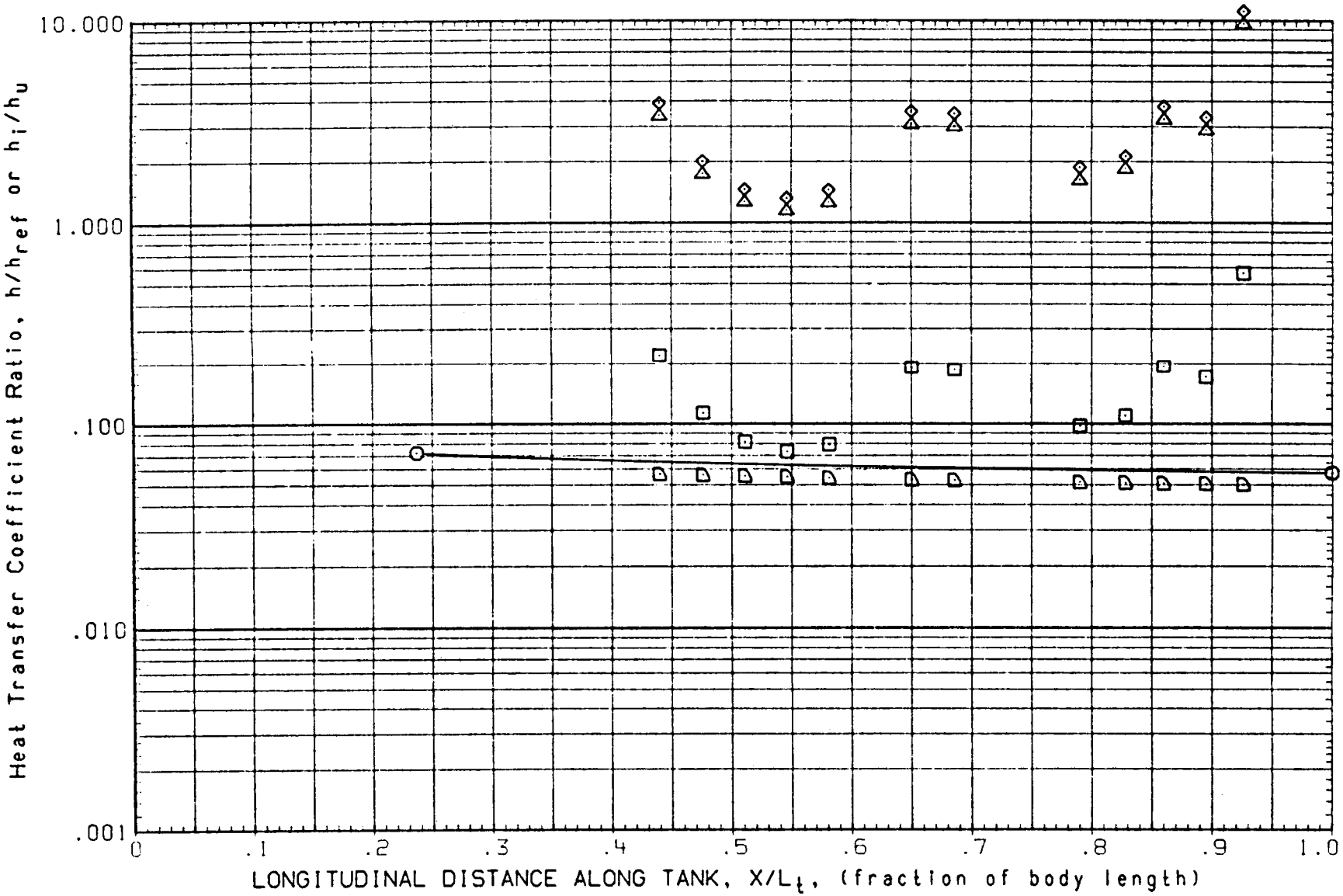

FIG. 4-19 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 31.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT58)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	7.500
(C9NT58)	D	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	7.500
(V4LT58)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	7.500
(X4LT58)	◇	IH85 (W.L. TEST) OTS/ET = V4LT58/C9NT58=	HI/HU	4.020	5.000	7.500
(Y4LT58)	△	IH85 (W.L. THEORY) OTS/ET = V4LT58/A9NT58=	HI/HU	4.020	5.000	7.500

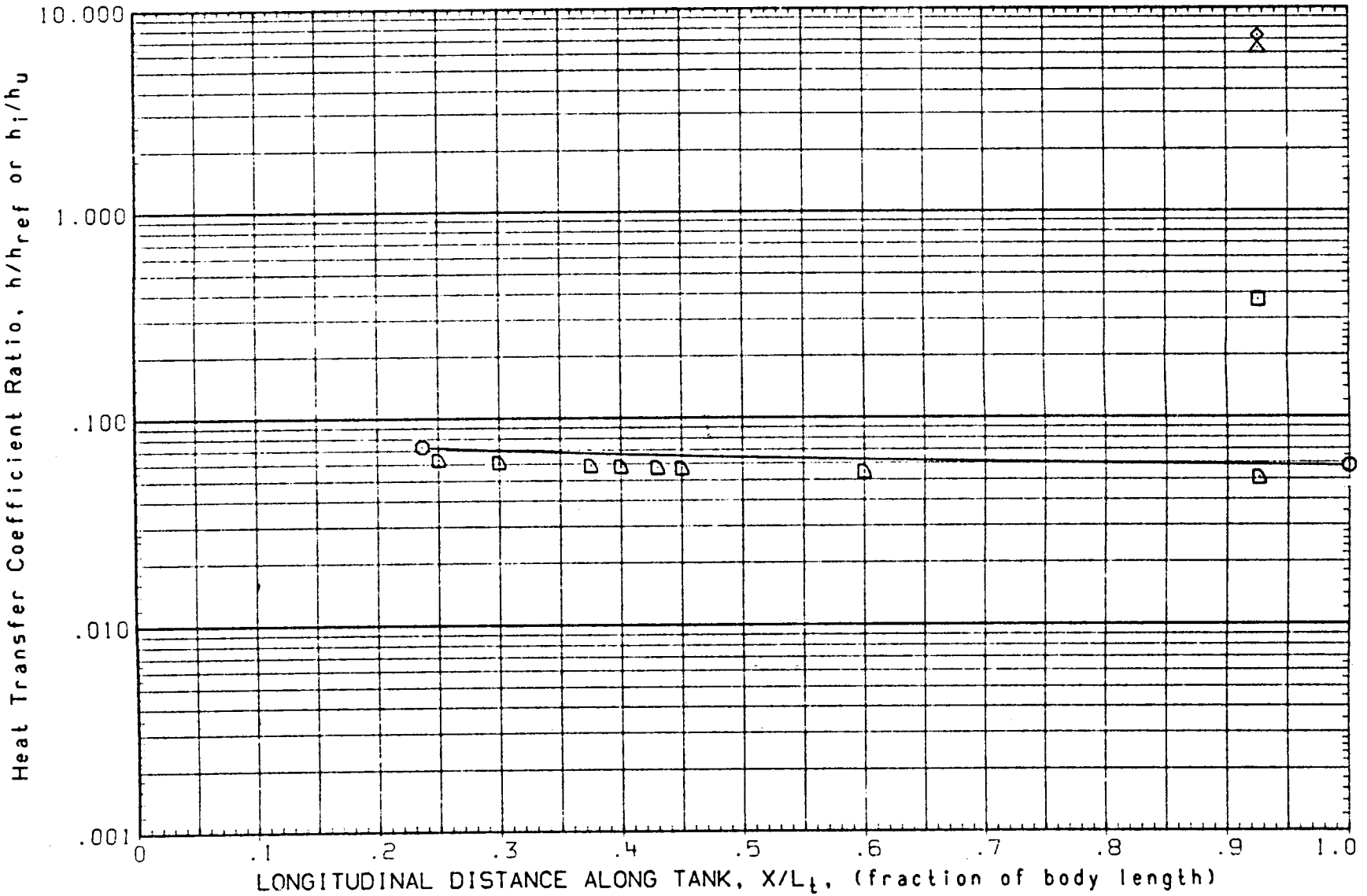

FIG. 4-19 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 33.750

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT58)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	7.500
(C9NT58)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	7.500
(V4LT58)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	7.500
(X4LT59)	◇	IH85 (W.L. TEST) OTS/ET = V4LT58/C9NT58=	HI/HU	4.020	5.000	7.500
(Y4LT58)	△	IH85 (W.L. THEORY) OTS/ET = V4LT58/A9NT59=	HI/HU	4.020	5.000	7.500

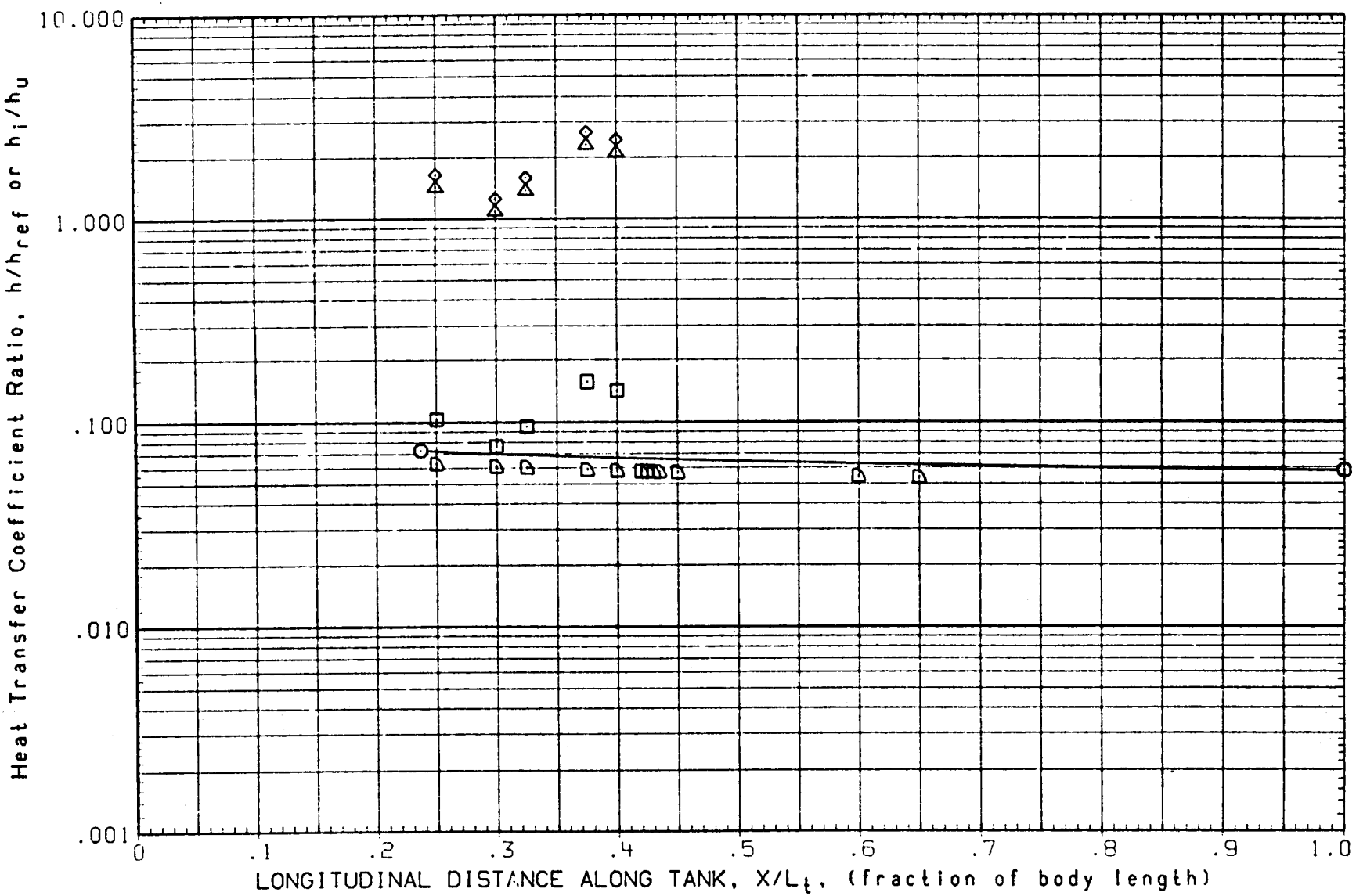

FIG. 4-19 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 36.320

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT58)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	7.500
(C9NT58)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	7.500
(V4LT58)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	7.500
(X4LT58)	◇	IH85 (W.L. TEST) OTS/ET = V4LT58/C9NT58=	HI/HU	4.020	5.000	7.500
(Y4LT58)	△	IH85 (W.L. THEORY) OTS/ET = V4LT58/A9NT58=	HI/HU	4.020	5.000	7.500

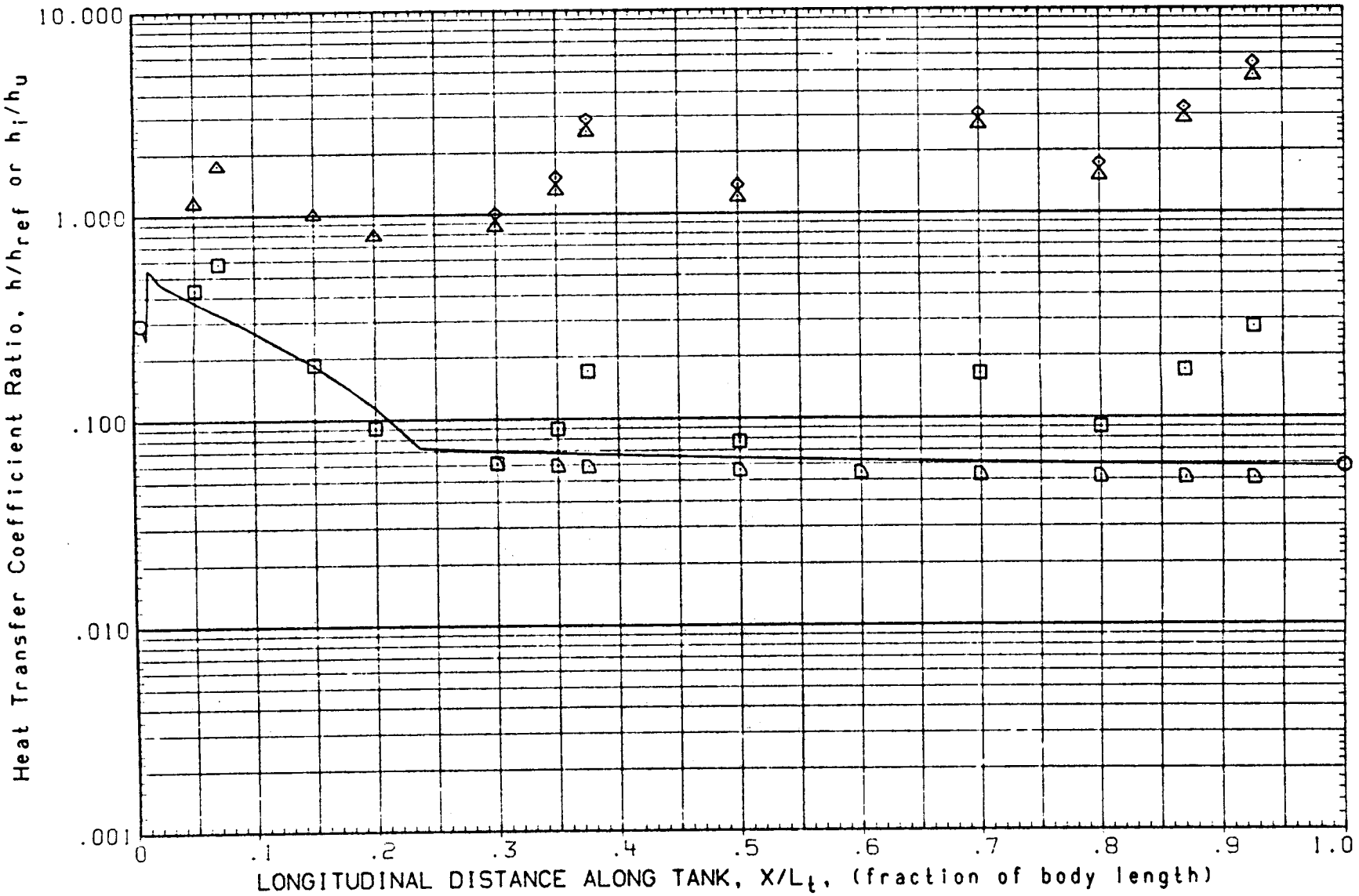

FIG. 4-19 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 37.700

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT58)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	7.500
(C9NT58)	◗	DATA NOT AVAILABLE		4.020	5.000	7.500
(V4LT58)	□	DATA NOT AVAILABLE		4.020	5.000	7.500
(X4LT58)	◇	DATA NOT AVAILABLE		4.020	5.000	7.500
(Y4LT58)	△	DATA NOT AVAILABLE		4.020	5.000	7.500

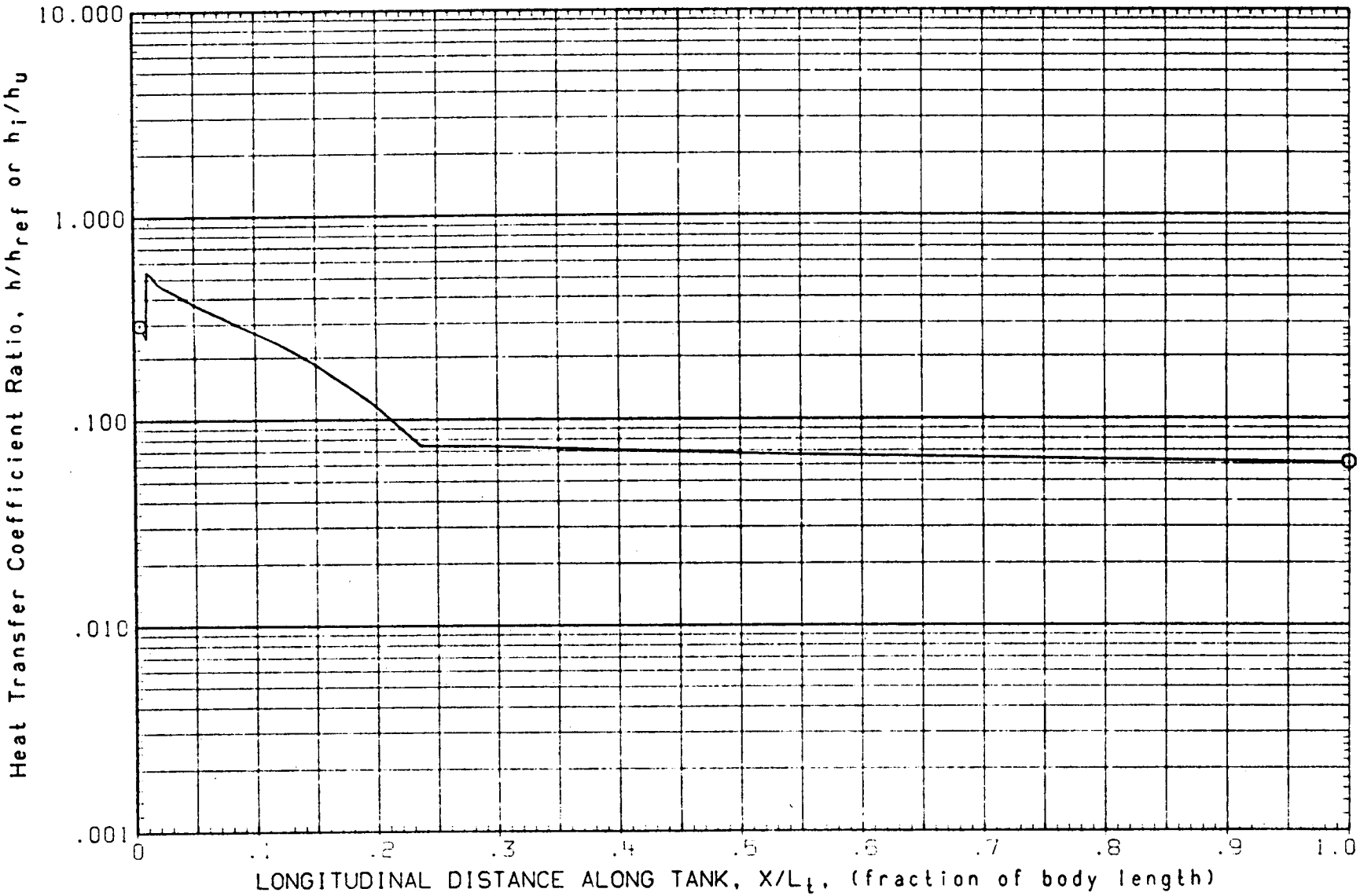

FIG. 4-19 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA 5.000 PHI = 0.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT58)	○	EXTERNAL TANK THEORY, N.S., TURBULENT	HU/HREF	4.020	5.000	7.500
(C9NT58)	◻	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	7.500
(Y4LT58)	◻	IH85, AFT V41A-W5, CONFIGURATION [illegible]		4.020	5.000	7.500
(X4LT58)	◇	IH85 (W.L. TEST) OTS/ET = V4LT58:X4NT58 HI HU		4.020	5.000	7.500
(Y4LT58)	△	IH85 (W.L. THEORY) OTS/ET = V4LT58:X4NT58 HI HU		4.020	5.000	7.500

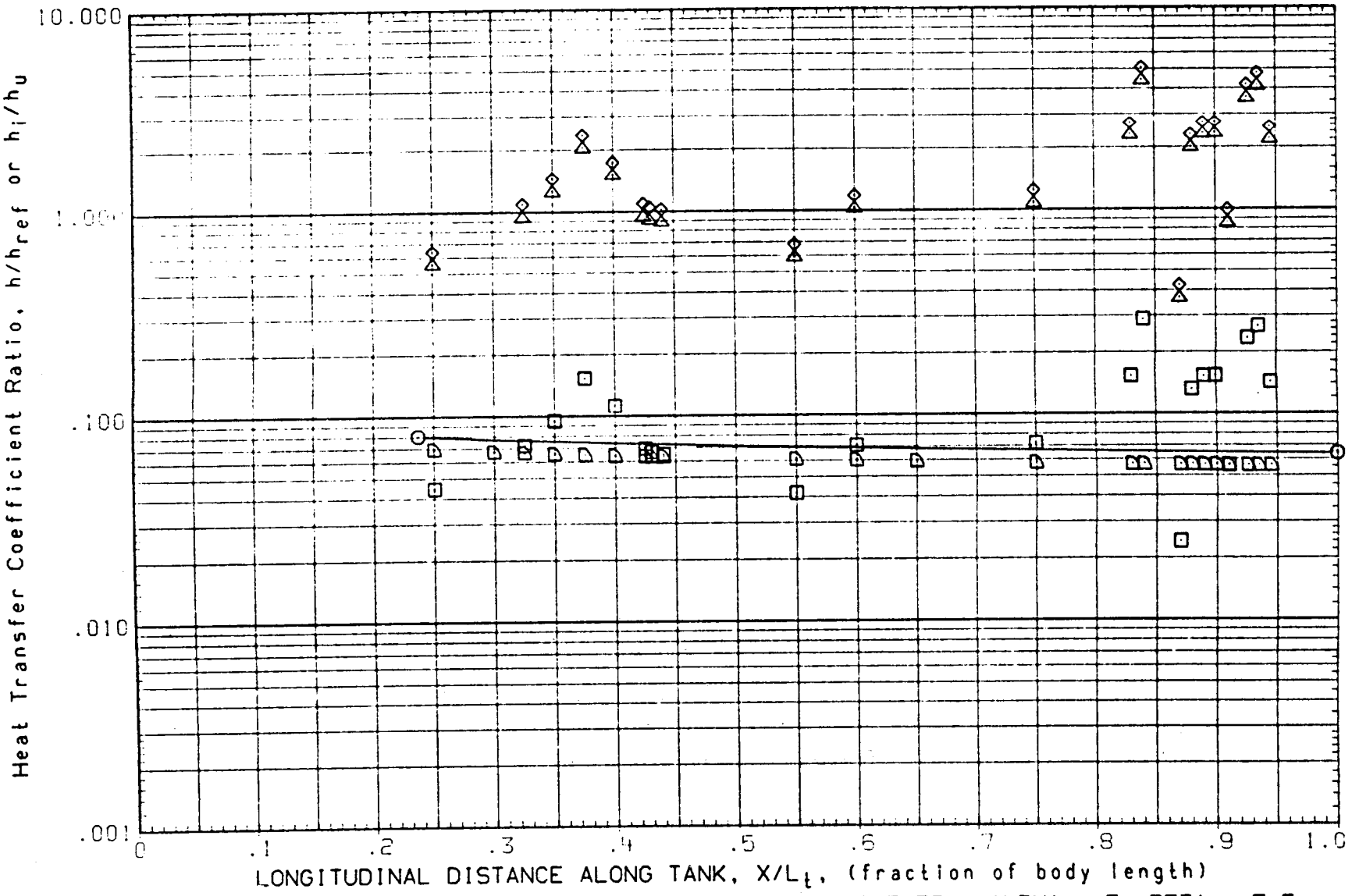

FIG. 4-19 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 45.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT58)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	4.020	5.000	7.500
(C9NT58)	⌂	DATA NOT AVAILABLE	4.020	5.000	7.500
(V4LT58)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S	4.020	5.000	7.500
(X4LT58)	◇	DATA NOT AVAILABLE	4.020	5.000	7.500
(Y4LT58)	△	IH85 (W.L. THEORY) OTS/ET = V4LT58/A9NT58= HI/HU	4.020	5.000	7.500

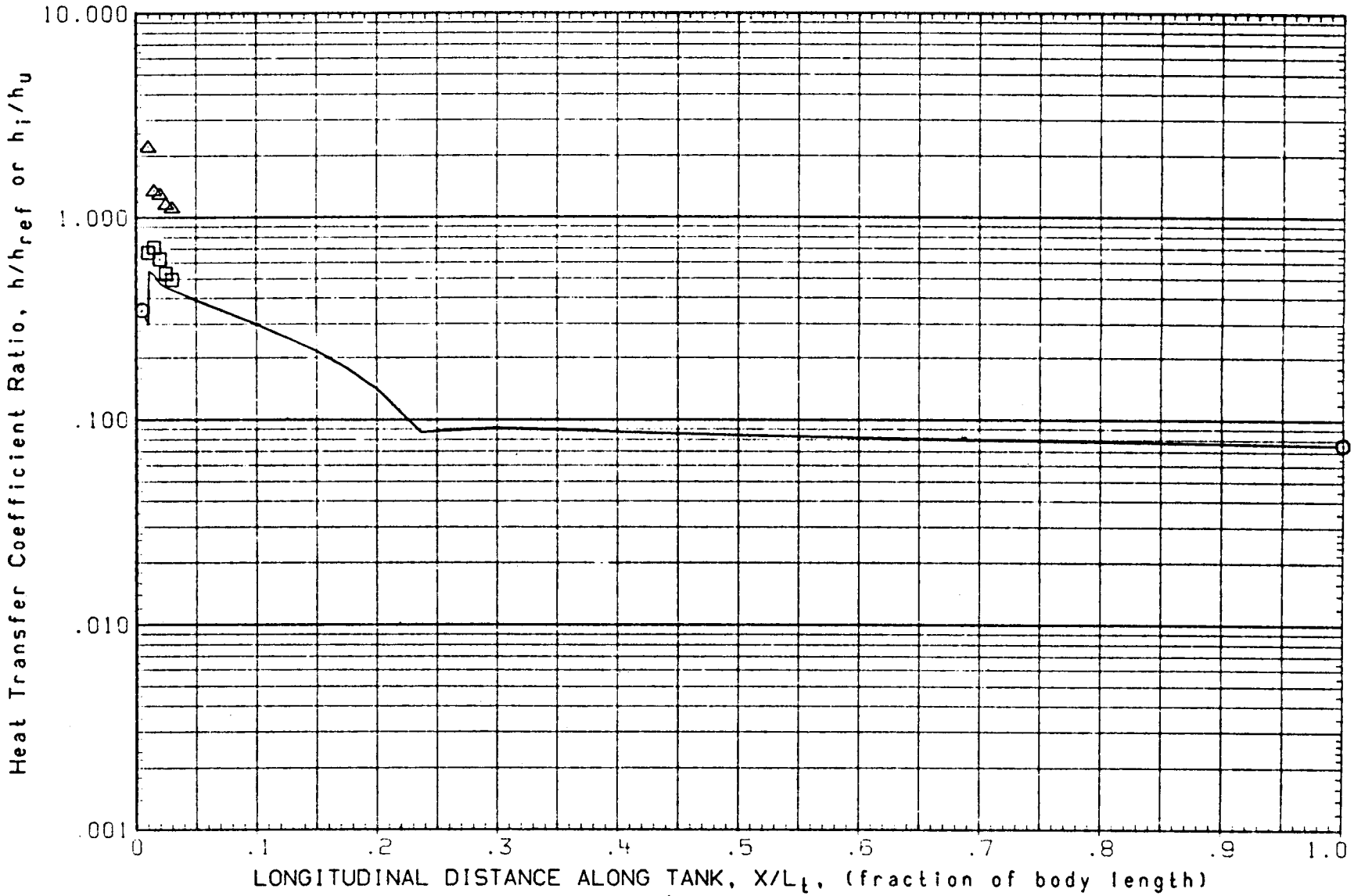

FIG. 4-19 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 180.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT58)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	7.500
(C9NT58)	□	DATA NOT AVAILABLE		4.020	5.000	7.500
(Y4LT58)	□	DATA NOT AVAILABLE		4.020	5.000	7.500
(X4LT58)	◇	DATA NOT AVAILABLE		4.020	5.000	7.500
(Y4LT58)	△	DATA NOT AVAILABLE		4.020	5.000	7.500

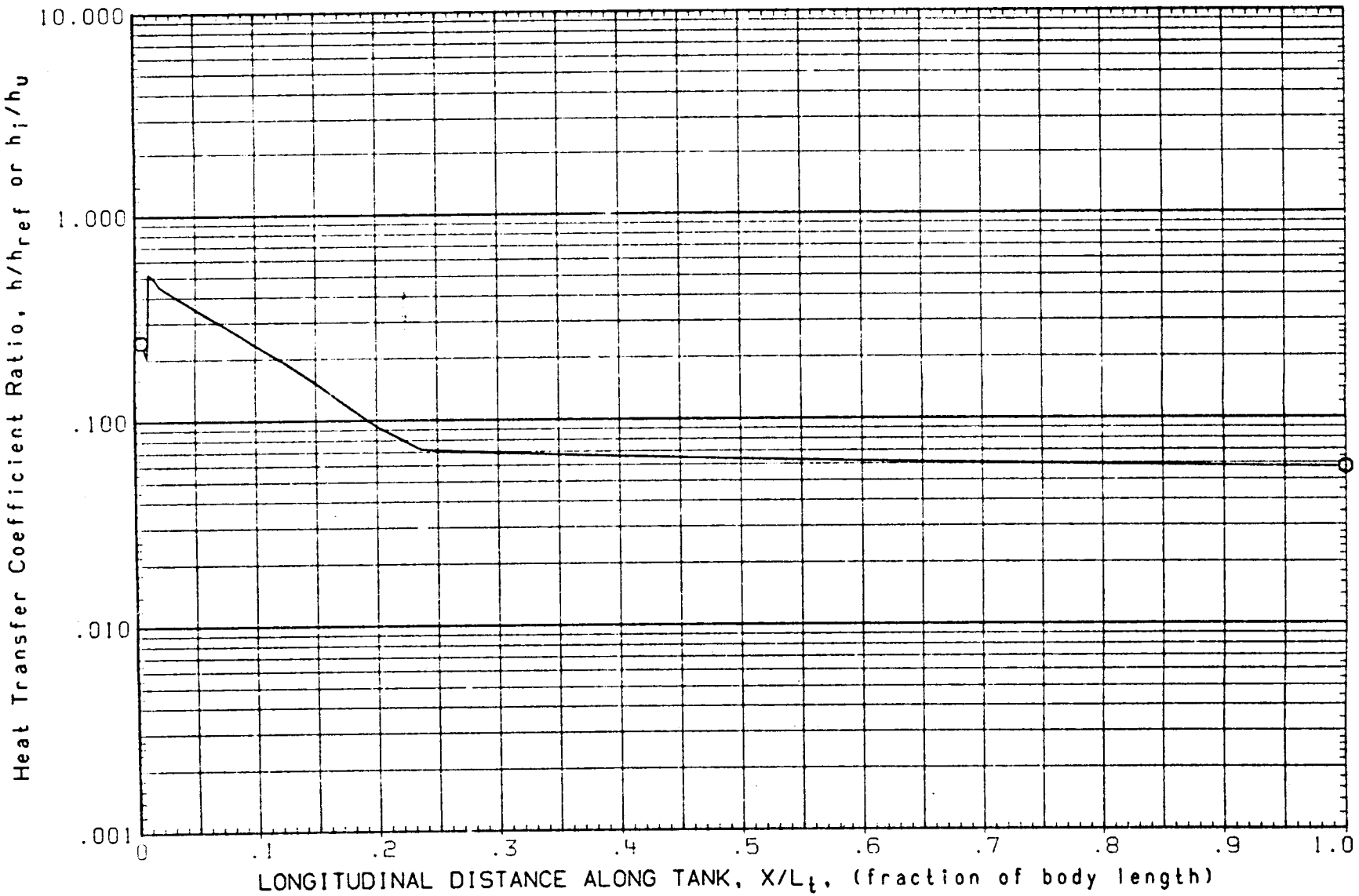

FIG. 4-19 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 235.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT58)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	7.500
(C9NT58)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	7.500
(V4LT58)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	7.500
(X4LT58)	◇	IH85 (W.L. TEST) OTS/ET = V4LT58/C9NT58=	HI/HU	4.020	5.000	7.500
(Y4LT58)	△	IH85 (W.L. THEORY) OTS/ET = V4LT58/A9NT58=	HI/HU	4.020	5.000	7.500

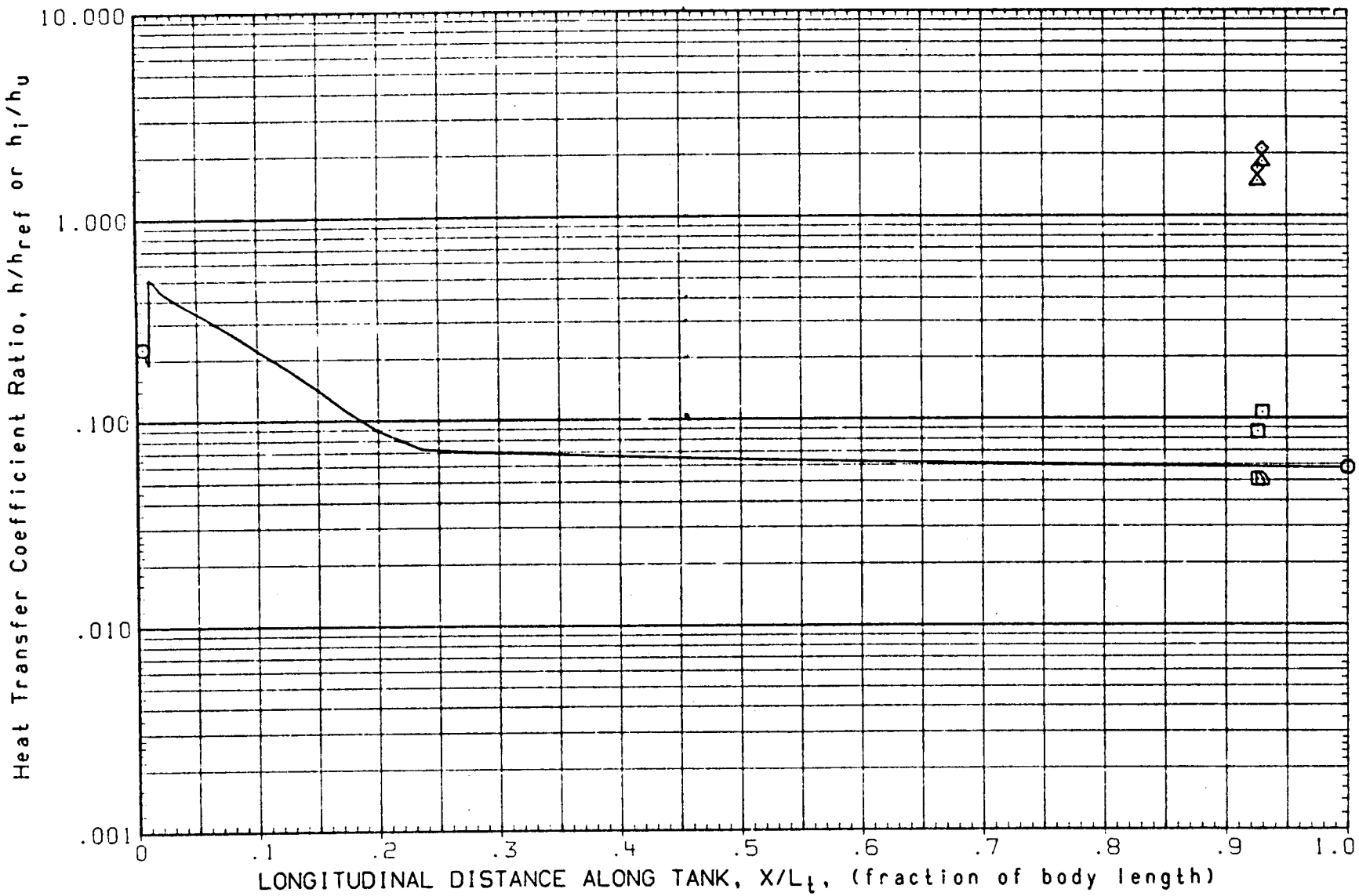

FIG. 4-19 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 247.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT58)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	7.500
(C9NT58)	⬠	DATA NOT AVAILABLE		4.020	5.000	7.500
(V4LT58)	□	DATA NOT AVAILABLE		4.020	5.000	7.500
(X4LT58)	◇	DATA NOT AVAILABLE		4.020	5.000	7.500
(Y4LT58)	△	DATA NOT AVAILABLE		4.020	5.000	7.500

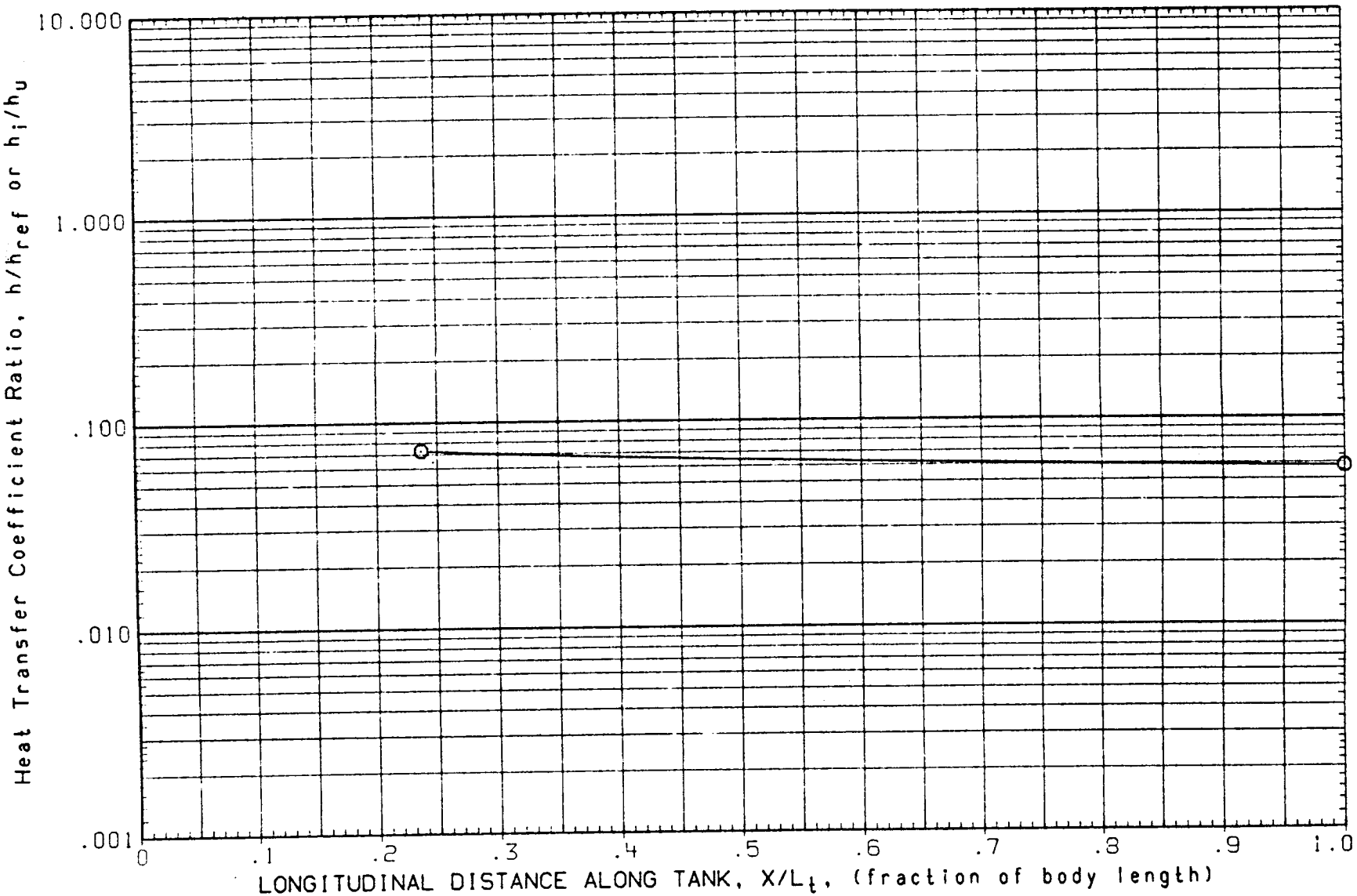

FIG. 4-19 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 247.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT58)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	4.020	5.000	7.500
(C9NT58)	⬠	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	4.020	5.000	7.500
(.4LT58)	□	IH85, AEDC V4IA-W5, CONFIGURATION 0 (T) S	4.020	5.000	7.500
(X4LT58)	◇	IH85 (W.L. TEST) OTS/ET = V4LT58/C9NT58= HI/HU	4.020	5.000	7.500
(Y4LT58)	△	IH85 (W.L. THEORY) OTS/ET = V4LT58/A9NT58= HI/HU	4.020	5.000	7.500

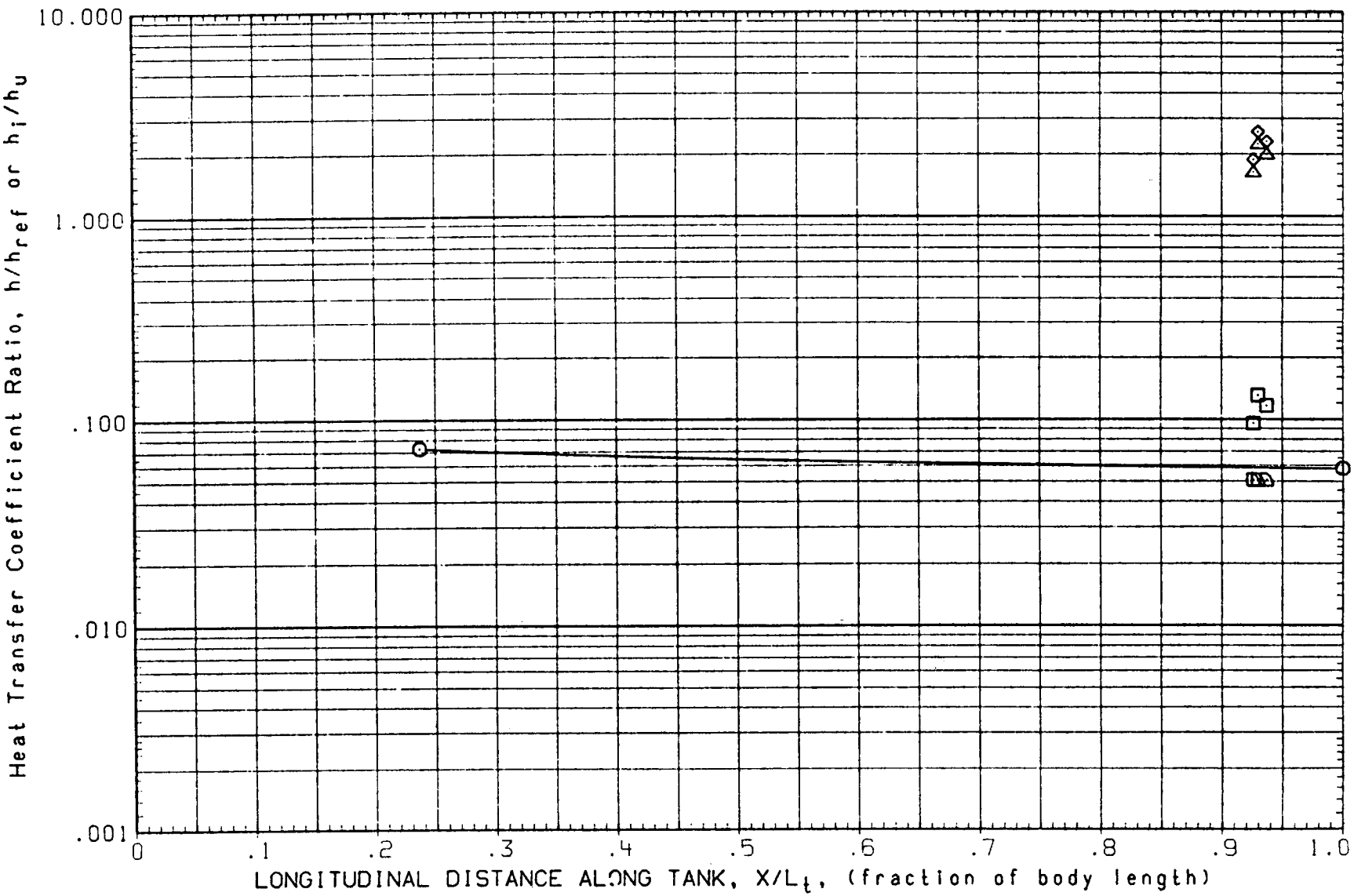

FIG. 4-19 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 250.570

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT58)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	7.500
(C9NT58)	◐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	7.500
(V4LT58)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	7.500
(X4LT58)	◇	IH85 (W.L. TEST) OTS/ET = V4LT58/C9NT58=	HI/HU	4.020	5.000	7.500
(Y4LT58)	△	IH85 (W.L. THEORY) OTS/ET = V4LT58/A9NT58=	HI/HU	4.020	5.000	7.500

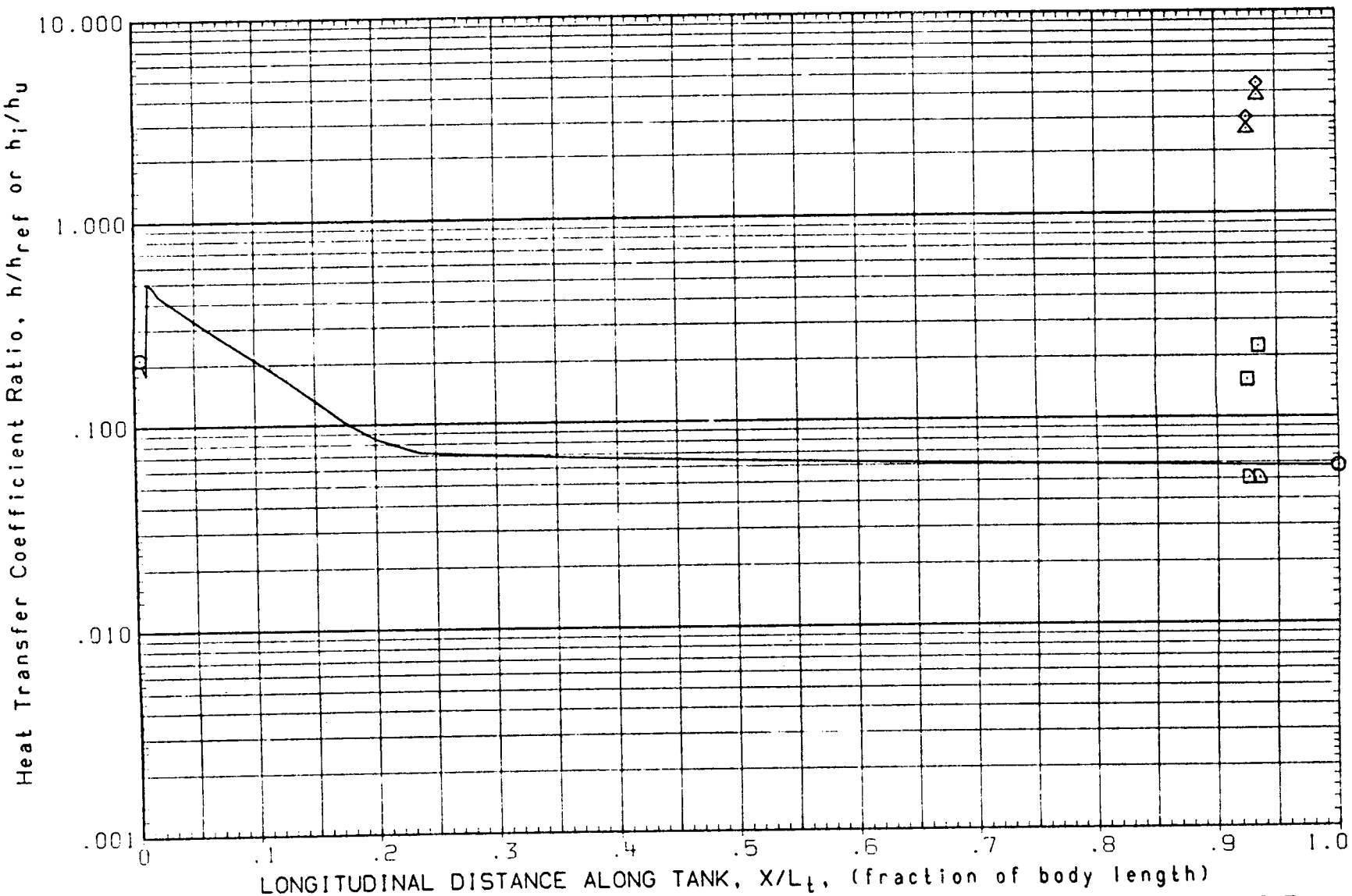

FIG. 4-19 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 258.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT58)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	7.500
(C9NT58)	⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	7.500
(V4LT58)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	7.500
(X4LT58)	◇	IH85 (W.L. TEST) OTS/ET = V4LT58/C9NT58=	HI/HU	4.020	5.000	7.500
(Y4LT58)	△	IH85 (W.L. THEORY) OTS/ET = V4LT58/A9NT58=	HI/HU	4.020	5.000	7.500

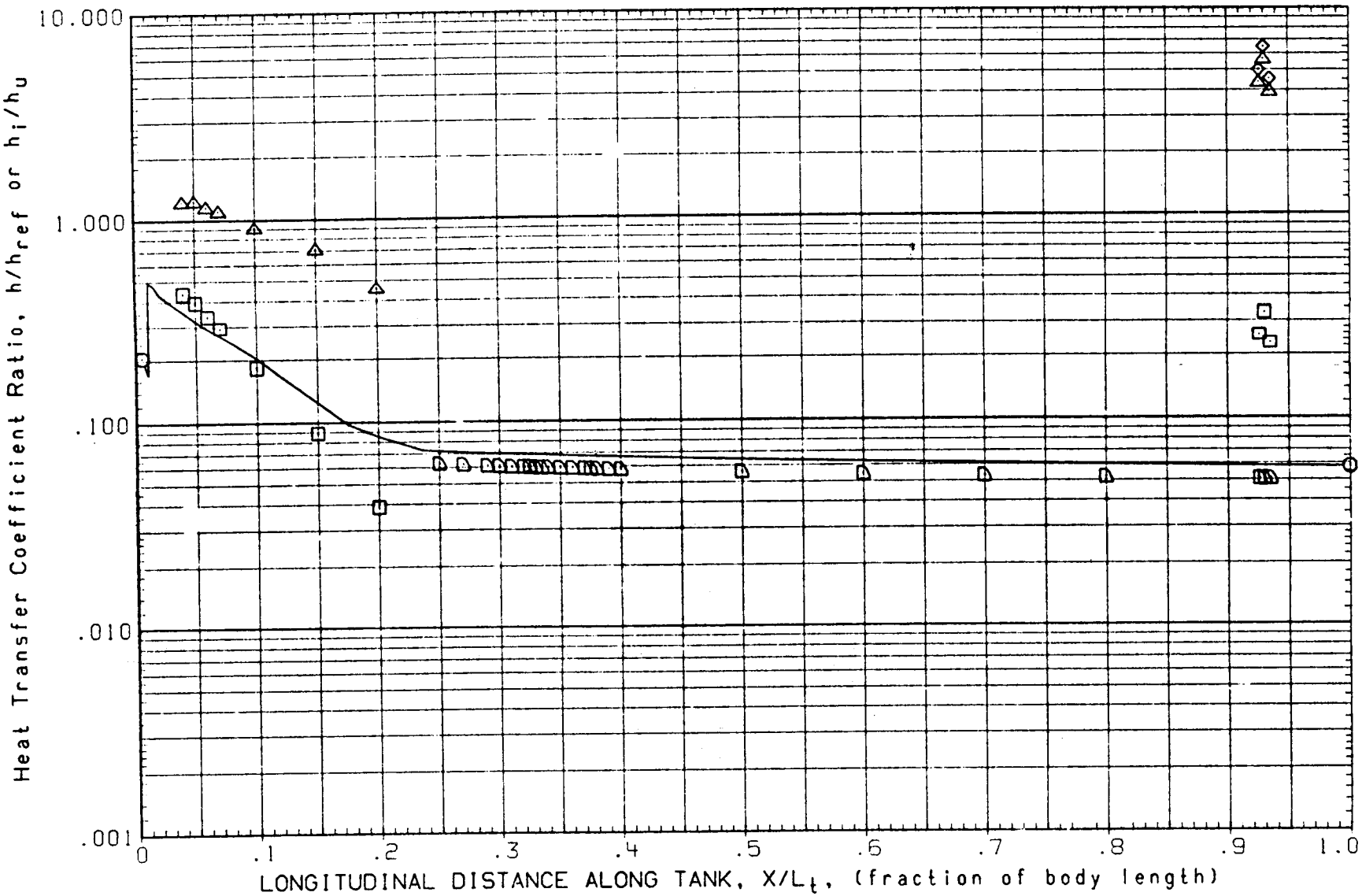

FIG. 4-19 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 270.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT58)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	7.500
(C9NT58)	□	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	7.500
(V4LT58)	⊡	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	7.500
(X4LT58)	◇	IH85 (W.L. TEST) OTS/ET = V4LT58/C9NT58=	HI/HU	4.020	5.000	7.500
(Y4LT58)	△	IH85 (W.L. THEORY) OTS/ET = V4LT58/A9NT58=	HI/HU	4.020	5.000	7.500

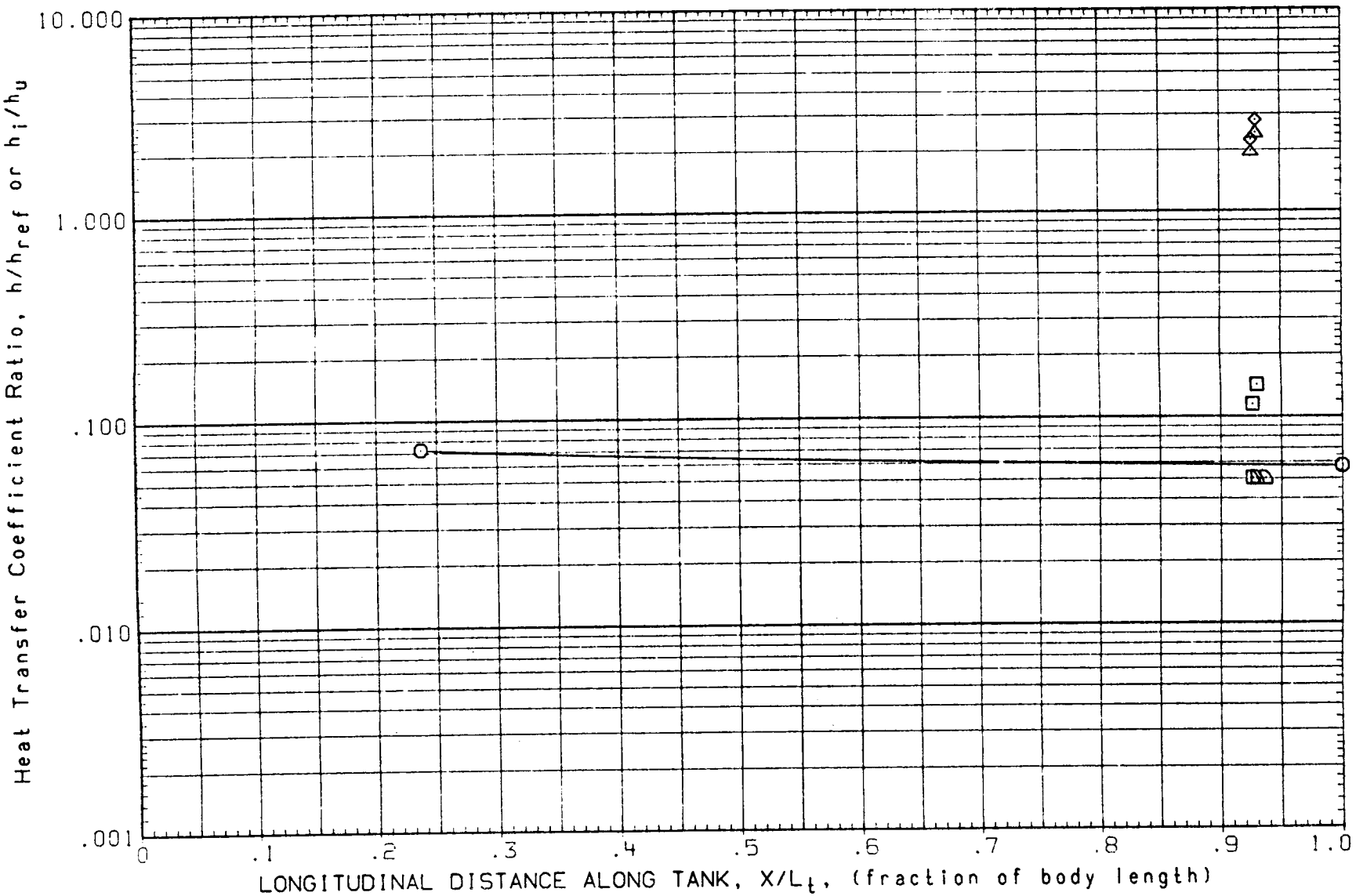

FIG. 4-19 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 289.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT58)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	7.500
(C9NT58)	▷	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	7.500
(V4LT58)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	7.500
(X4LT58)	◇	IH85 (W.L. TEST) OTS/ET = V4LT58/C9NT58=	HI/HU	4.020	5.000	7.500
(Y4LT58)	△	IH85 (W.L. THEORY) OTS/ET = V4LT58/A9NT58=	HI/HU	4.020	5.000	7.500

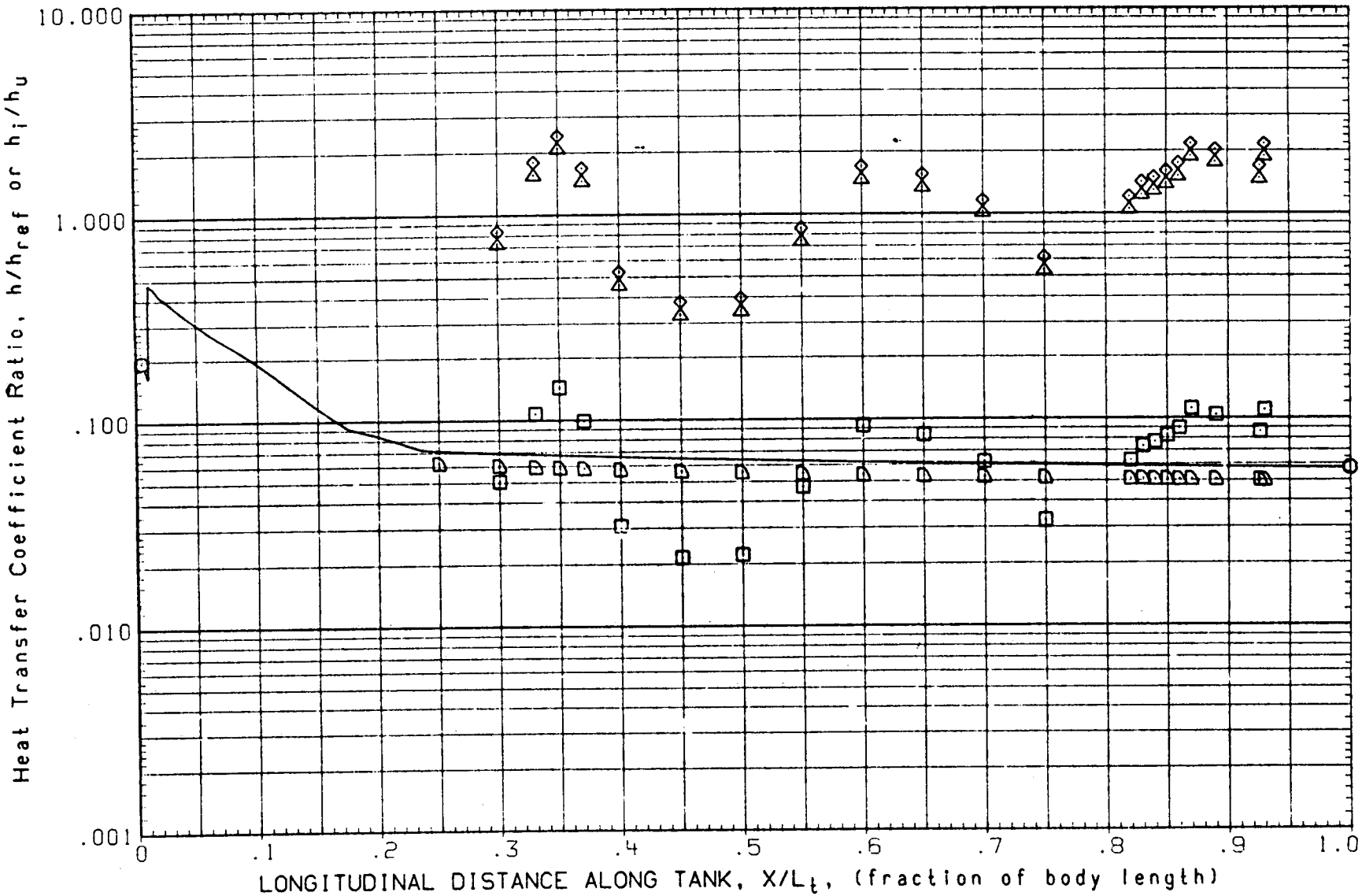

FIG. 4-19 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 292.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT58)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	4.020	5.000	7.500
(C9NT58)	◁	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	4.020	5.000	7.500
(V4LT58)	□	IH65, AEDC V4TA-W5, CONFIGURATION 0 (T) S	4.020	5.000	7.500
(X4LT58)	◇	IH85 (W.L. TEST) OTS/ET = V4LT58/C9NT58= HI/HU	4.020	5.000	7.500
(Y4LT58)	△	IH85 (W.L. THEORY) OTS/ET = V4LT58/A9NT58= HI/HU	4.020	5.000	7.500

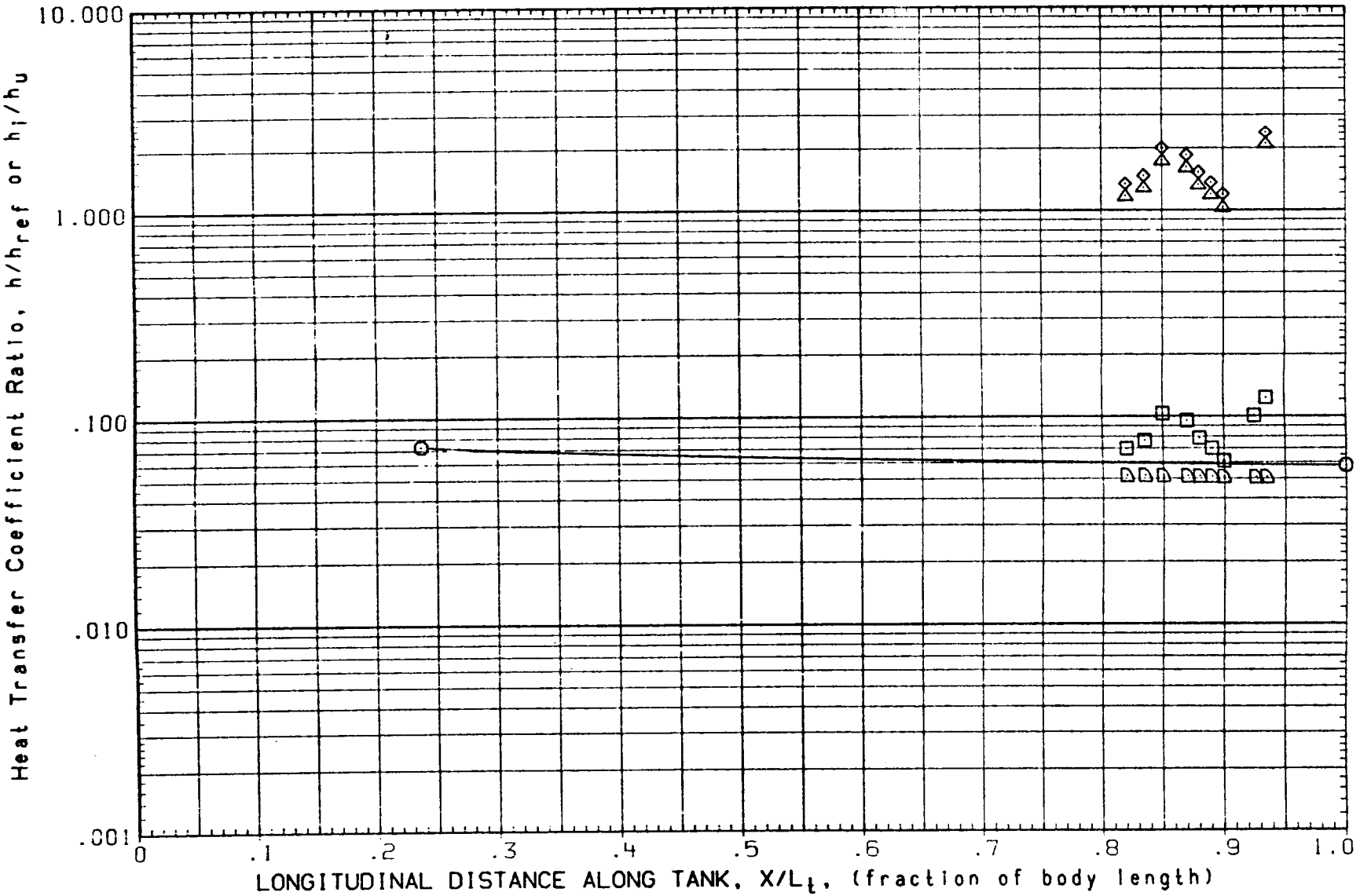

FIG. 4-19 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 301.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT58)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	7.500
(C9NT58)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	7.500
(V4LT58)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	7.500
(X4LT58)	◇	IH85 (W.L. TEST) OTS/ET = V4LT58/C9NT58= HI/HU		4.020	5.000	7.500
(Y4LT58)	△	IH85 (W.L. THEORY) OTS/ET = V4LT58/A9NT58= HI/HU		4.020	5.000	7.500

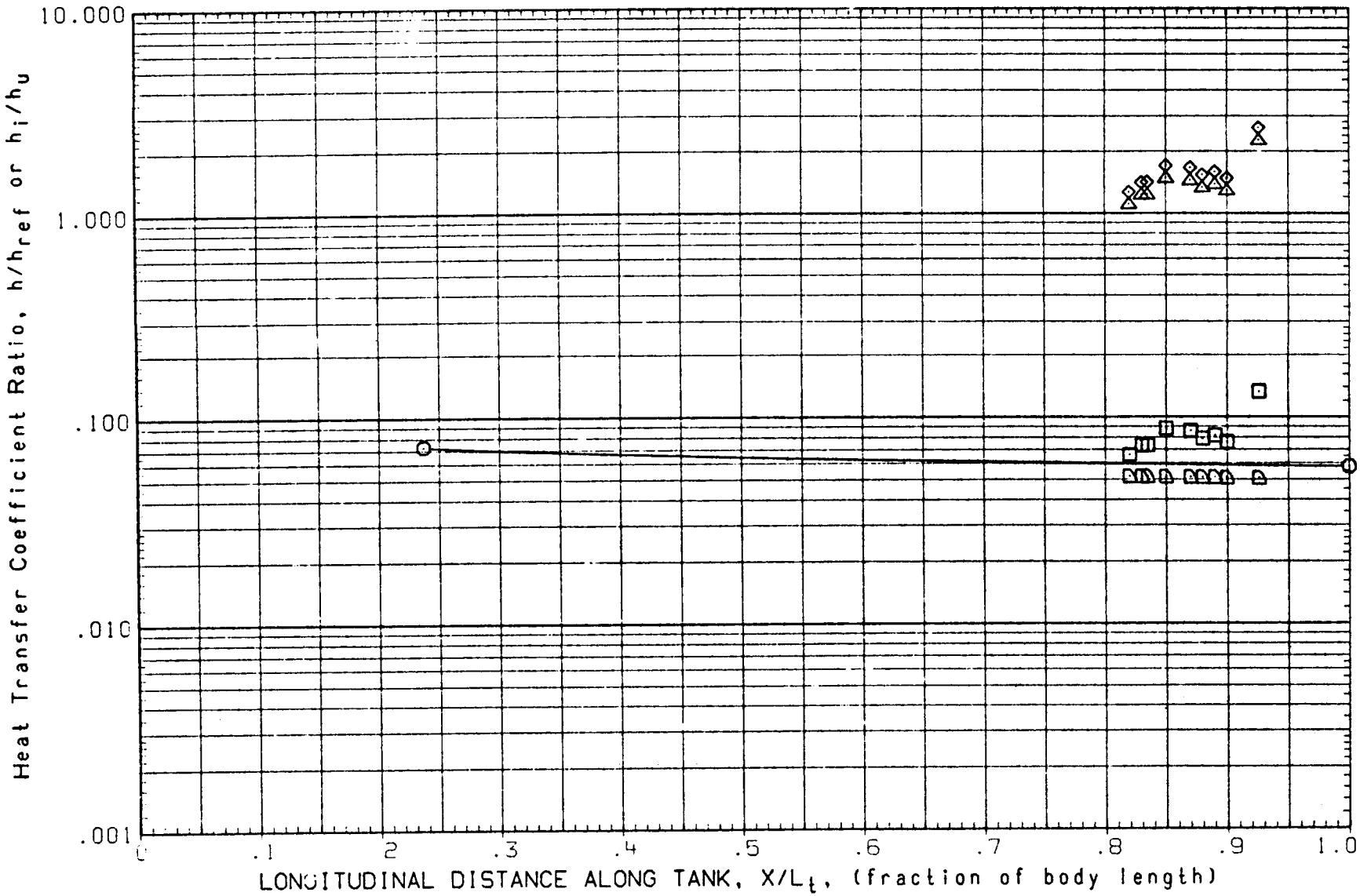

FIG. 4-19 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 305.400

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT58)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	7.500
(C9NT58)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	7.500
(V4LT58)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	7.500
(X4LT58)	◇	IH85 (W.L. TEST) OTS/ET = V4LT58/C9NT58=	HI/HU	4.020	5.000	7.500
(Y4LT58)	△	IH85 (W.L. THEORY) OTS/ET = V4LT58/A9NT58=	HI/HU	4.020	5.000	7.500

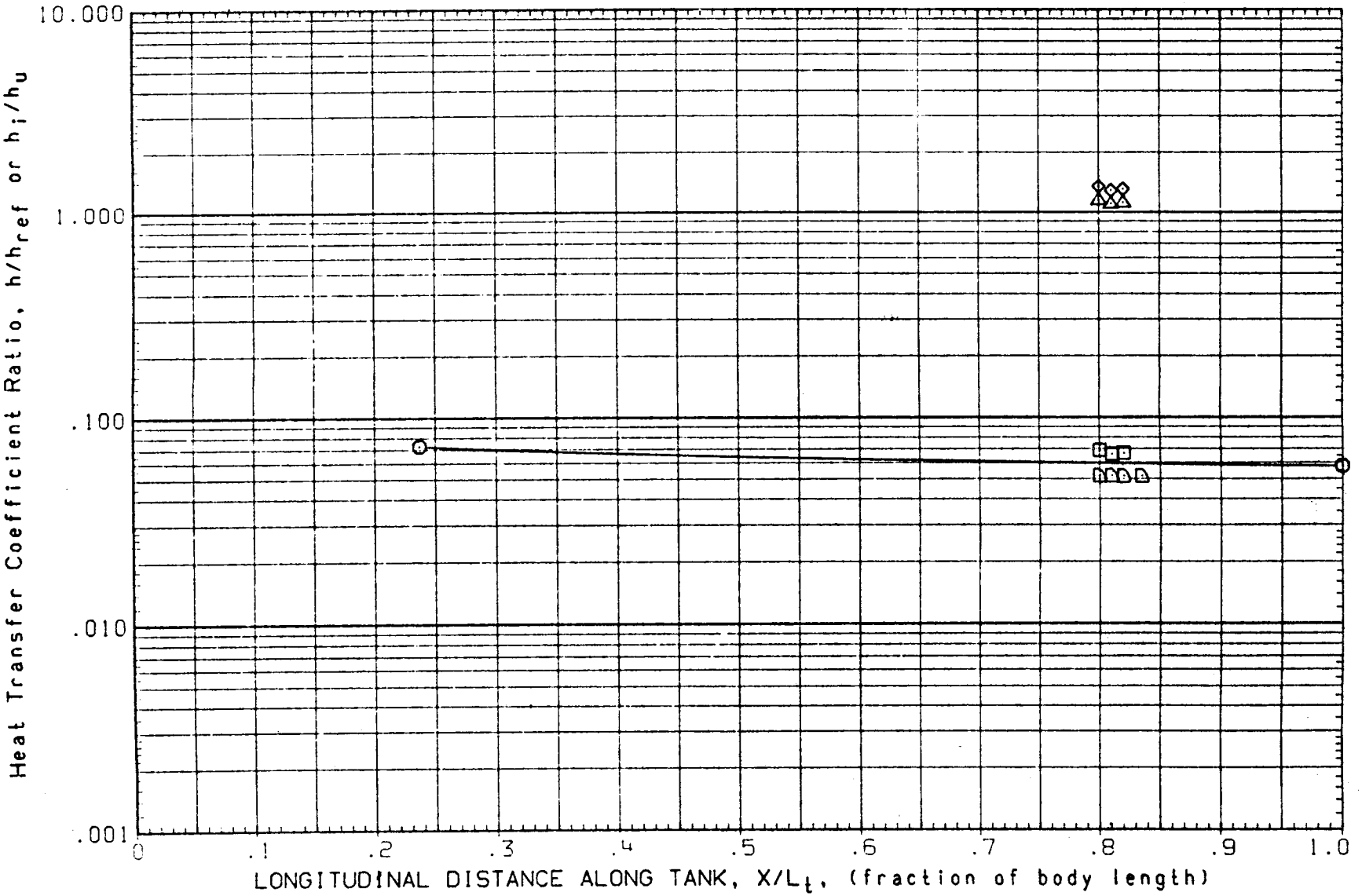

FIG. 4-19 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 309.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT58)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	7.500
(C9NT58)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	7.500
(V4LT58)	□	IH85, AEDC V4IA-W5, CONFIGURATION 0 (T) S		4.020	5.000	7.500
(X4LT58)	◇	IH85 (W.L. TEST) OTS/ET = V4LT58/C9NT58= HI/HU		4.020	5.000	7.500
(Y4LT58)	△	IH85 (W.L. THEORY) OTS/ET = V4LT58/A9NT55= HI/HU		4.020	5.000	7.500

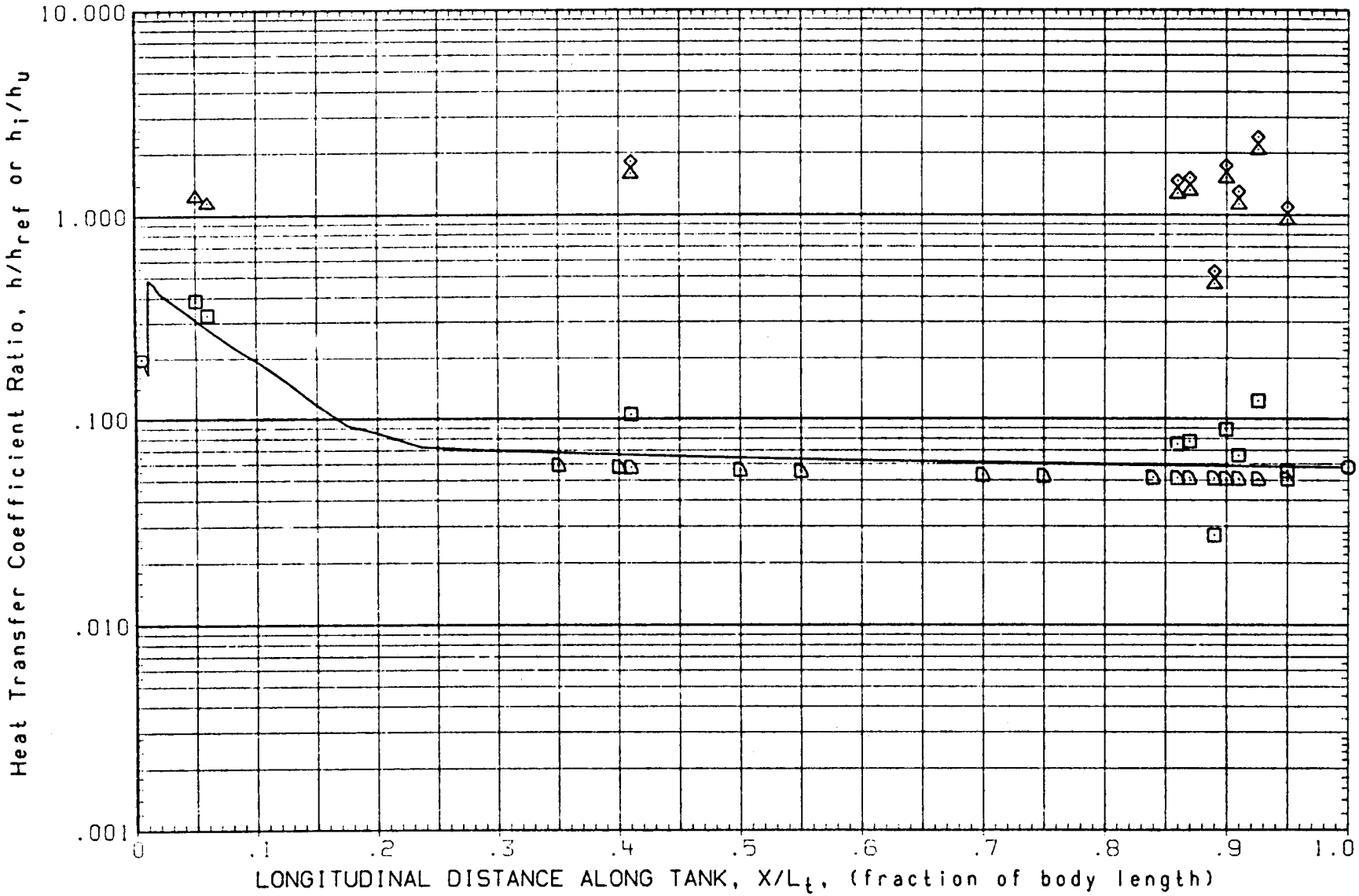

FIG. 4-19 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 315.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT58)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	7.500
(C9NT58)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	7.500
(V4LT58)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	7.500
(X4LT58)	◇	IH85 (W.L. TEST) OTS/ET = V4LT58/C9NT58=	HI/HU	4.020	5.000	7.500
(Y4LT58)	△	IH85 (W.L. THEORY) OTS/ET = V4LT58/A9NT58=	HI/HU	4.020	5.000	7.500

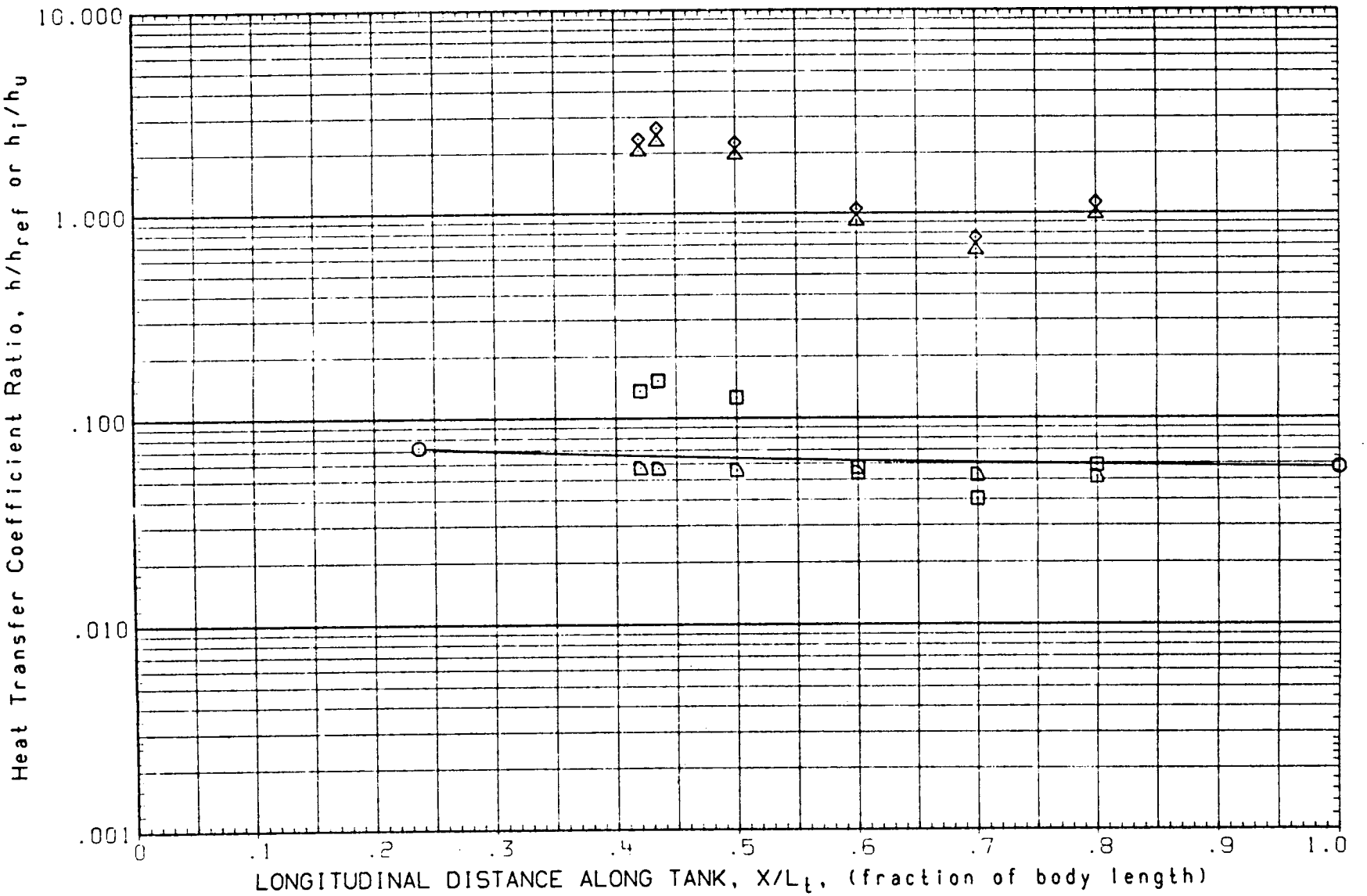

FIG. 4-19 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 322.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT58)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	7.500
(C9NT58)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	7.500
(V4LT58)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	7.500
(X4LT58)	◇	IH85 (W.L. TEST) OTS/ET = V4LT58/C9NT58=	HI/HU	4.020	5.000	7.500
(Y4LT58)	△	IH85 (W.L. THEORY) OTS/ET = V4LT58/A9NT58=	HI/HU	4.020	5.000	7.500

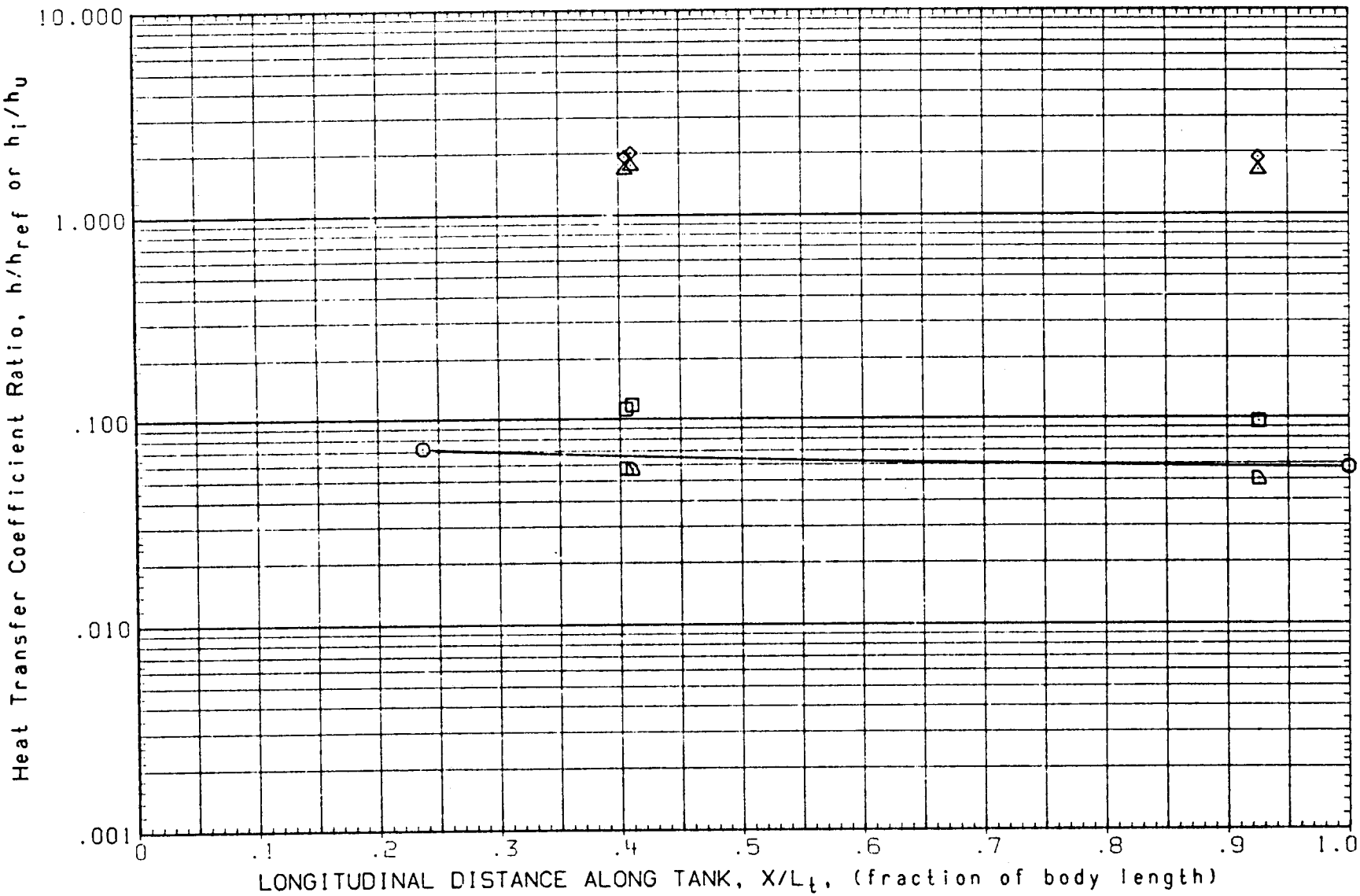

FIG. 4-19 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 324.450

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(C9NT58)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	7.500
(C9NT58)	□	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	7.500
(V4LT58)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	7.500
(X4LT58)	◇	IH85 (W.L. TEST) OTS/ET = V4LT58/C9NT58=	HI/HU	4.020	5.000	7.500
(Y4LT58)	△	IH85 (W.L. THEORY) OTS/ET = V4LT58/A9NT58=	HI/HU	4.020	5.000	7.500

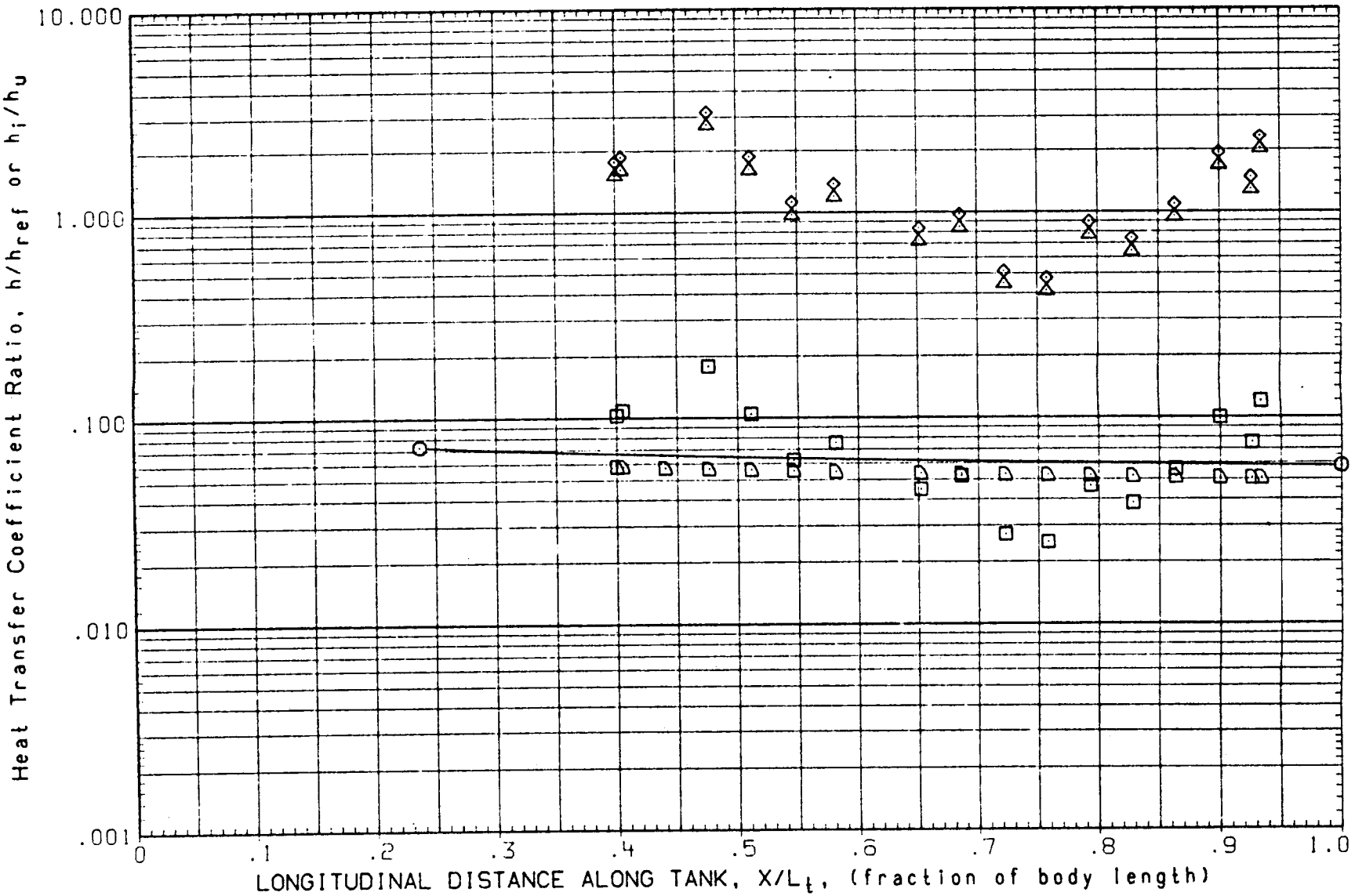

FIG. 4-19 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 326.850

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT58)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	7.500
(C9NT58)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	7.500
(V4LT58)	□	IH85, AEDC V4TA-W5, CONFIGURATION 0 (T) S		4.020	5.000	7.500
(X4LT58)	◇	IH85 (W.L. TEST) OTS/ET = V4LT58/C9NT58=	HI/HU	4.020	5.000	7.500
(Y4LT58)	△	IH85 (W.L. THEORY) OTS/ET = V4LT58/A9NT58=	HI/HU	4.020	5.000	7.500

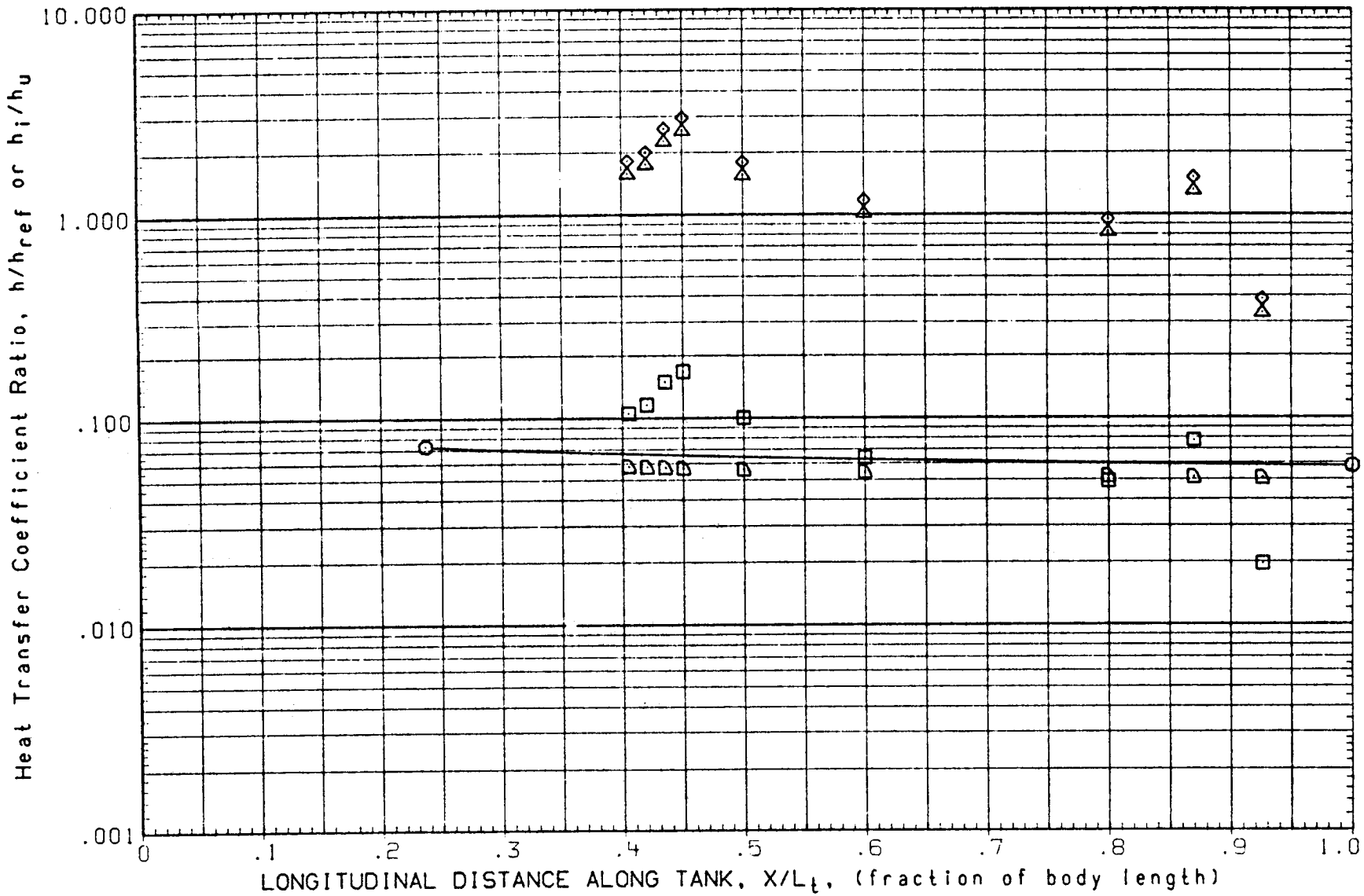

FIG. 4-19 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 330.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT58)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	7.500
(C9NT58)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	7.500
(V4LT58)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	7.500
(X4LT58)	◇	IH85 (W.L. TEST) OTS/ET = V4LT58/C9NT58=	HI/HU	4.020	5.000	7.500
(Y4LT58)	△	IH85 (W.L. THEORY) OTS/ET = V4LT58/A9NT58=	HI/HU	4.020	5.000	7.500

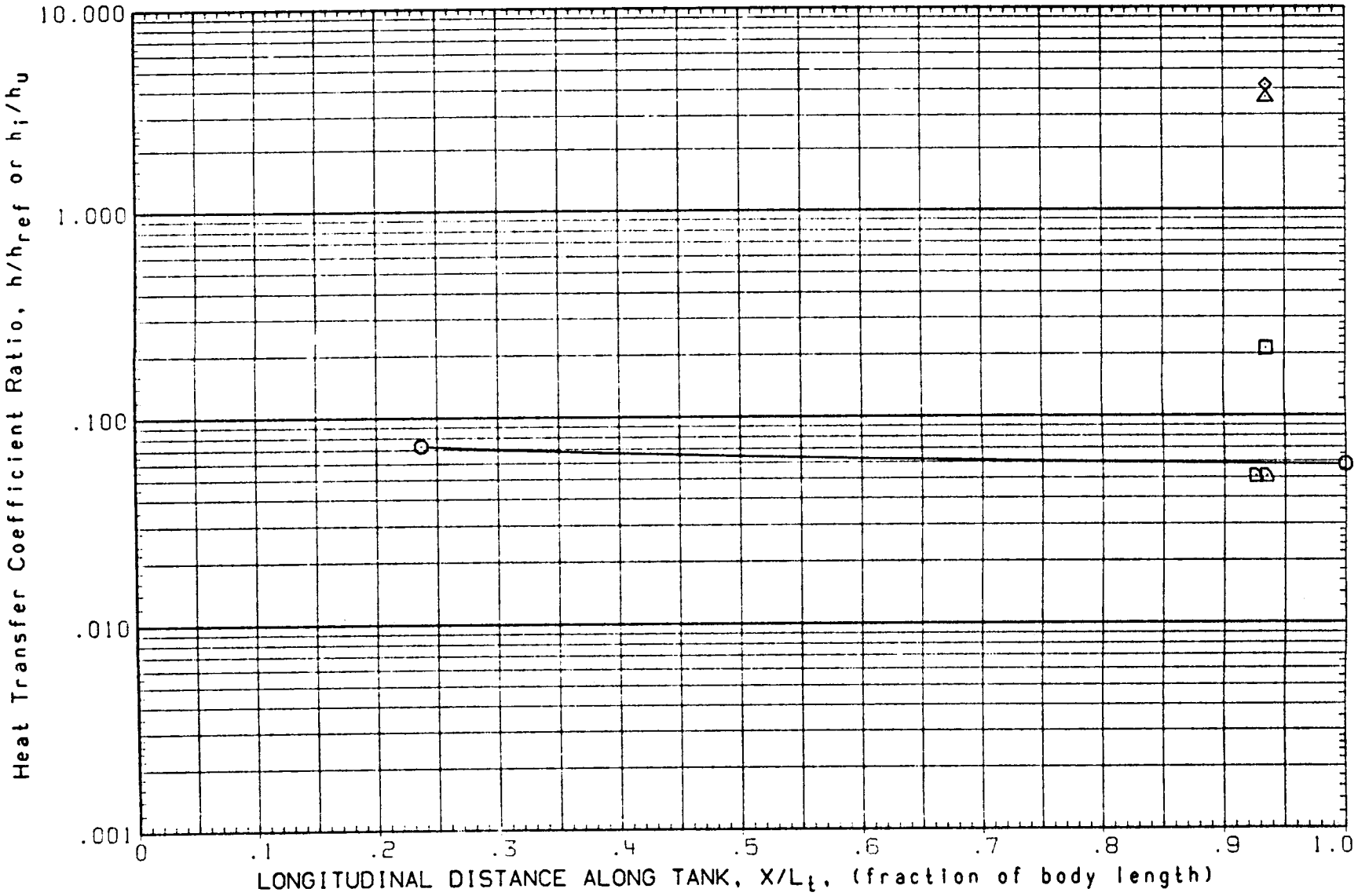

FIG. 4-19 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 334.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT58)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	7.500
(C9NT58)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	7.500
(V4LT58)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	7.500
(X4LT58)	◇	IH85 (W.L. TEST) OTS/ET = V4LT58/C9NT58= HI/HU		4.020	5.000	7.500
(Y4LT58)	△	IH85 (W.L. THEORY) OTS/ET = V4LT58/A9NT58= HI/HU		4.020	5.000	7.500

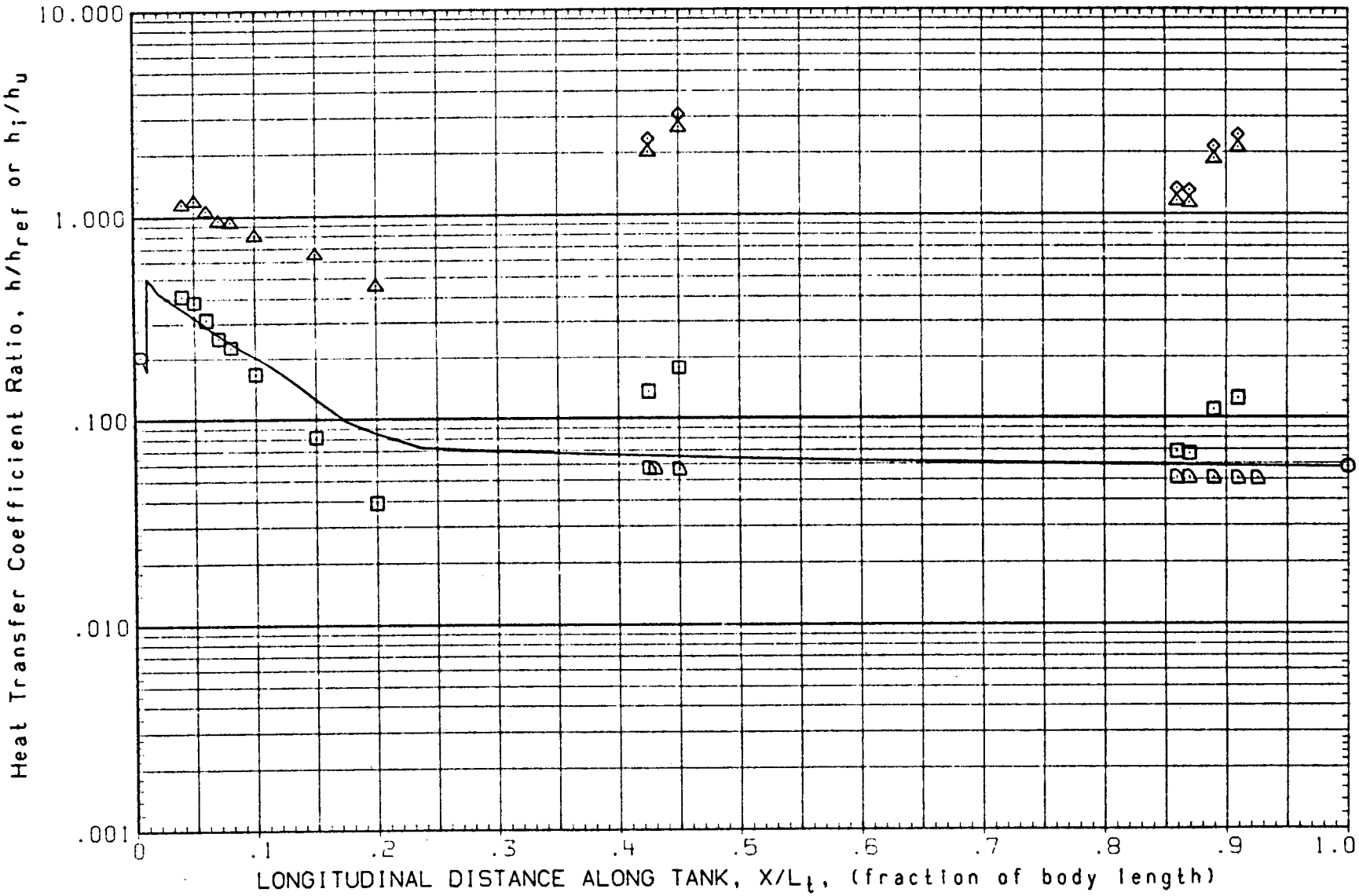

FIG. 4-19 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 337.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT58)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	7.500
(C9NT58)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	7.500
(V4LT58)	□	DATA NOT AVAILABLE		4.020	5.000	7.500
(X4LT58)	◇	DATA NOT AVAILABLE		4.020	5.000	7.500
(Y4LT58)	△	DATA NOT AVAILABLE		4.020	5.000	7.500

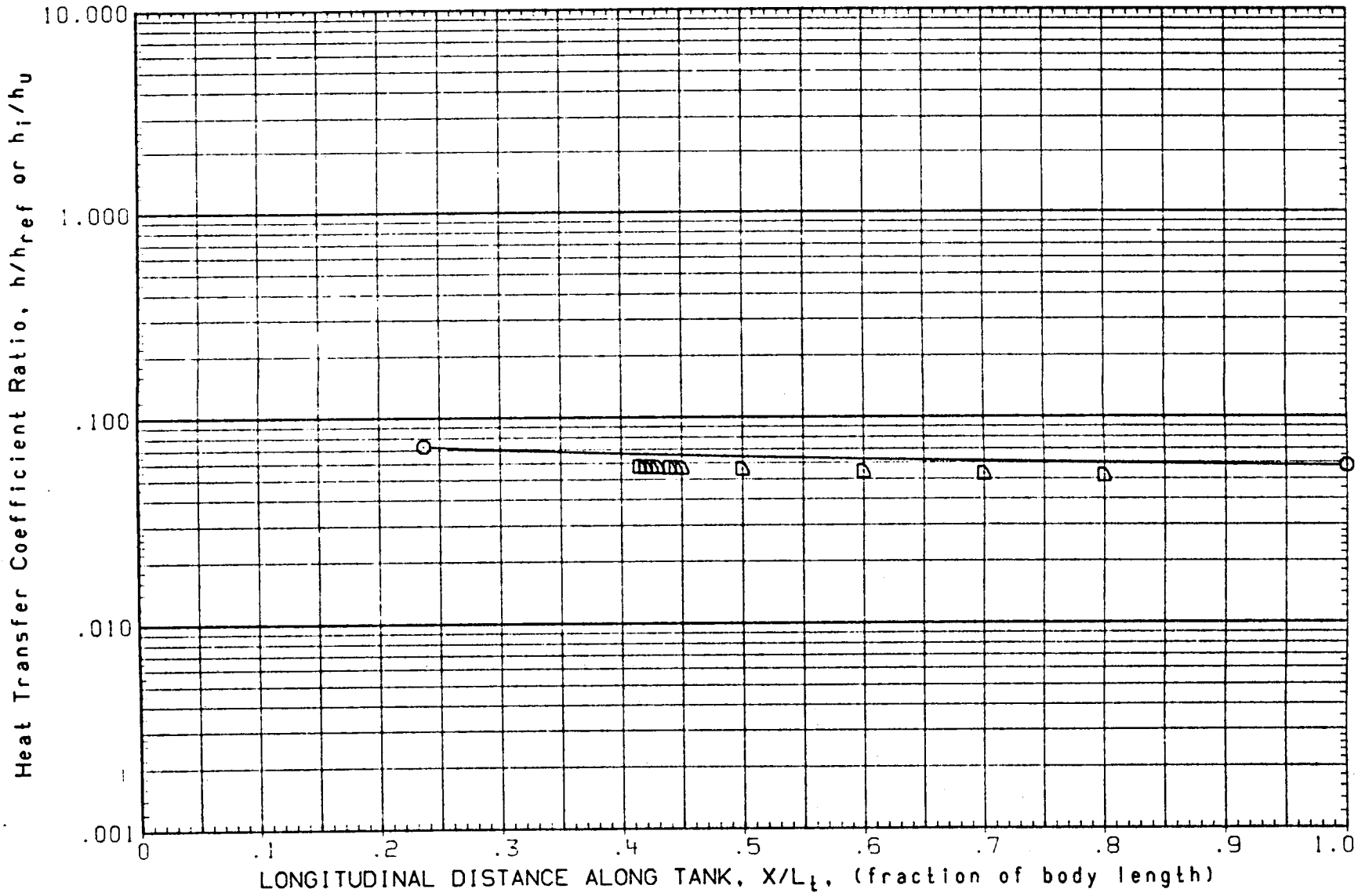

FIG. 4-19 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 343.120

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT58)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	7.500
(C9NT58)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	7.500
(V4LT58)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	7.500
(X4LT58)	◇	IH85 (W.L. TEST) OTS/ET = V4LT58/C9NT58= HI/HU		4.020	5.000	7.500
(Y4LT58)	△	IH85 (W.L. THEORY) OTS/ET = V4LT58/A9NT58= HI/HU		4.020	5.000	7.500

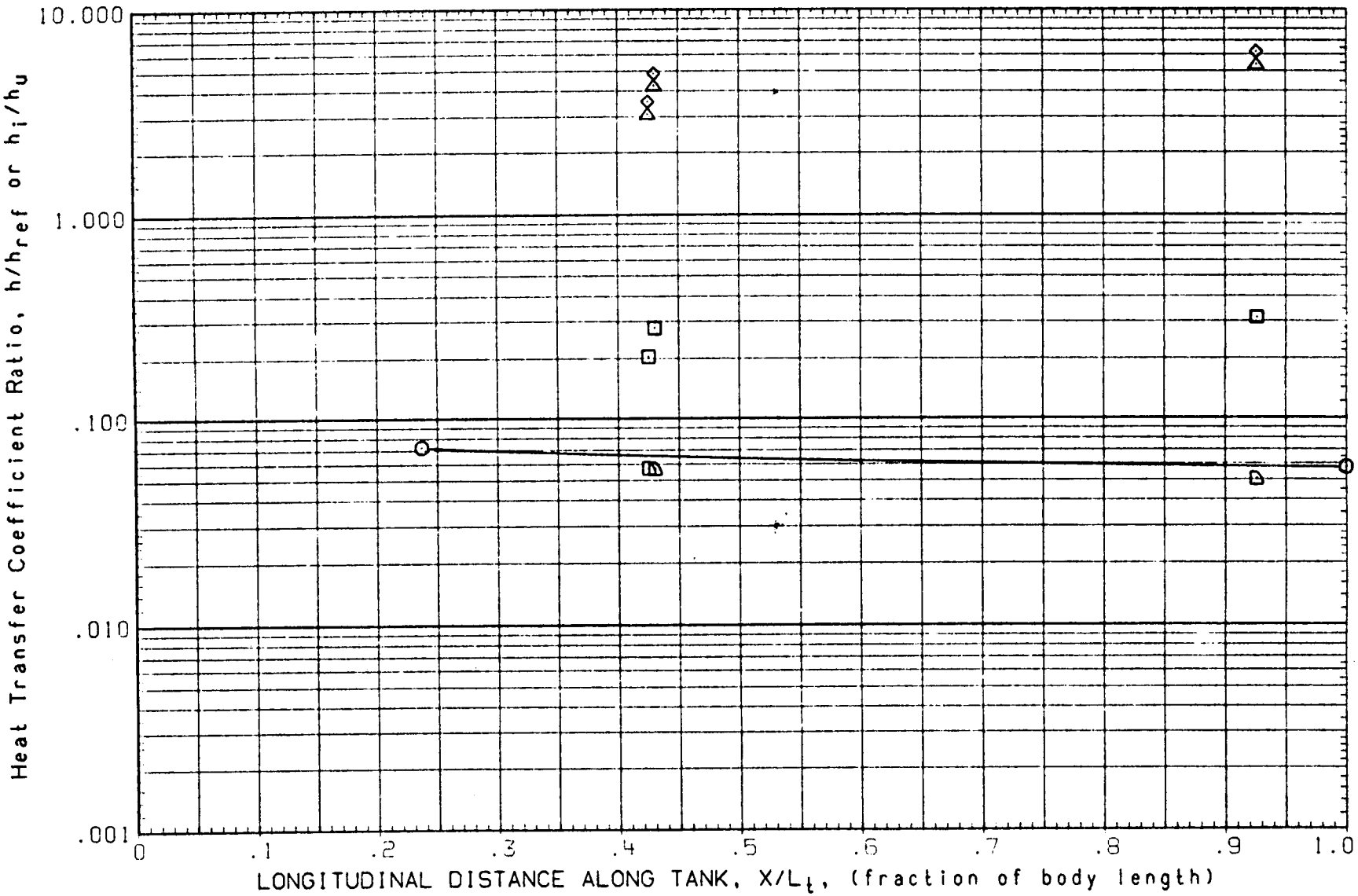

FIG. 4-19 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 345.560

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT58)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	7.500
(C9NT58)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	7.500
(V4LT58)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	7.500
(X4LT58)	◇	IH85 (W.L. TEST) OTS/ET = V4LT58/C9NT58=	HI/HU	4.020	5.000	7.500
(Y4LT58)	△	IH85 (W.L. THEORY) OTS/ET = V4LT58/A9NT58=	HI/HU	4.020	5.000	7.500

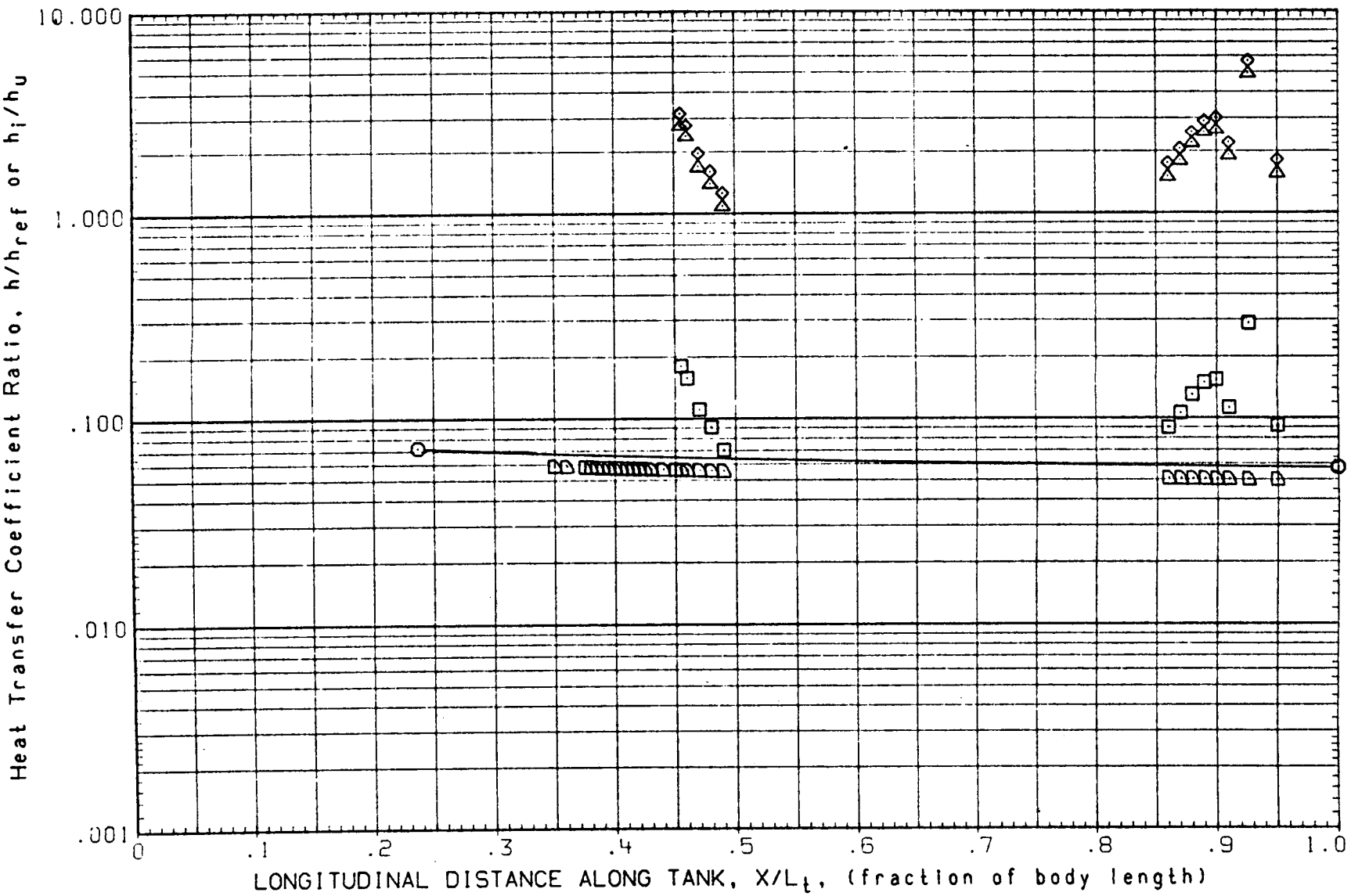

FIG. 4-19 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 348.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT58)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	7.500
(C9NT58)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	7.500
(V4LT58)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	7.500
(X4LT58)	◇	IH85 (W.L. TEST) OTS/ET = V4LT58/C9NT58= HI/HU		4.020	5.000	7.500
(Y4LT58)	△	IH85 (W.L. THEORY) OTS/ET = V4LT58/A9NT58= HI/HU		4.020	5.000	7.500

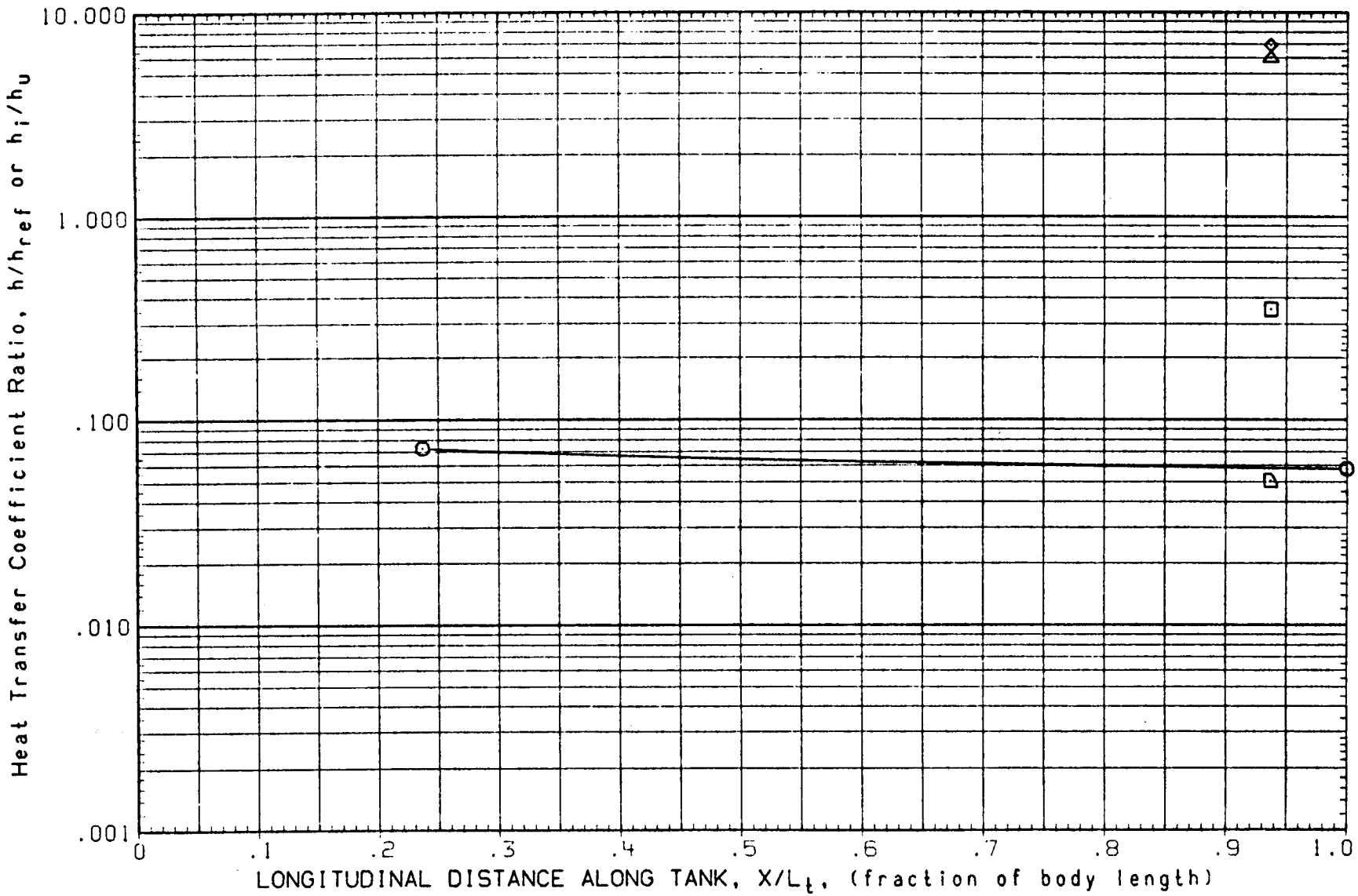

FIG. 4-19 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 352.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT58)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	7.500
(C9NT58)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	4.020	5.000	7.500
(V4LT58)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T) S		4.020	5.000	7.500
(X4LT58)	◇	IH85 (W.L. TEST) OTS/ET = V4LT58/C9NT58=	HI/HU	4.020	5.000	7.500
(Y4LT58)	△	IH85 (W.L. THEORY) OTS/ET = V4LT58/A9NT58=	HI/HU	4.020	5.000	7.500

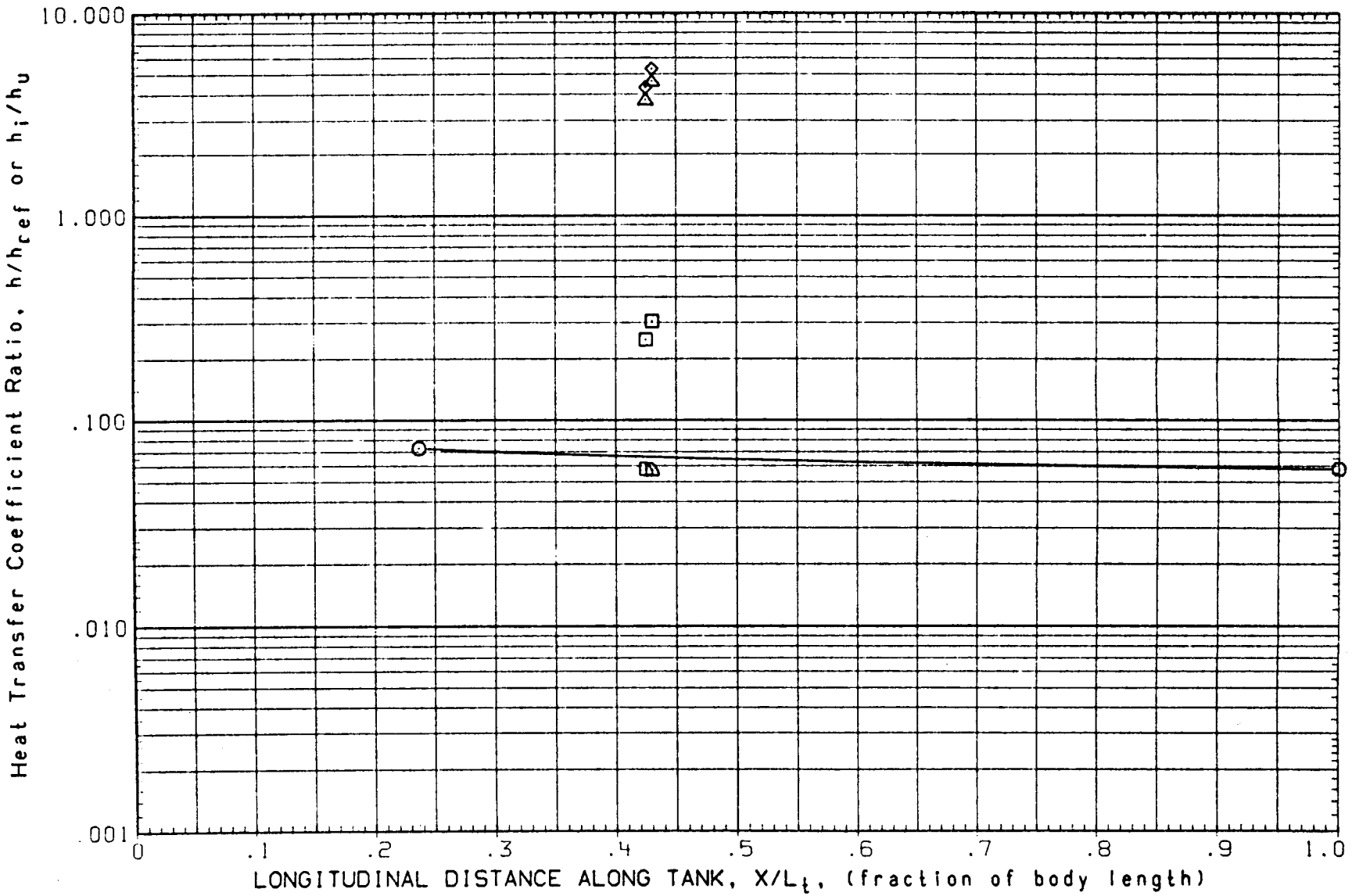

FIG. 4-19 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 354.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT58)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	7.500
(C9NT58)	⬠	DATA NOT AVAILABLE		4.020	5.000	7.500
(V4LT58)	□	DATA NOT AVAILABLE		4.020	5.000	7.500
(X4LT58)	◇	DATA NOT AVAILABLE		4.020	5.000	7.500
(Y4LT58)	△	DATA NOT AVAILABLE		4.020	5.000	7.500

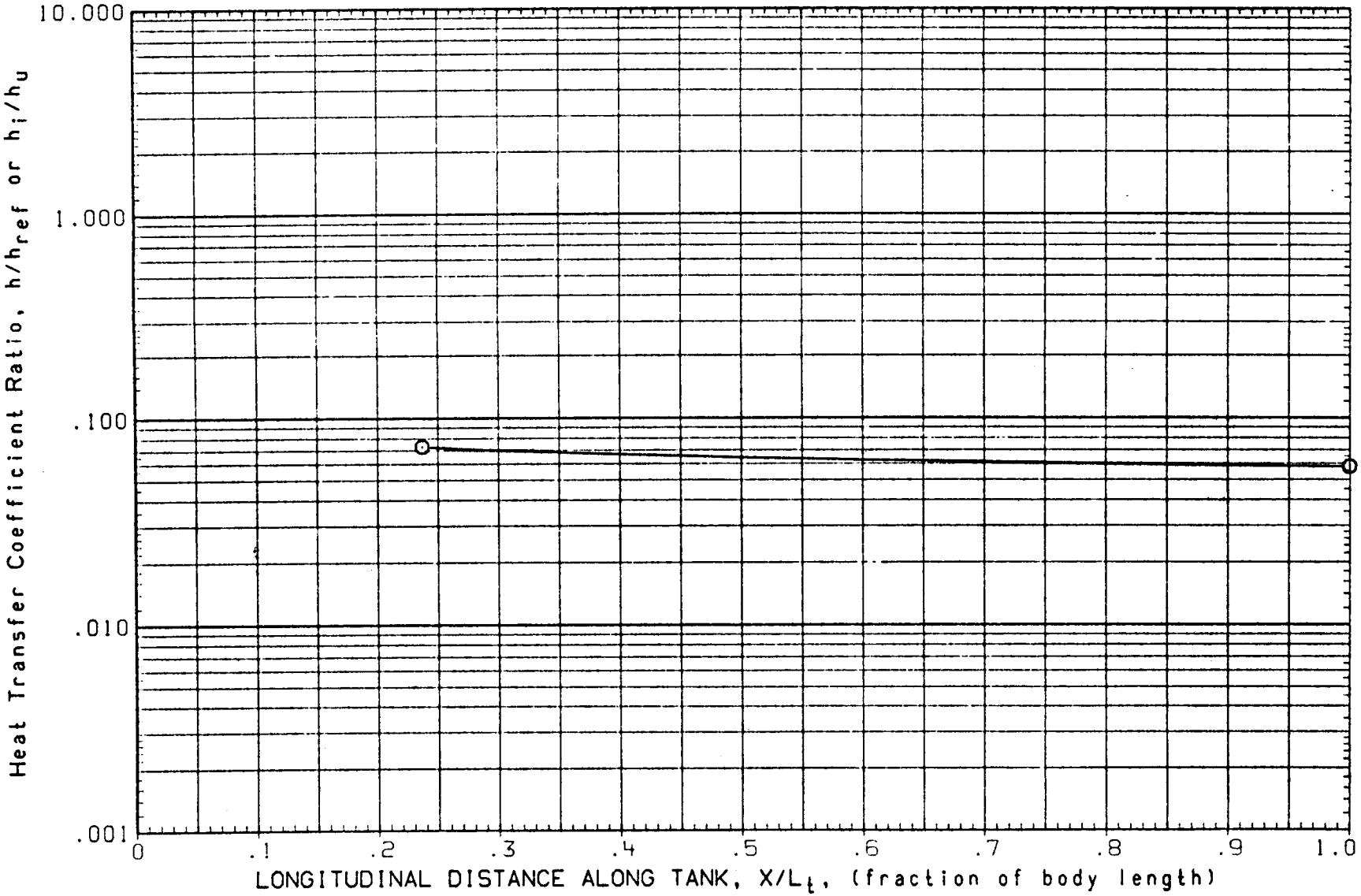

FIG. 4-19 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 355.160

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT58)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	4.020	5.000	7.500
(C9NT58)	⬠	DATA NOT AVAILABLE		4.020	5.000	7.500
(V4LT58)	□	DATA NOT AVAILABLE		4.020	5.000	7.500
(X4LT58)	◇	DATA NOT AVAILABLE		4.020	5.000	7.500
(Y4LT58)	△	DATA NOT AVAILABLE		4.020	5.000	7.500

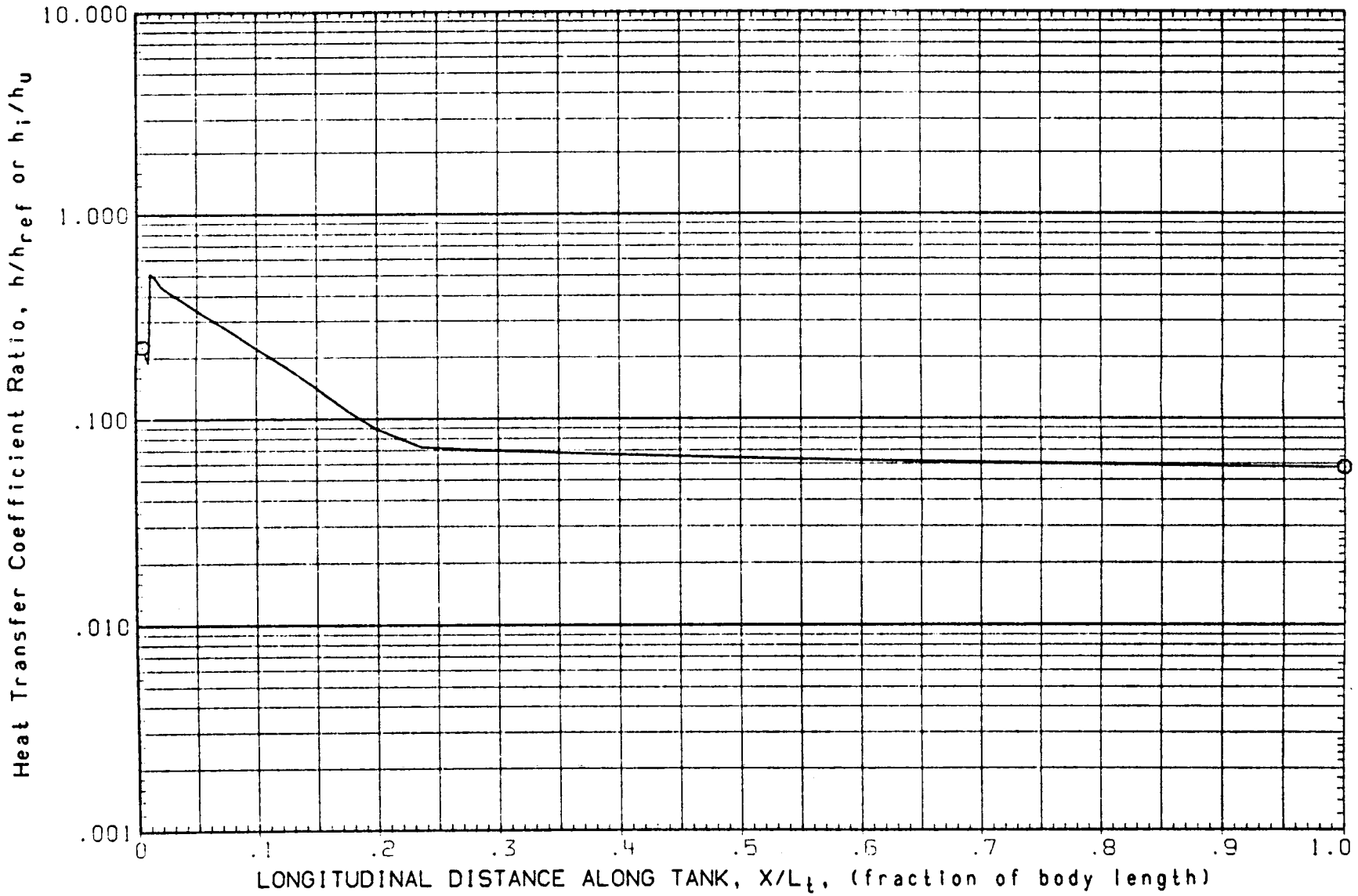

FIG. 4-19 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 5, BETA= 7.5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 4.020 ALPHA = 5.000 PHI = 360.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT04)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-5.000
(C9NT04)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-5.000
(V4LT12)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-5.000
(X4LT12)	◇	IH85 (W.L. TEST)	OT/ET = V4LT12/C9NT04= HI/HU	3.010	.000	-5.000
(Y4LT12)	△	IH85 (W.L. THEORY)	OT/ET = V4LT12/A9NT04= HI/HU	3.010	.000	-5.000

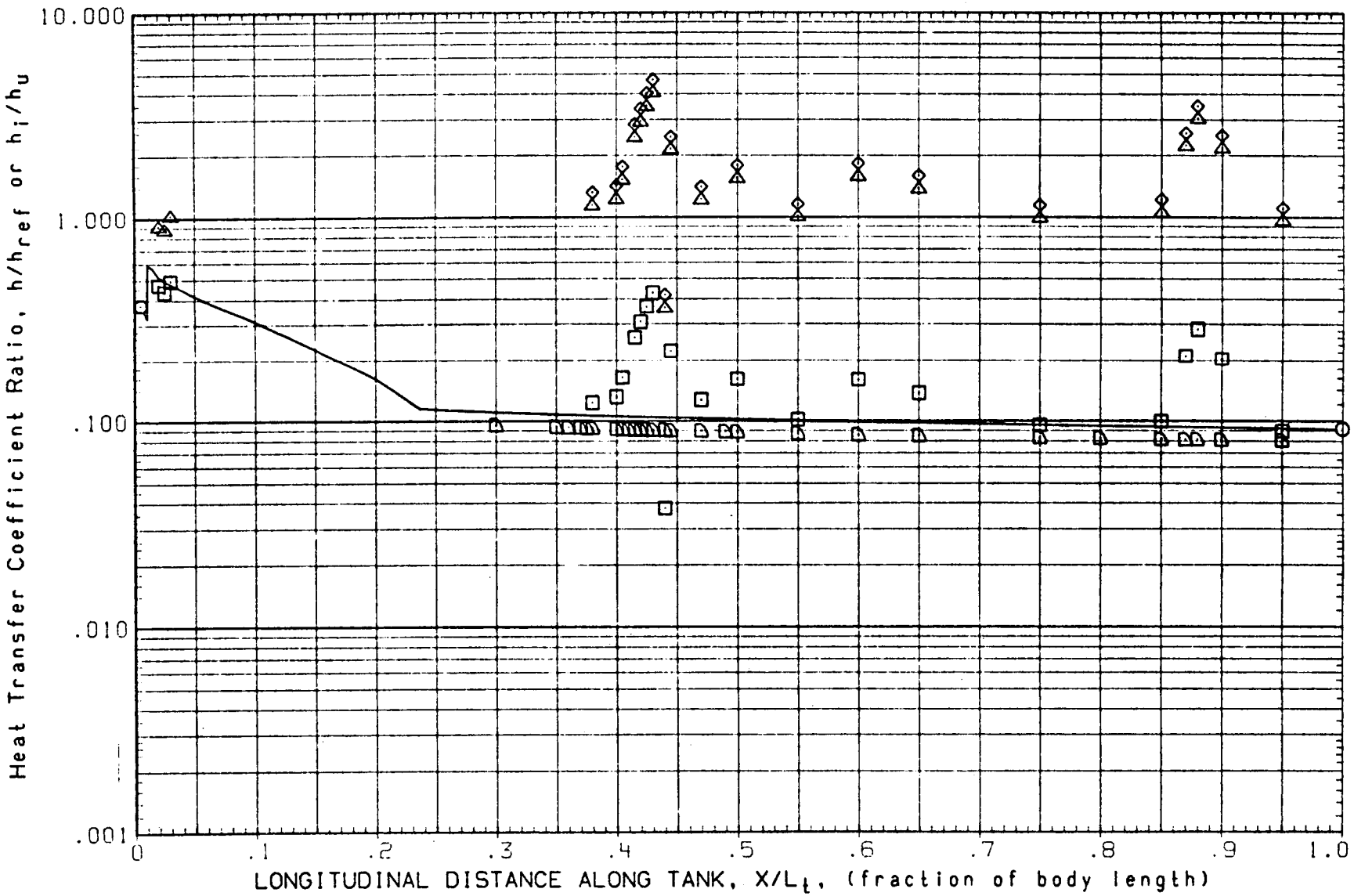

FIG. 4-20 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = .000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT04)	○	DATA NOT AVAILABLE	3.010	.000	-5.000
(C9NT04)	⌂	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	3.010	.000	-5.000
(V4LT12)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)	3.010	.000	-5.000
(X4LT12)	◇	IH85 (W.L. TEST) OT/ET = V4LT12/C9NT04= HI/HU	3.010	.000	-5.000
(Y4LT12)	△	IH85 (W.L. THEORY) OT/ET = V4LT12/A9NT04= HI/HU	3.010	.000	-5.000

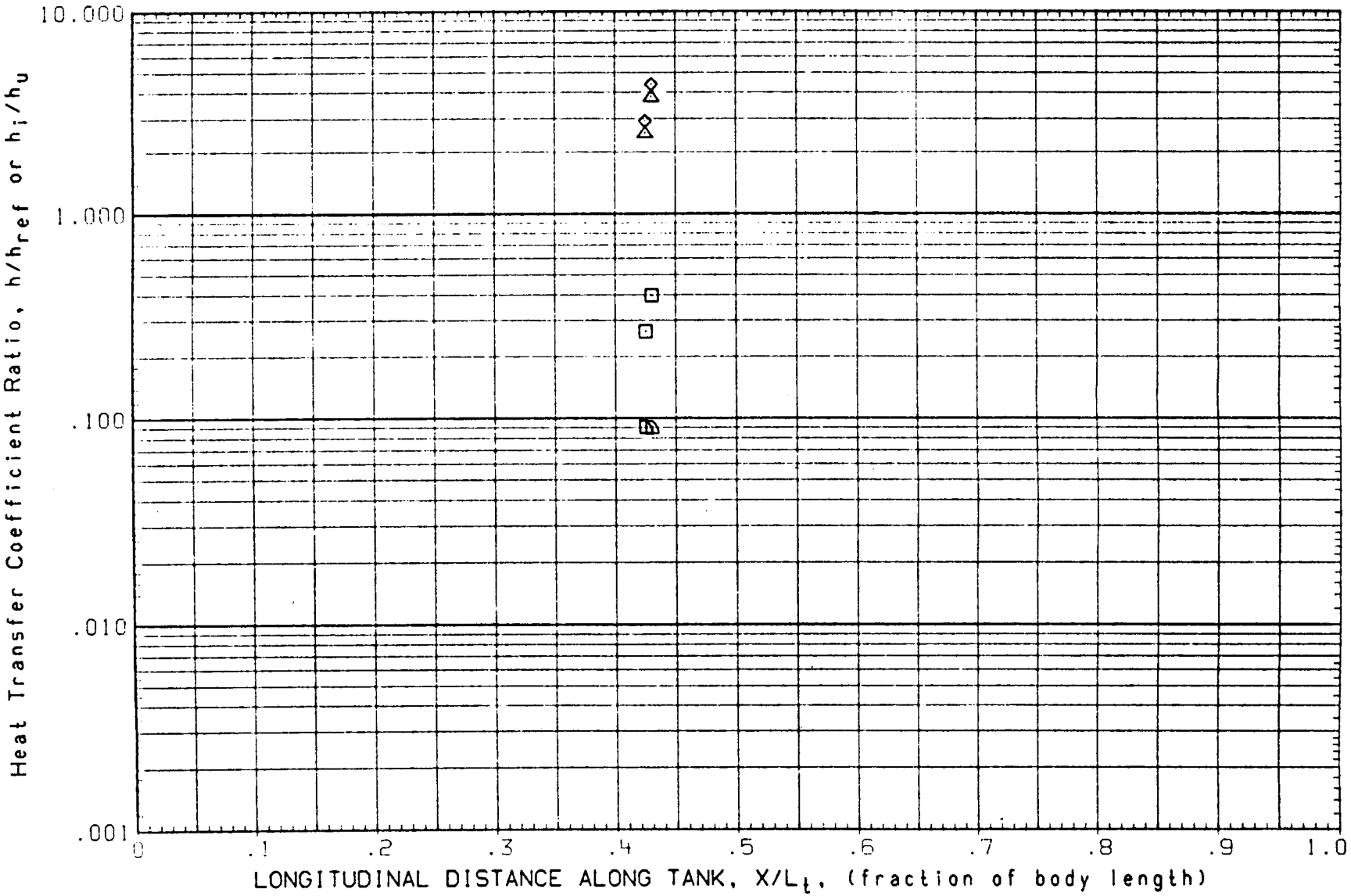

FIG. 4-20 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 5.625

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT04)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-5.000
(C9NT04)	⬠	DATA NOT AVAILABLE		3.010	.000	-5.000
(V4LT12)	□	DATA NOT AVAILABLE		3.010	.000	-5.000
(X4LT12)	◇	DATA NOT AVAILABLE		3.010	.000	-5.000
(Y4LT12)	△	DATA NOT AVAILABLE		3.010	.000	-5.000

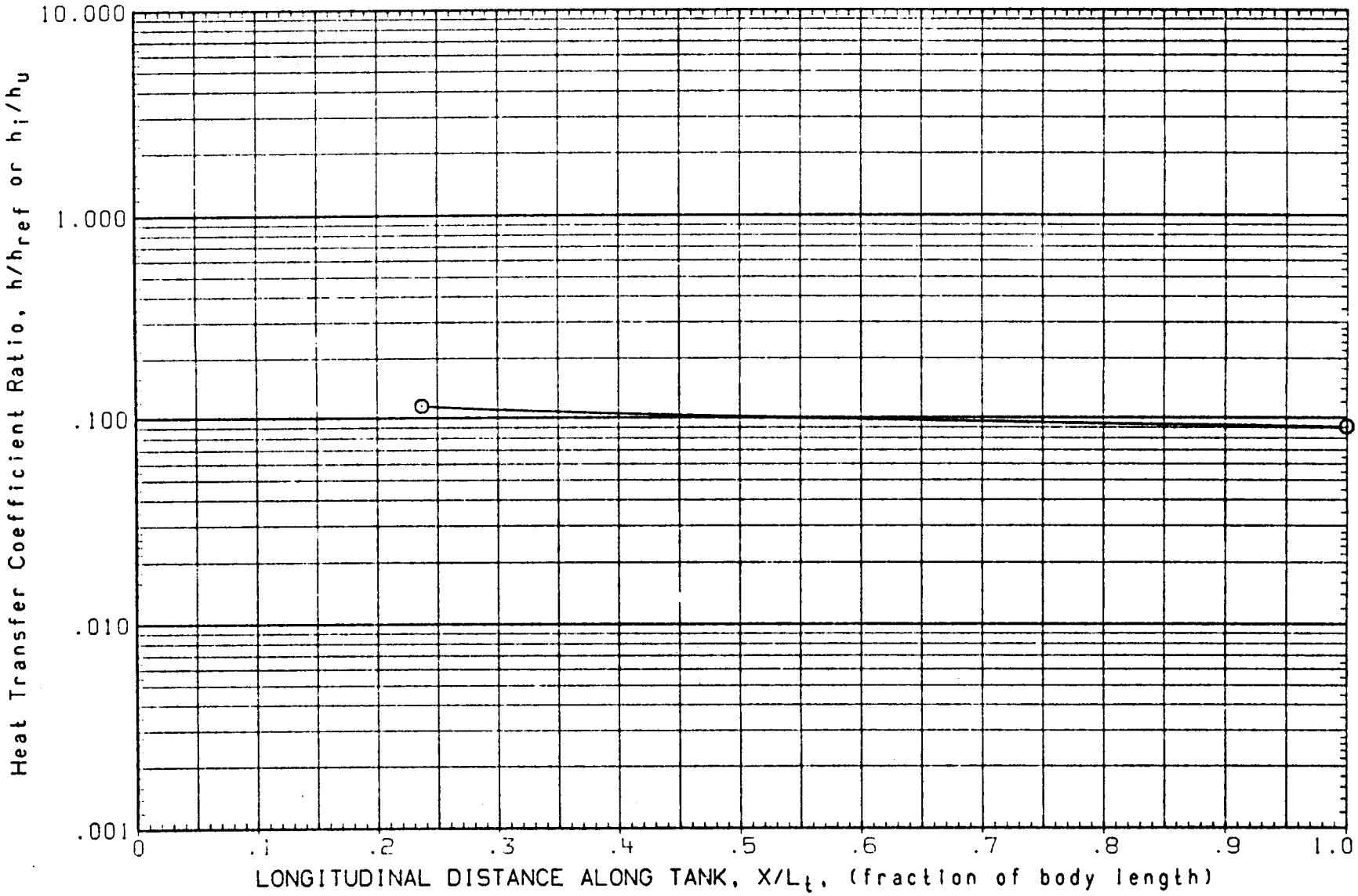

FIG. 4-20 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 5.630

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT04)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-5.000
(C9NT04)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-5.000
(V4LT12)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-5.000
(X4LT12)	◇	IH85 (W.L. TEST) OT/ET = V4LT12/C9NT04=	HI/HU	3.010	.000	-5.000
(Y4LT12)	△	IH85 (W.L. THEORY) OT/ET = V4LT12/A9NT04=	HI/HU	3.010	.000	-5.000

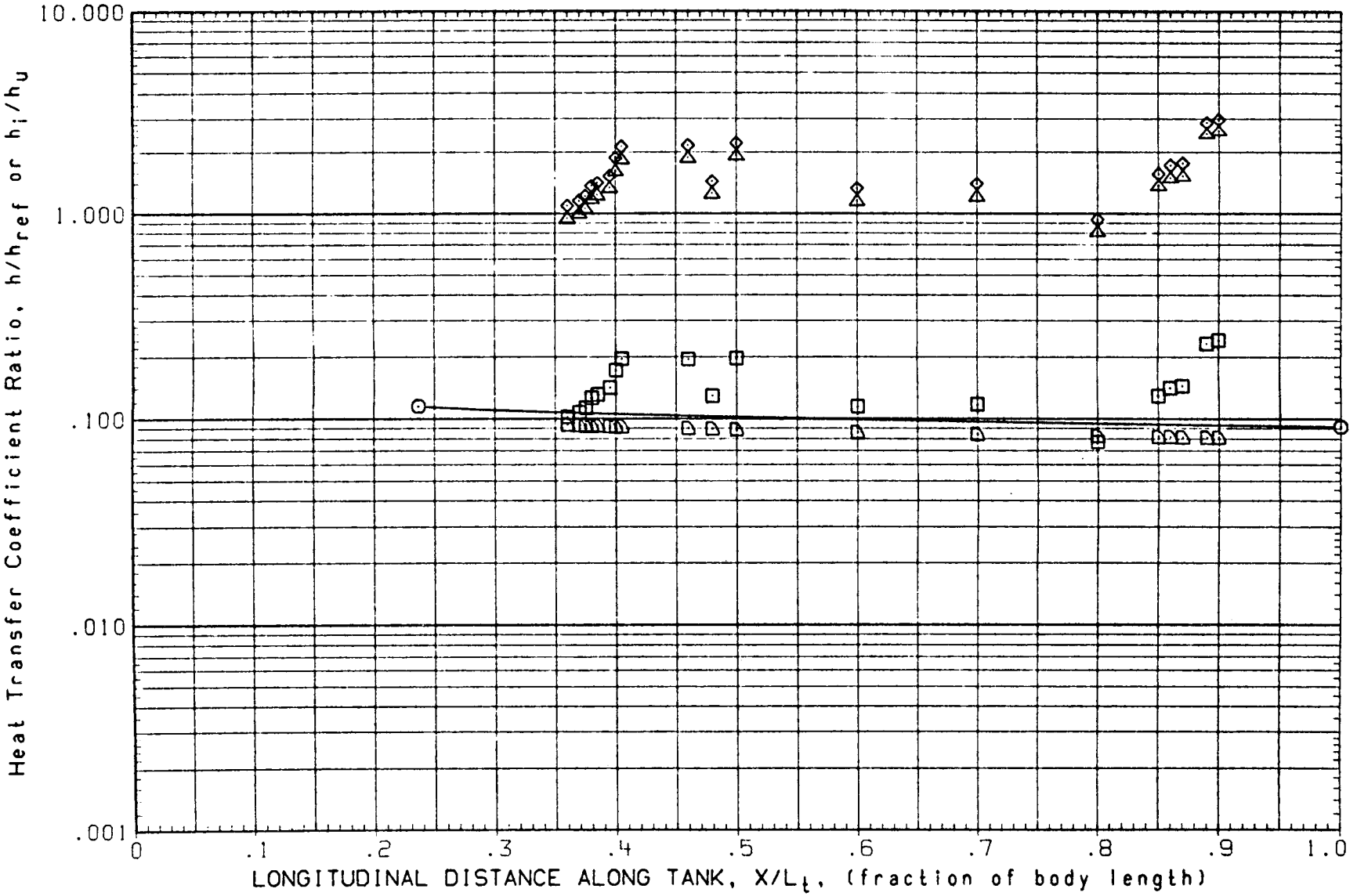

FIG. 4-20 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 11.250

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT04)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-5.000
(C9NT04)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-5.000
(V4LT12)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-5.000
(X4LT12)	◇	IH85 (W.L. TEST)	OT/ET = V4LT12/C9NT04= HI/HU	3.010	.000	-5.000
(Y4LT12)	△	IH85 (W.L. THEORY)	OT/ET = V4LT12/A9NT04= HI/HU	3.010	.000	-5.000

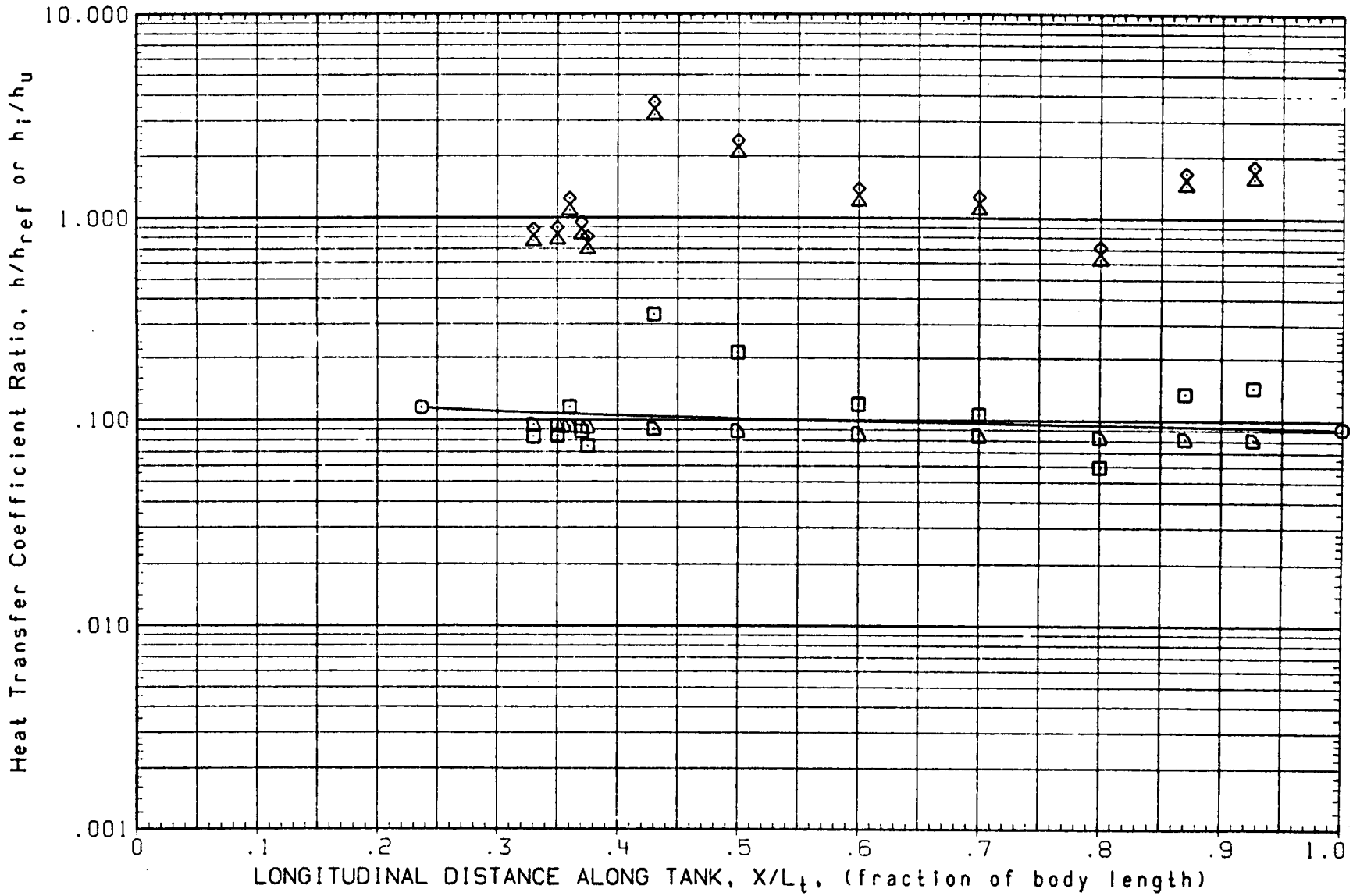

FIG. 4-20 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 17.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT04)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-5.000
(C9NT04)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-5.000
(V4LT12)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-5.000
(X4LT12)	◇	IH85 (W.L. TEST)	OT/ET = V4LT12/C9NT04= HI/HU	3.010	.000	-5.000
(Y4LT12)	△	IH85 (W.L. THEORY)	OT/ET = V4LT12/A9NT04= HI/HU	3.010	.000	-5.000

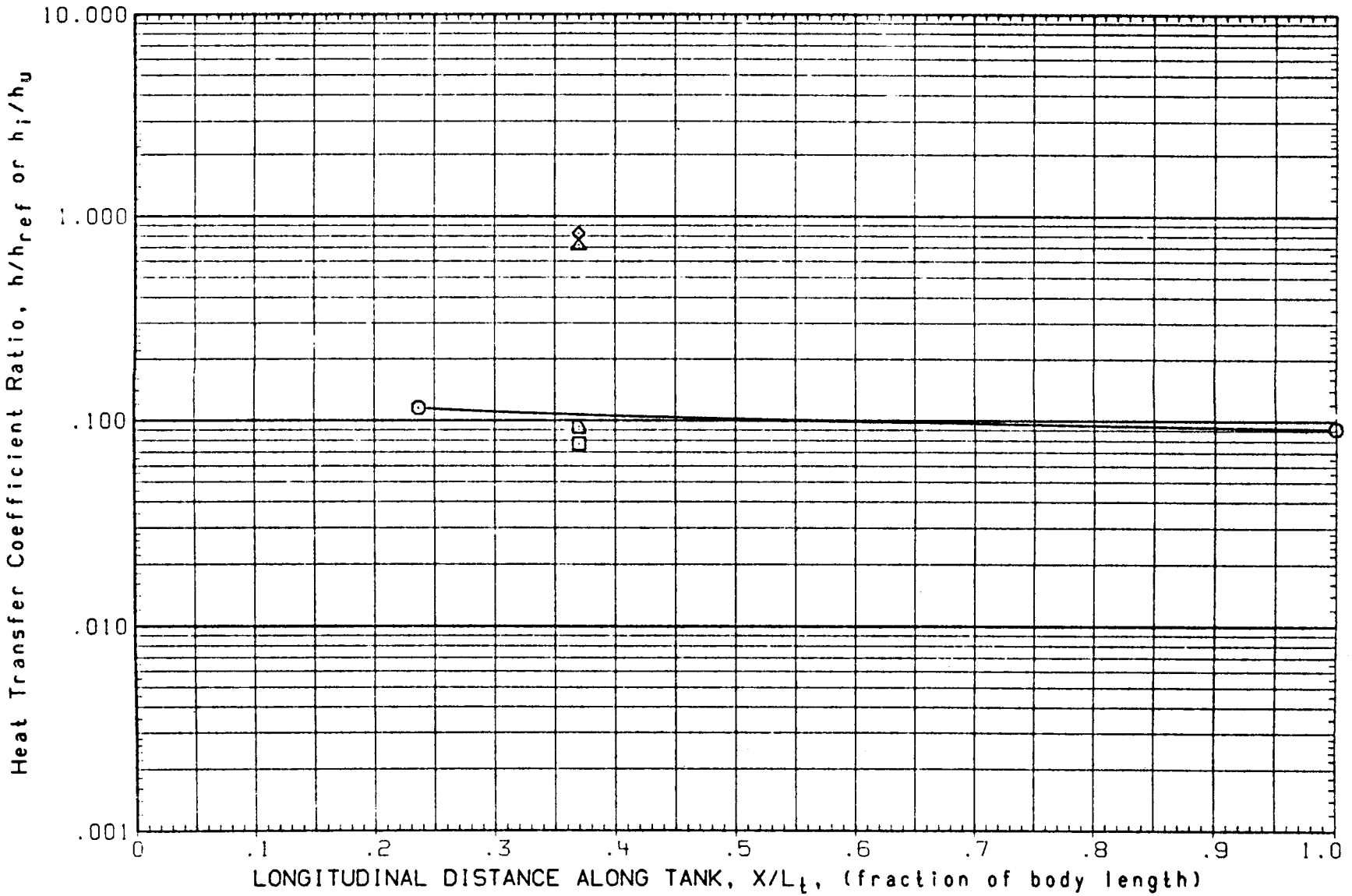

FIG. 4-20 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 20.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT04)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-5.000
(C9NT04)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-5.000
(V4LT12)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-5.000
(X4LT12)	◇	IH85 (W.L. TEST)	OT/ET = V4LT12/C9NT04= HI/HU	3.010	.000	-5.000
(Y4LT12)	△	IH85 (W.L. THEORY)	OT/ET = V4LT12/A9NT04= HI/HU	3.010	.000	-5.000

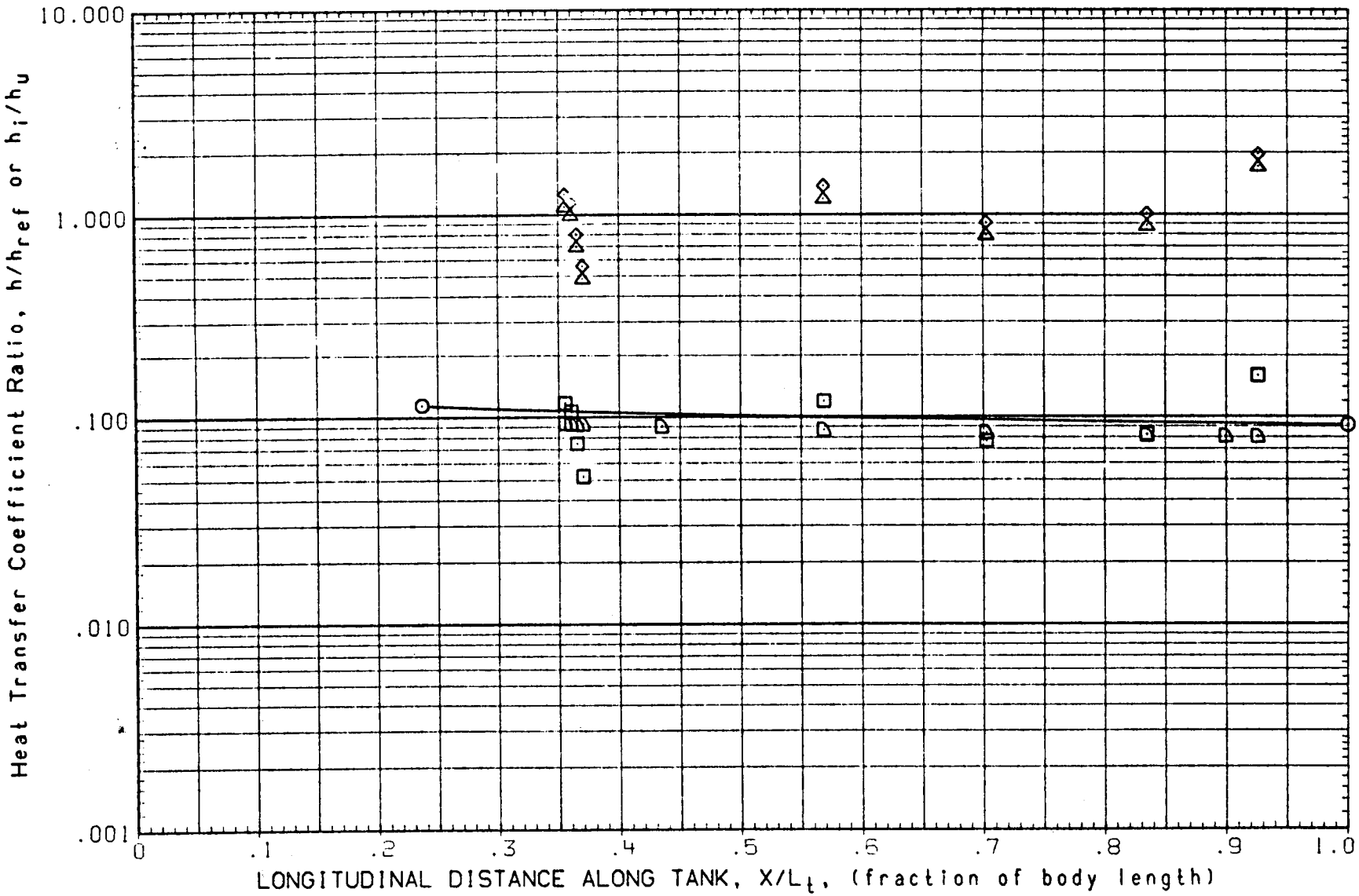

FIG. 4-20 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 23.070

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT04)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-5.000
(C9NT04)	⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-5.000
(V4LT12)	□	IH85, AEDC V4TA-W5, CONFIGURATION 0 (T)		3.010	.000	-5.000
(X4LT12)	◇	IH85 (W.L. TEST) OT/ET = V4LT12/C9NT04=	HI/HU	3.010	.000	-5.000
(Y4LT12)	△	IH85 (W.L. THEORY) OT/ET = V4LT12/A9NT04=	HI/HU	3.010	.000	-5.000

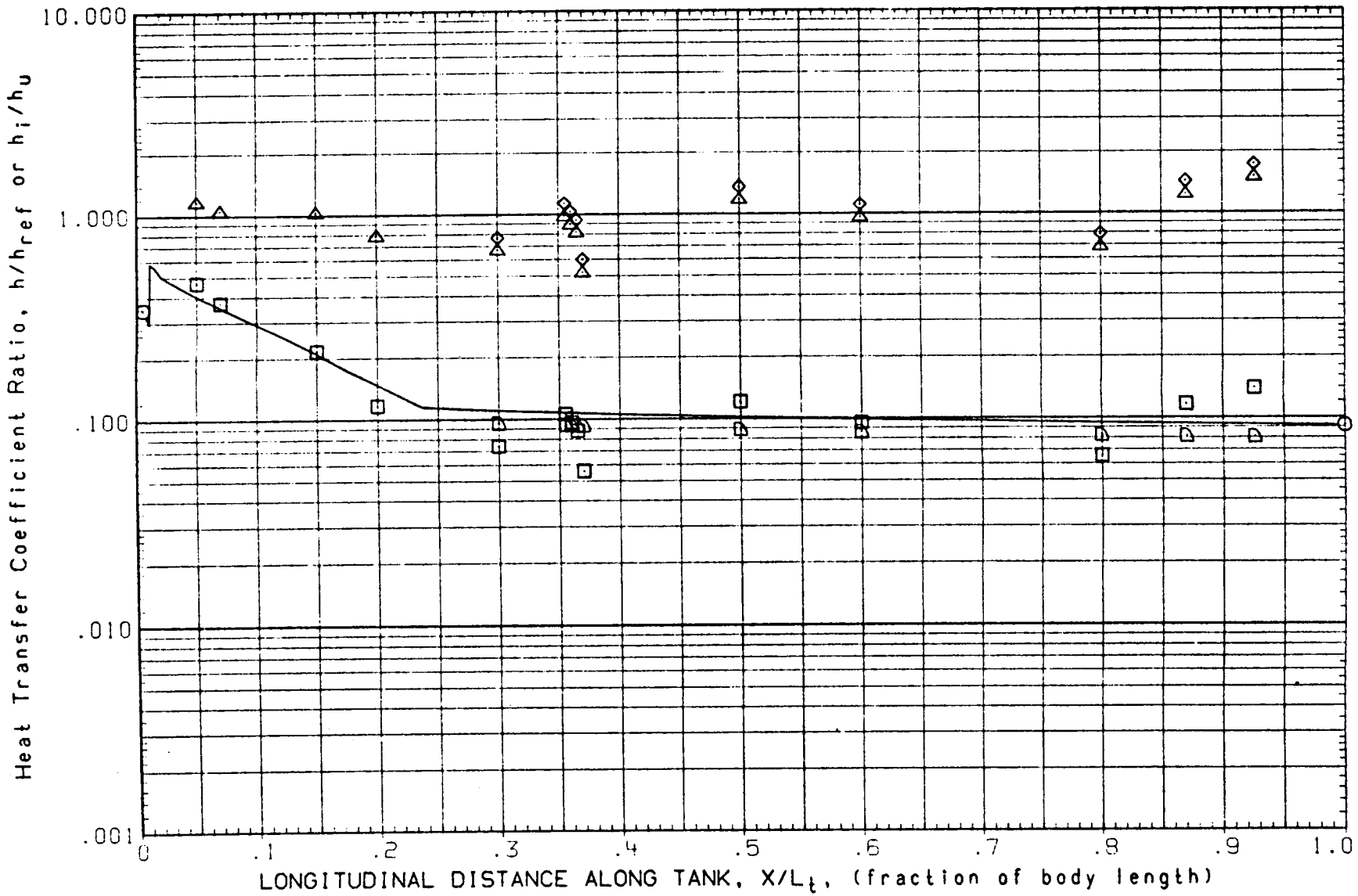

FIG. 4-20 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 29.800

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT04)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	3.010	.000	-5.000
(C9NT04)	◺	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	3.010	.000	-5.000
(V4LT12)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)	3.010	.000	-5.000
(X4LT12)	◇	IH85 (W.L. TEST) OT/ET = V4LT12/C9NT04= HI/HU	3.010	.000	-5.000
(Y4LT12)	△	IH85 (W.L. THEORY) OT/ET = V4LT12/A9NT04= HI/HU	3.010	.000	-5.000

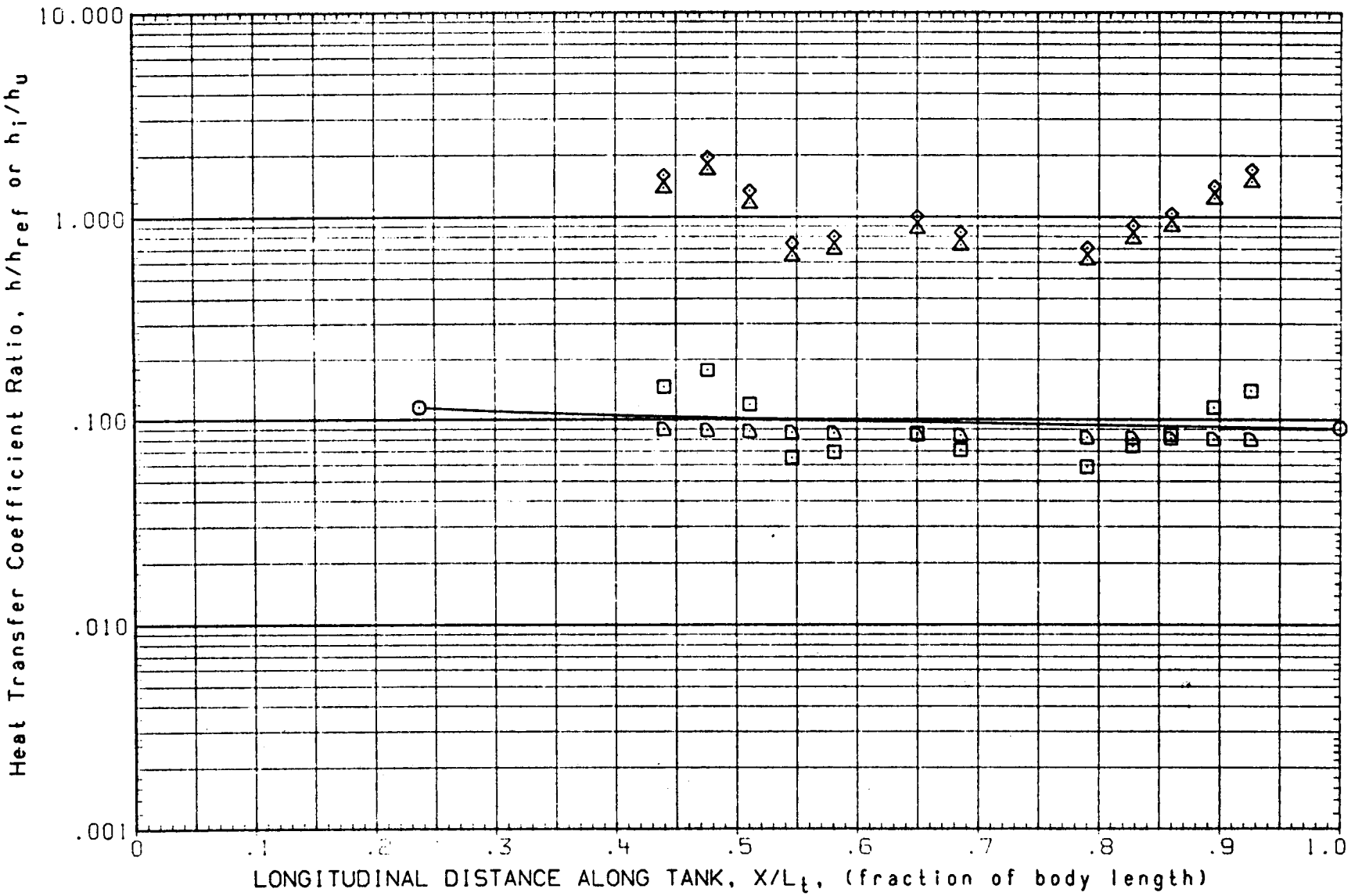

FIG. 4-20 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 31.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT04)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-5.000
(C9NT04)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-5.000
(V4LT12)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-5.000
(X4LT12)	◇	IH85 (W.L. TEST)	OT/ET = V4LT12/C9NT04= HI/HU	3.010	.000	-5.000
(Y4LT12)	△	IH85 (W.L. THEORY)	OT/LT = V4LT12/A9NT04= HI/HU	3.010	.000	-5.000

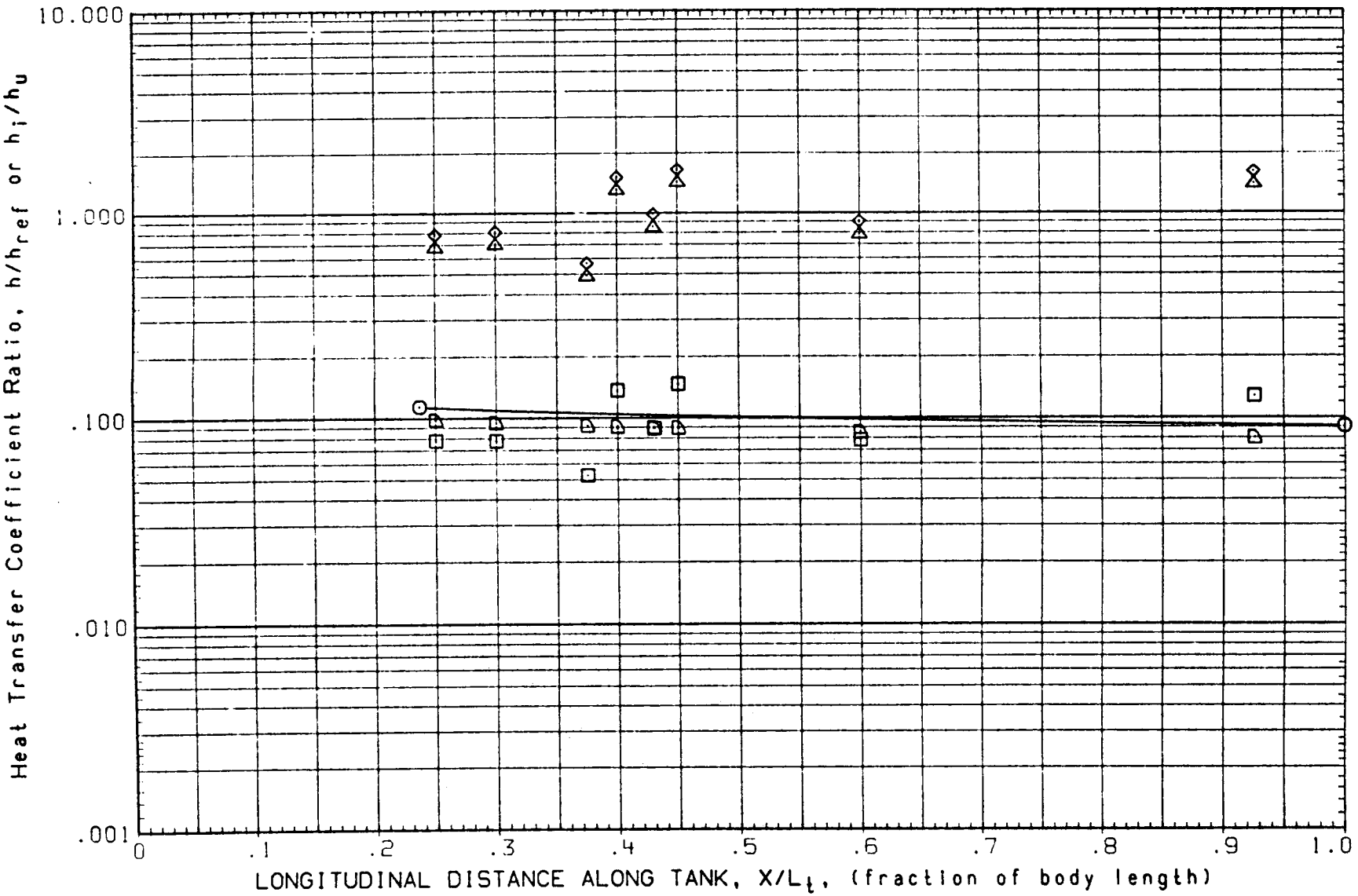

FIG. 4-20 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 33.750

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT04)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-5.000
(C9NT04)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-5.000
(V4LT12)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-5.000
(X4LT12)	◇	IH85 (W.L. TEST) OT/ET = V4LT12/C9NT04=	HI/HU	3.010	.000	-5.000
(Y4LT12)	△	IH85 (W.L. THEORY) OT/ET = V4LT12/A9NT04=	HI/HU	3.010	.000	-5.000

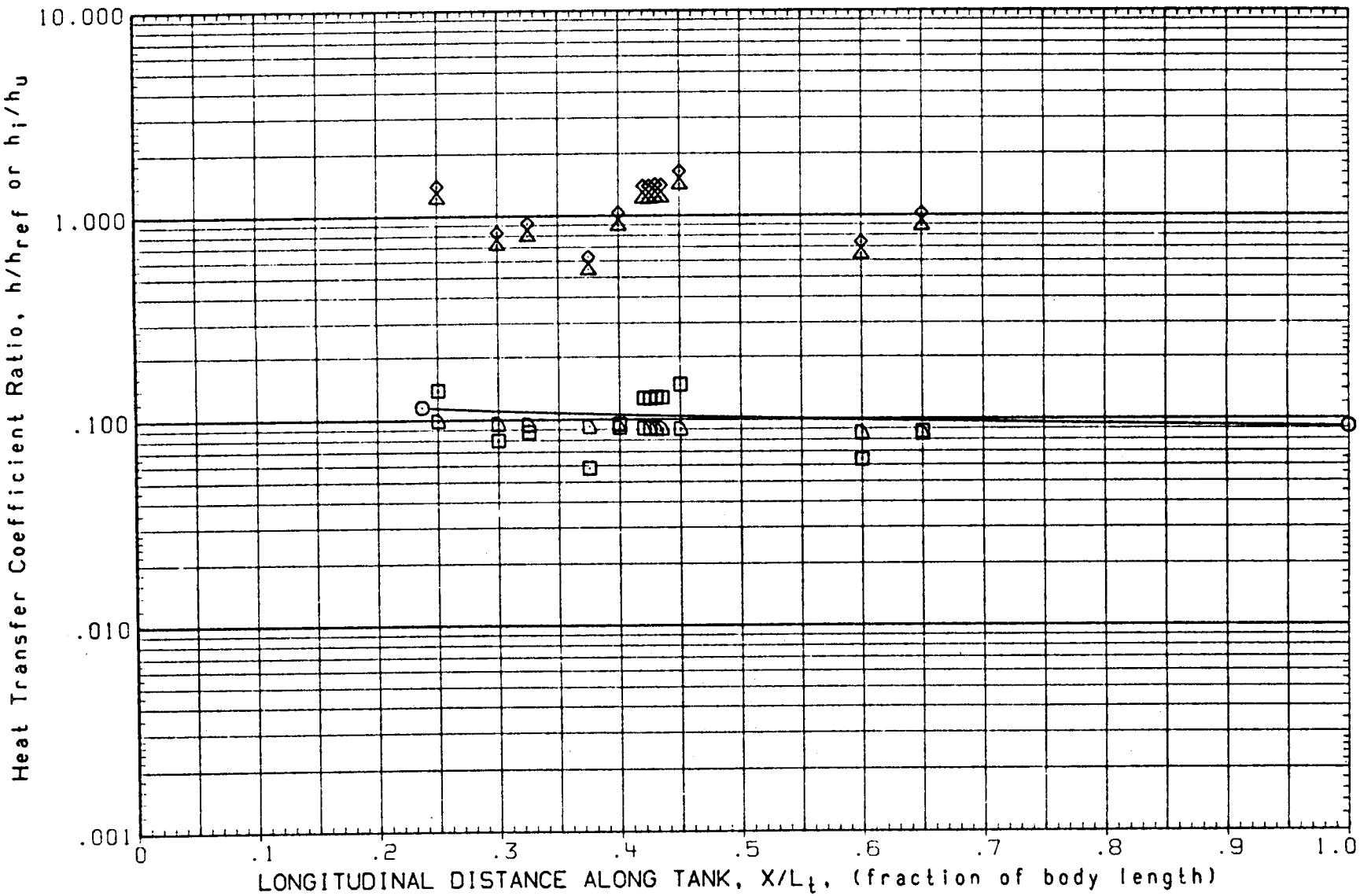

FIG. 4-20 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 36.320

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT04)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-5.000
(C9NT04)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-5.000
(V4LT12)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-5.000
(X4LT12)	◇	IH85 (W.L. TEST)	OT/ET = V4LT12/C9NT04= HI/HU	3.010	.000	-5.000
(Y4LT12)	△	IH85 (W.L. THEORY)	OT/ET = V4LT12/A9NT04= HI/HU	3.010	.000	-5.000

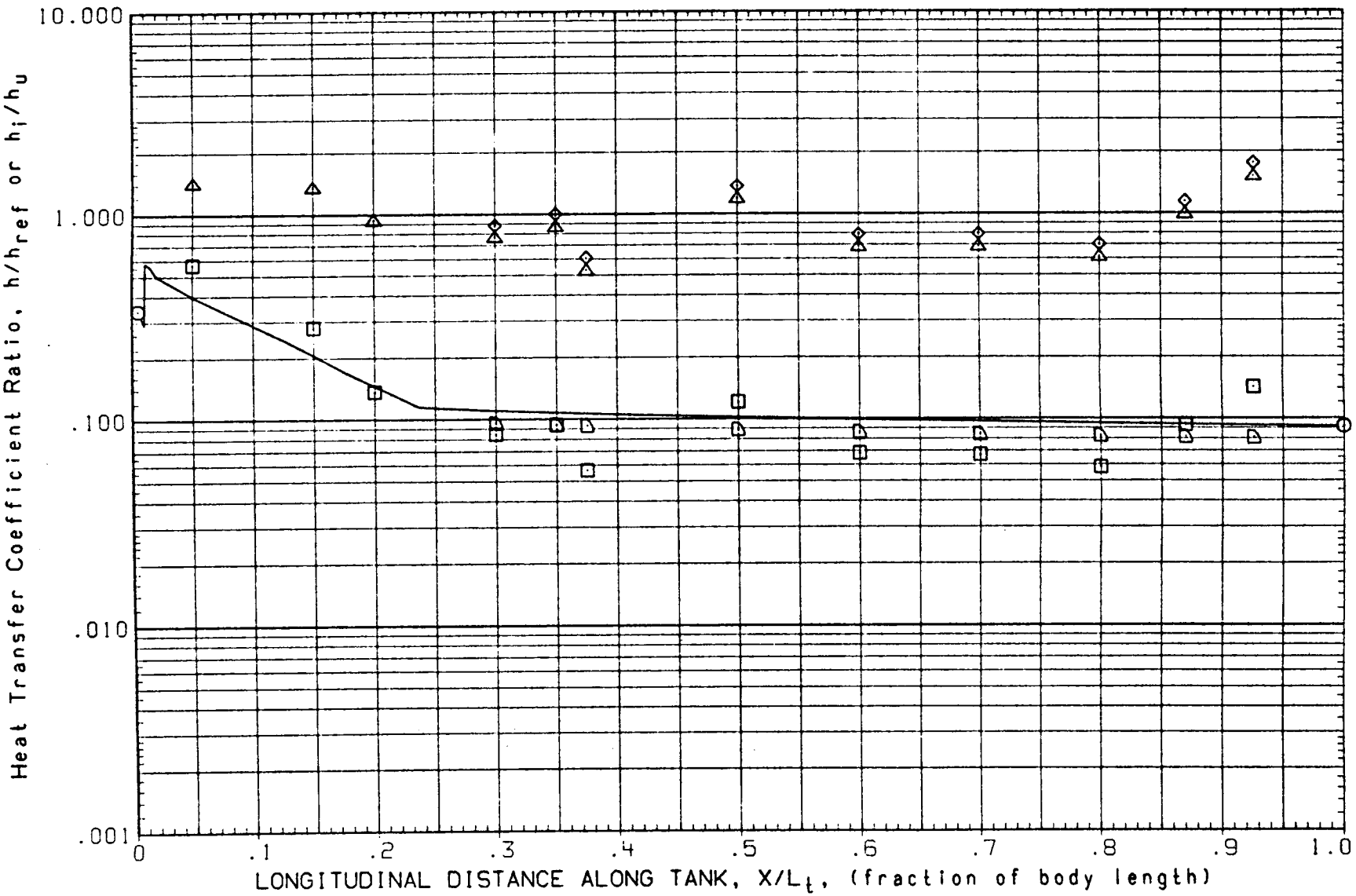

FIG. 4-20 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 37.700

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT04)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-5.000
(C9NT04)	⬠	DATA NOT AVAILABLE		3.010	.000	-5.000
(V4LT12)	□	DATA NOT AVAILABLE		3.010	.000	-5.000
(X4LT12)	◇	DATA NOT AVAILABLE		3.010	.000	-5.000
(Y4LT12)	△	DATA NOT AVAILABLE		3.010	.000	-5.000

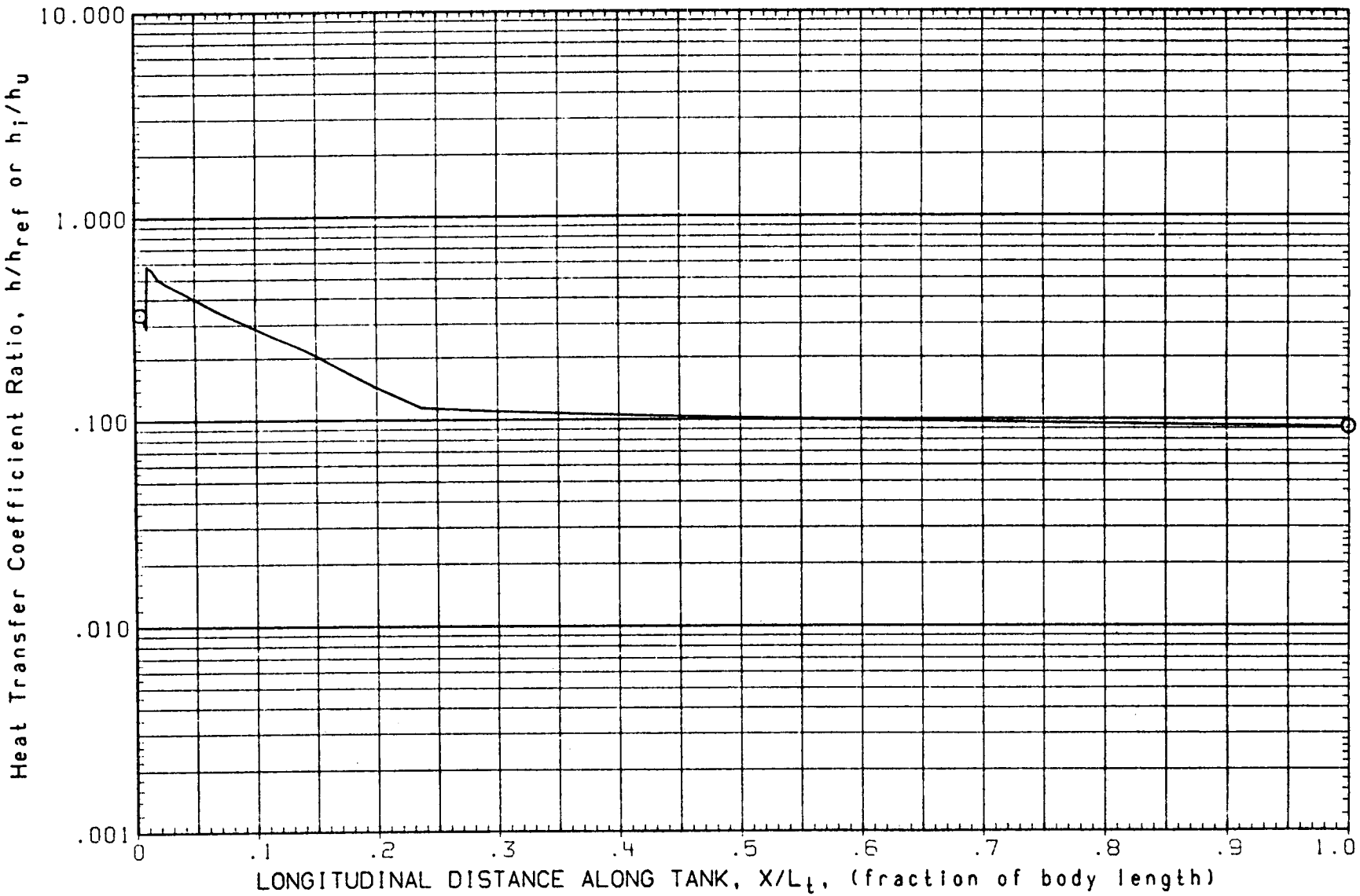

FIG. 4-20 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 39.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT04)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-5.000
(C9NT04)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-5.000
(V4LT12)	□	IH95, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-5.000
(X4LT12)	◇	IH85 (W.L. TEST)	OT/ET = V4LT12/C9NT04= HI/HU	3.010	.000	-5.000
(Y4LT12)	△	IH85 (W.L. THEORY)	OT/ET = V4LT12/A9NT04= HI/HU	3.010	.000	-5.000

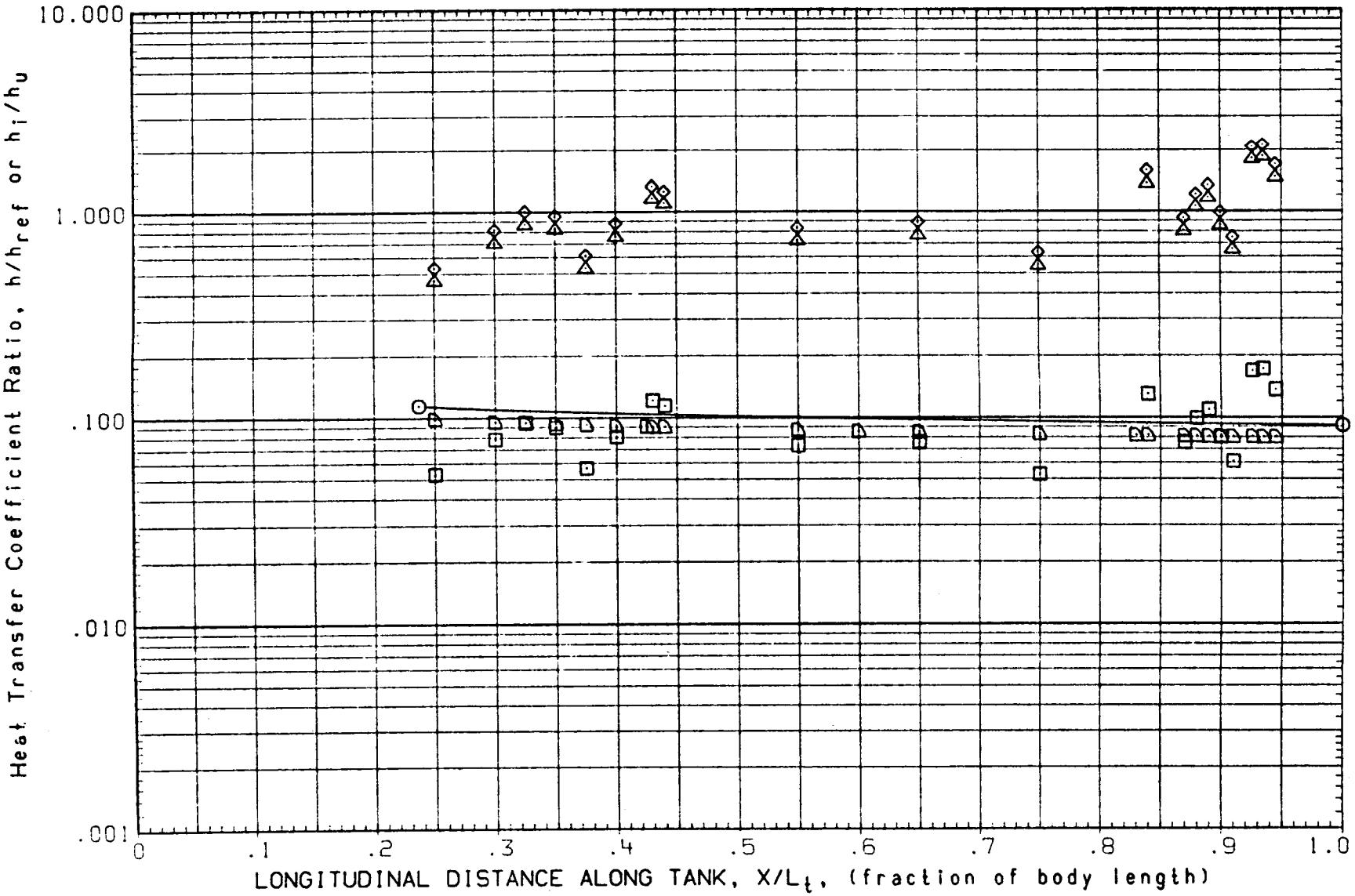

FIG. 4-20 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 45.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT04)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	3.010	.000	-5.000
(C9NT04)	⬡	DATA NOT AVAILABLE	3.010	.000	-5.000
(V4LT12)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)	3.010	.000	-5.000
(X4LT12)	◇	DATA NOT AVAILABLE	3.010	.000	-5.000
(Y4LT12)	△	IH85 (W.L. THEORY) OT/ET = V4LT12/A9NT04= HI/HU	3.010	.000	-5.000

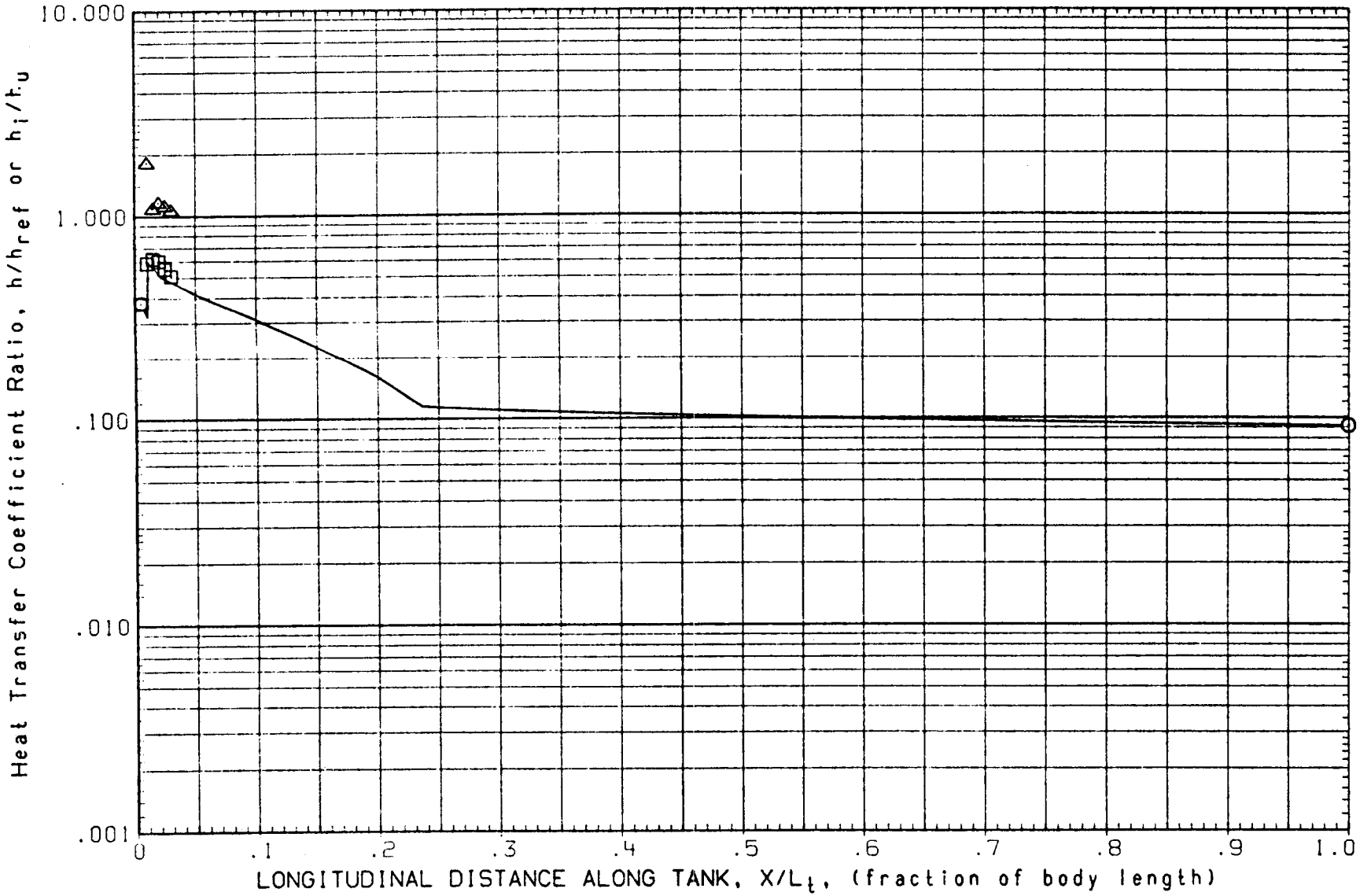

FIG. 4-20 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 180.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT04)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-5.000
(C9NT04)	⬠	DATA NOT AVAILABLE		3.010	.000	-5.000
(Y4LT12)	□	DATA NOT AVAILABLE		3.010	.000	-5.000
(X4LT12)	◇	DATA NOT AVAILABLE		3.010	.000	-5.000
(Y4LT12)	△	DATA NOT AVAILABLE		3.010	.000	-5.000

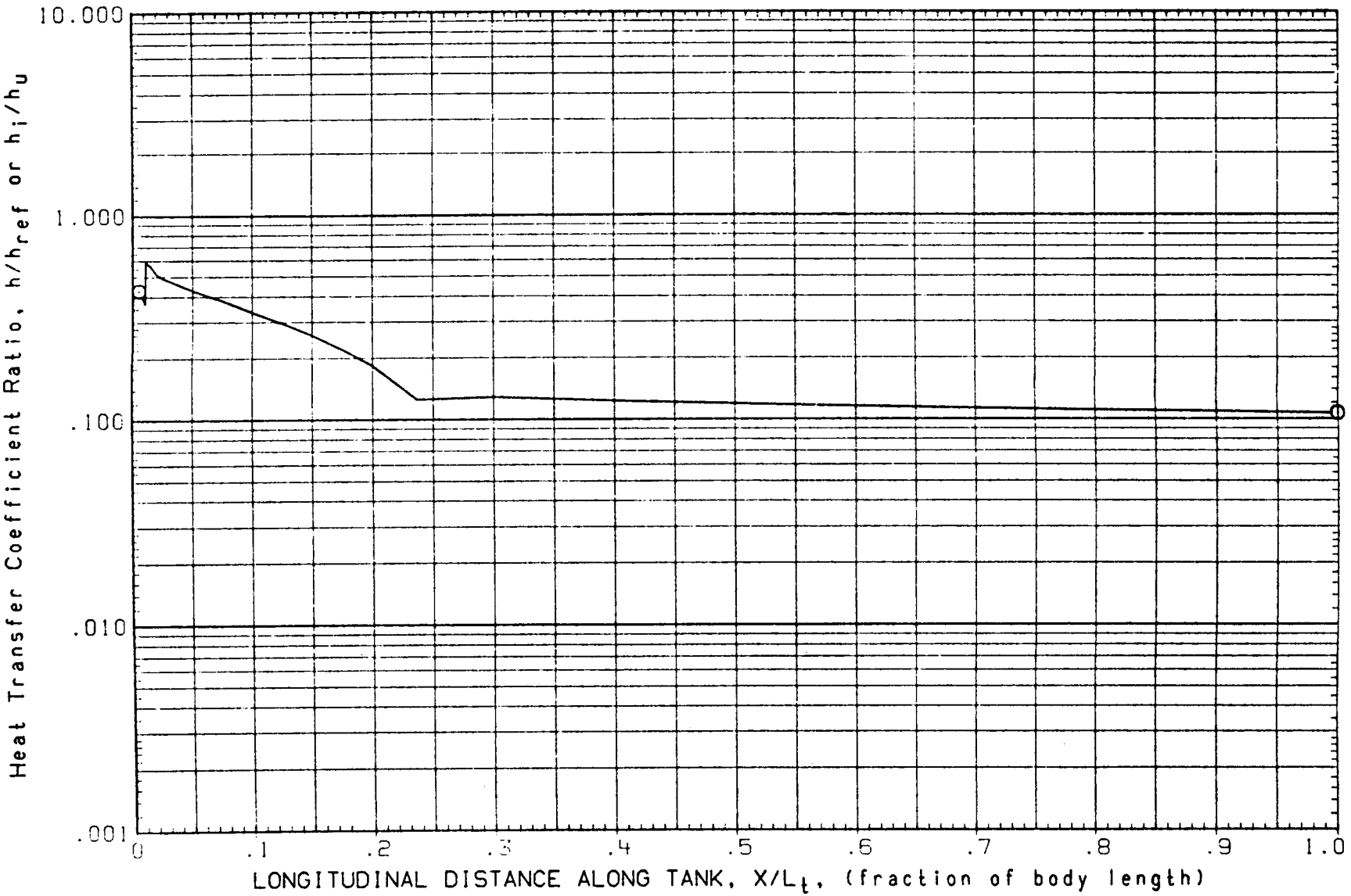

FIG. 4-20 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 235.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT04)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-5.000
(C9NT04)	⊿	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-5.000
(V4LT12)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-5.000
(X4LT12)	◇	IH85 (W.L. TEST)	OT/ET = V4LT12/C9NT04= HI/HU	3.010	.000	-5.000
(Y4LT12)	△	IH85 (W.L. THEORY)	OT/ET = V4LT12/A9NT04= HI/HU	3.010	.000	-5.000

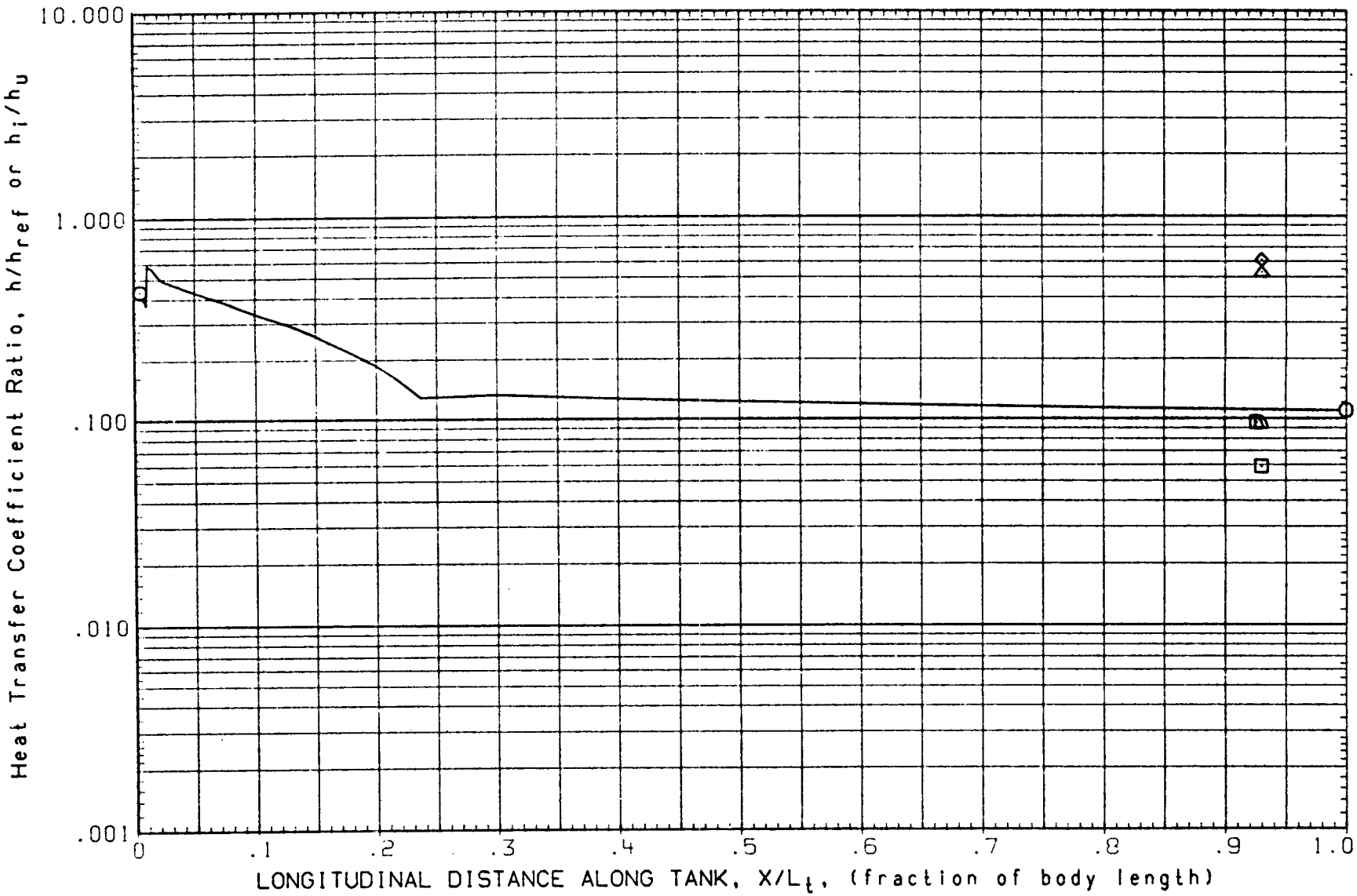

FIG. 4-20 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 247.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT04)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-5.000
(C9NT04)	◐	DATA NOT AVAILABLE		3.010	.000	-5.000
(V4LT12)	□	DATA NOT AVAILABLE		3.010	.000	-5.000
(X4LT12)	◇	DATA NOT AVAILABLE		3.010	.000	-5.000
(Y4LT12)	△	DATA NOT AVAILABLE		3.010	.000	-5.000

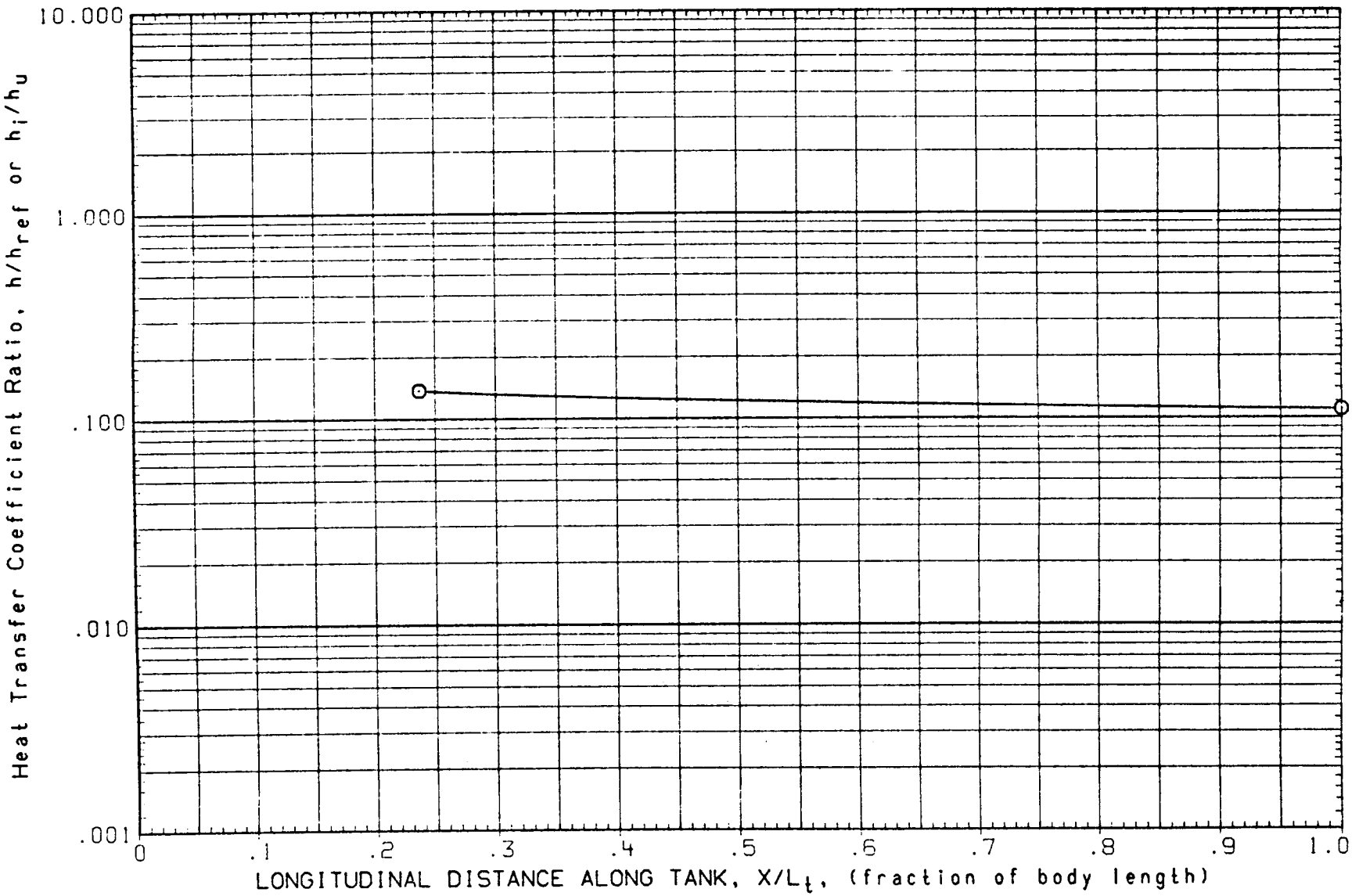

FIG. 4-20 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 247.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT04)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-5.000
(C9NT04)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-5.000
(V4LT12)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-5.000
(X4LT12)	◇	IH85 (W.L. TEST)	OT/ET = V4LT12/C9NT04= HI/HU	3.010	.000	-5.000
(Y4LT12)	△	IH85 (W.L. THEORY)	OT/ET = V4LT12/A9NT04= HI/HU	3.010	.000	-5.000

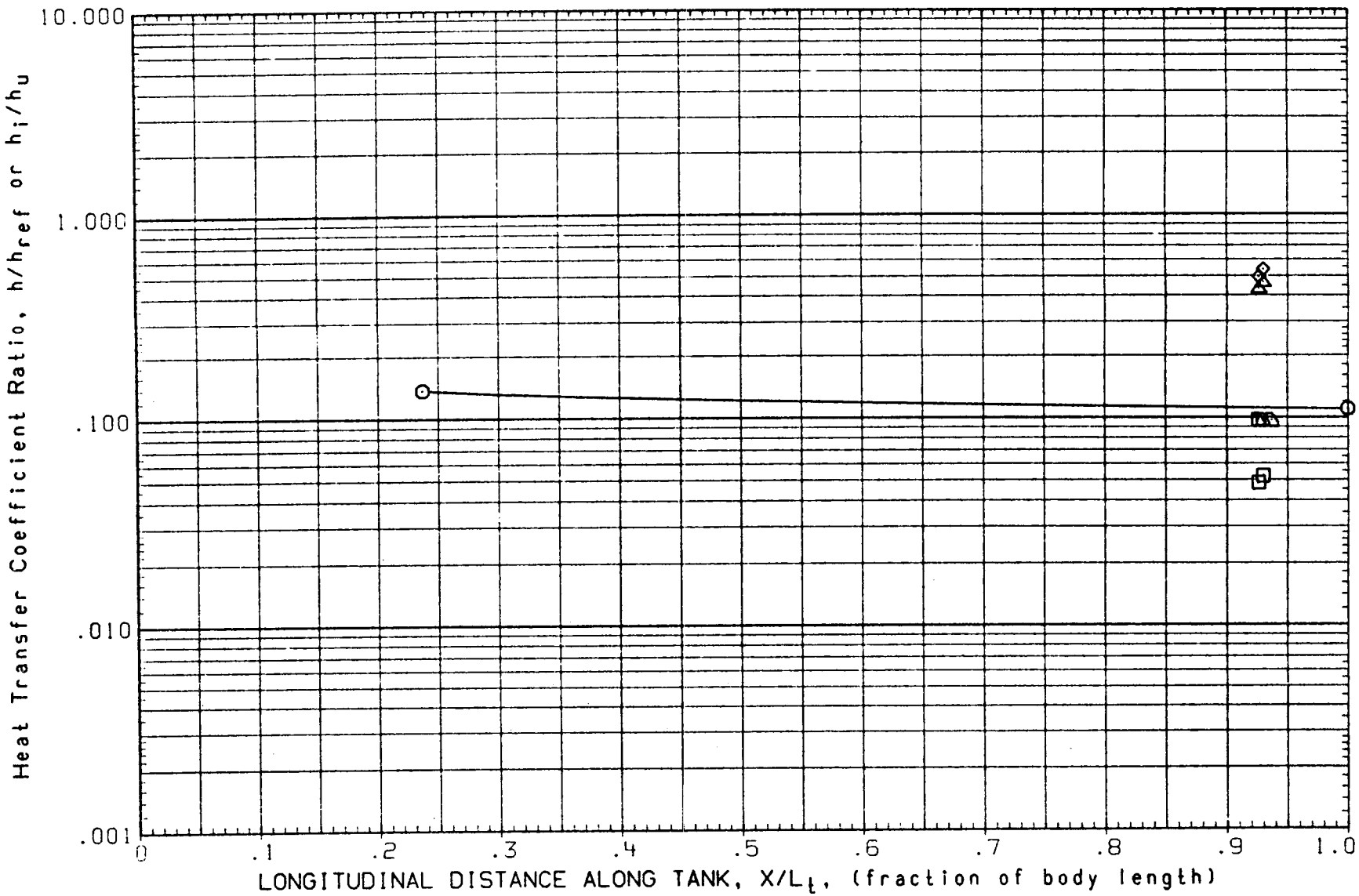

FIG. 4-20 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 250.570

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT04)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-5.000
(C9NT04)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-5.000
(V4LT12)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-5.000
(X4LT12)	◇	IH85 (W.L. TEST) OT/ET = V4LT12/C9NT04=	HI/HU	3.010	.000	-5.000
(Y4LT12)	△	IH85 (W.L. THEORY) OT/ET = V4LT12/A9NT04=	HI/HU	3.010	.000	-5.000

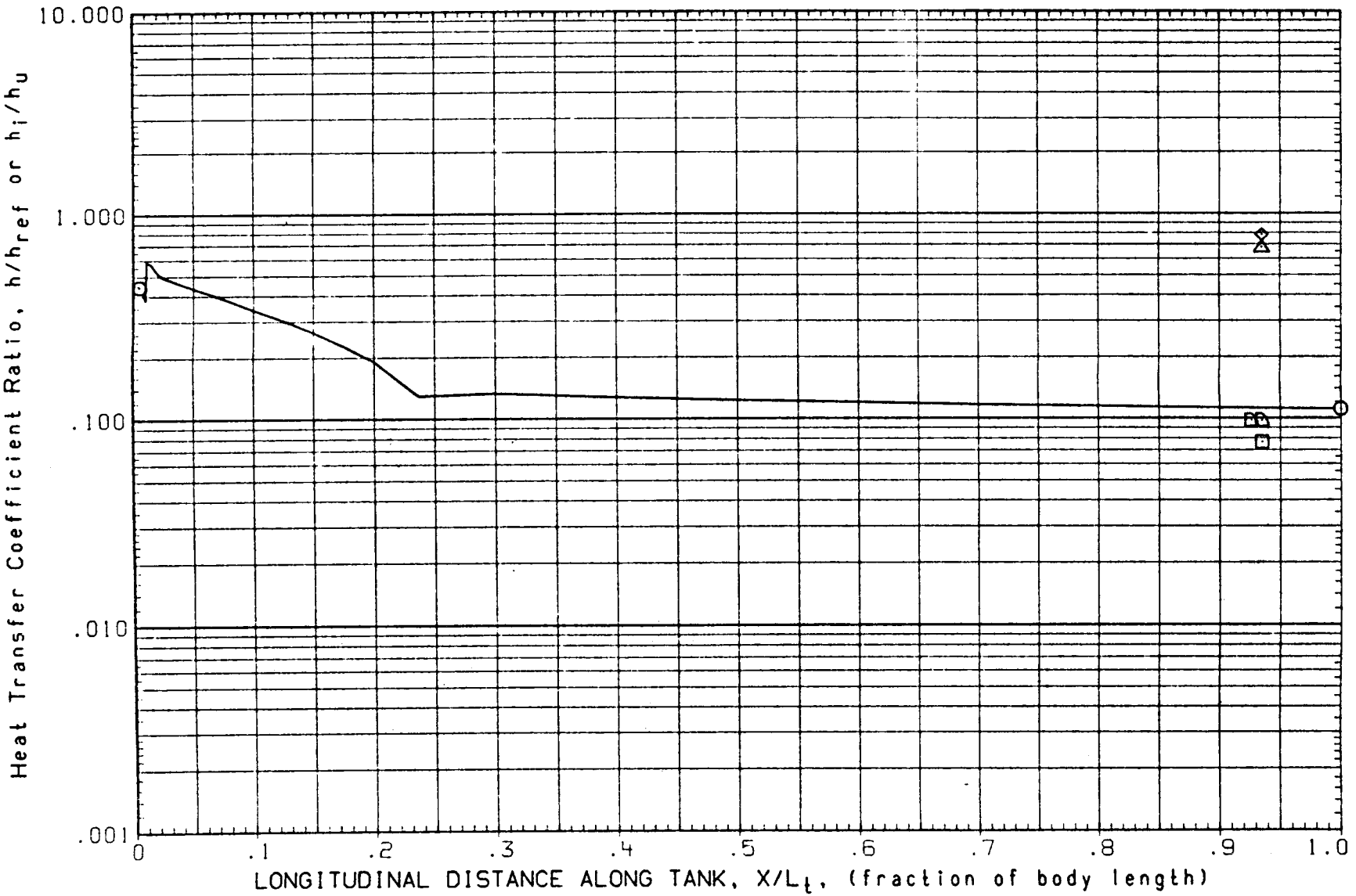

FIG. 4-20 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 258.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT04)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-5.000
(C9NT04)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-5.000
(V4LT12)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-5.000
(X4LT12)	◇	IH85 (W.L. TEST)	OT/ET = V4LT12/C9NT04= HI/HU	3.010	.000	-5.000
(Y4LT12)	△	IH85 (W.L. THEORY)	OT/ET = V4LT12/A9NT04= HI/HU	3.010	.000	-5.000

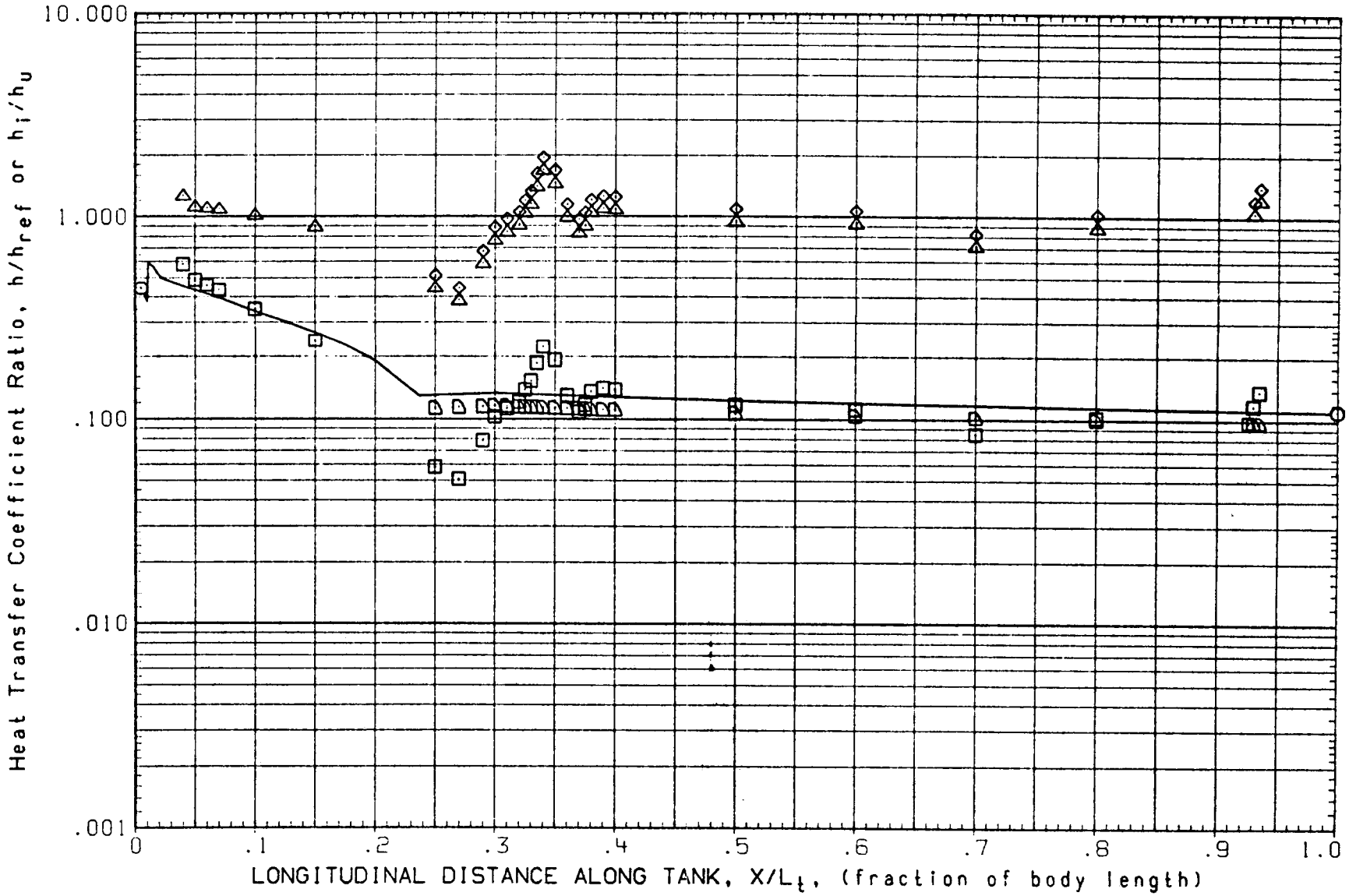

FIG. 4-20 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 270.000

C-10

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT04)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-5.000
(C9NT04)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-5.000
(V4LT12)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-5.000
(X4LT12)	◇	IH85 (W.L. TEST) OT/ET = V4LT12/C9NT04= HI/HU		3.010	.000	-5.000
(Y4LT12)	△	IH85 (W.L. THEORY) OT/ET = V4LT12/A9NT04= HI/HU		3.010	.000	-5.000

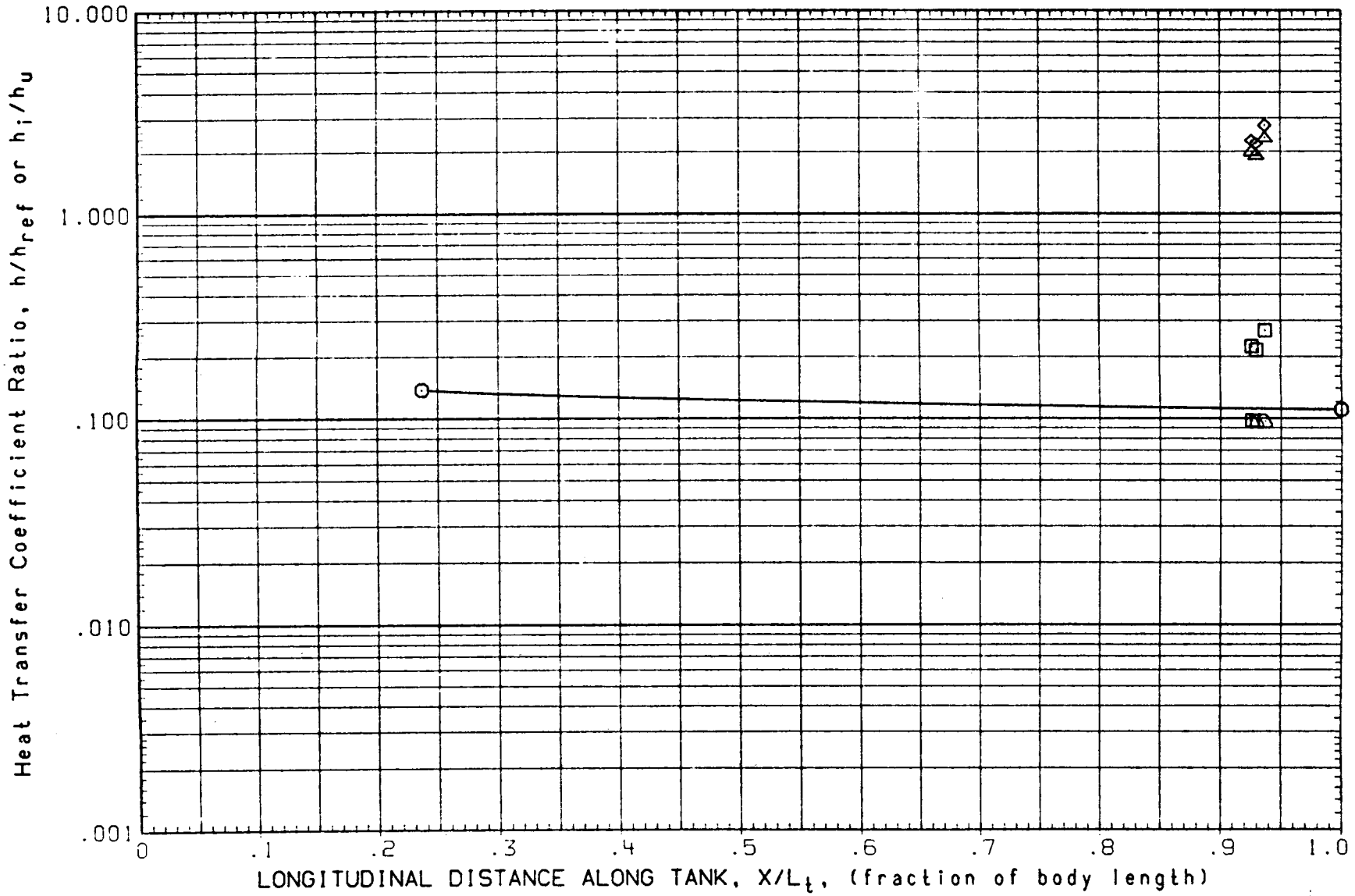

FIG. 4-20 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 289.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT04)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-5.000
(C9NT04)	◐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-5.000
(V4LT12)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-5.000
(X4LT12)	◇	IH85 (W.L. TEST) OT/ET = V4LT12/C9NT04= HI/HU		3.010	.000	-5.000
(Y4LT12)	△	IH85 (W.L. THEORY) OT/ET = V4LT12/A9NT04= HI/HU		3.010	.000	-5.000

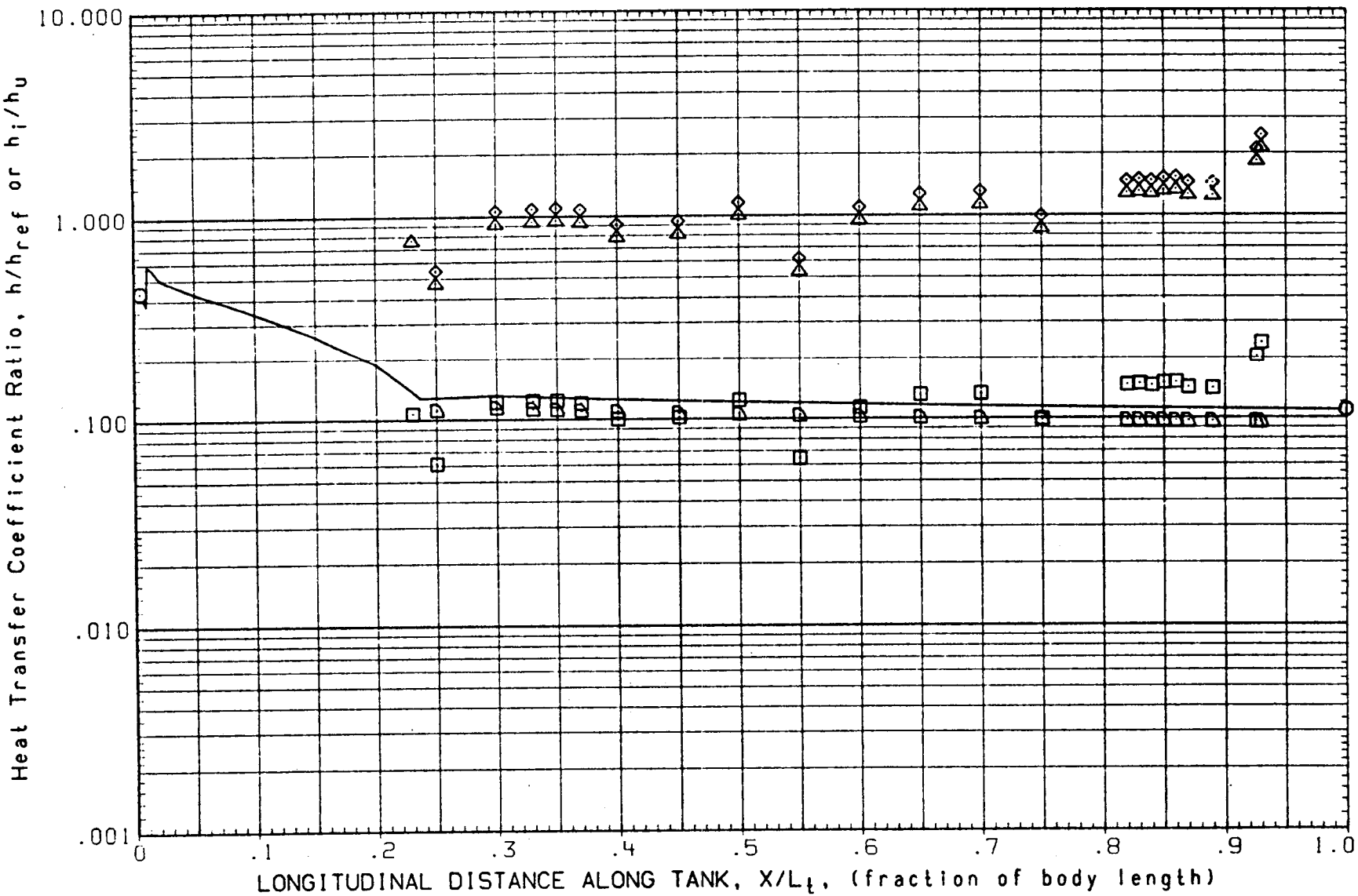

FIG. 4-20 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 292.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT04)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-5.000
(C9NT04)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-5.000
(V4LT12)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-5.000
(X4LT12)	◇	IH85 (W.L. TEST)	OT/ET = V4LT12/C9NT04= HI/HU	3.010	.000	-5.000
(Y4LT12)	△	IH85 (W.L. THEORY)	OT/ET = V4LT12/A9NT04= HI/HU	3.010	.000	-5.000

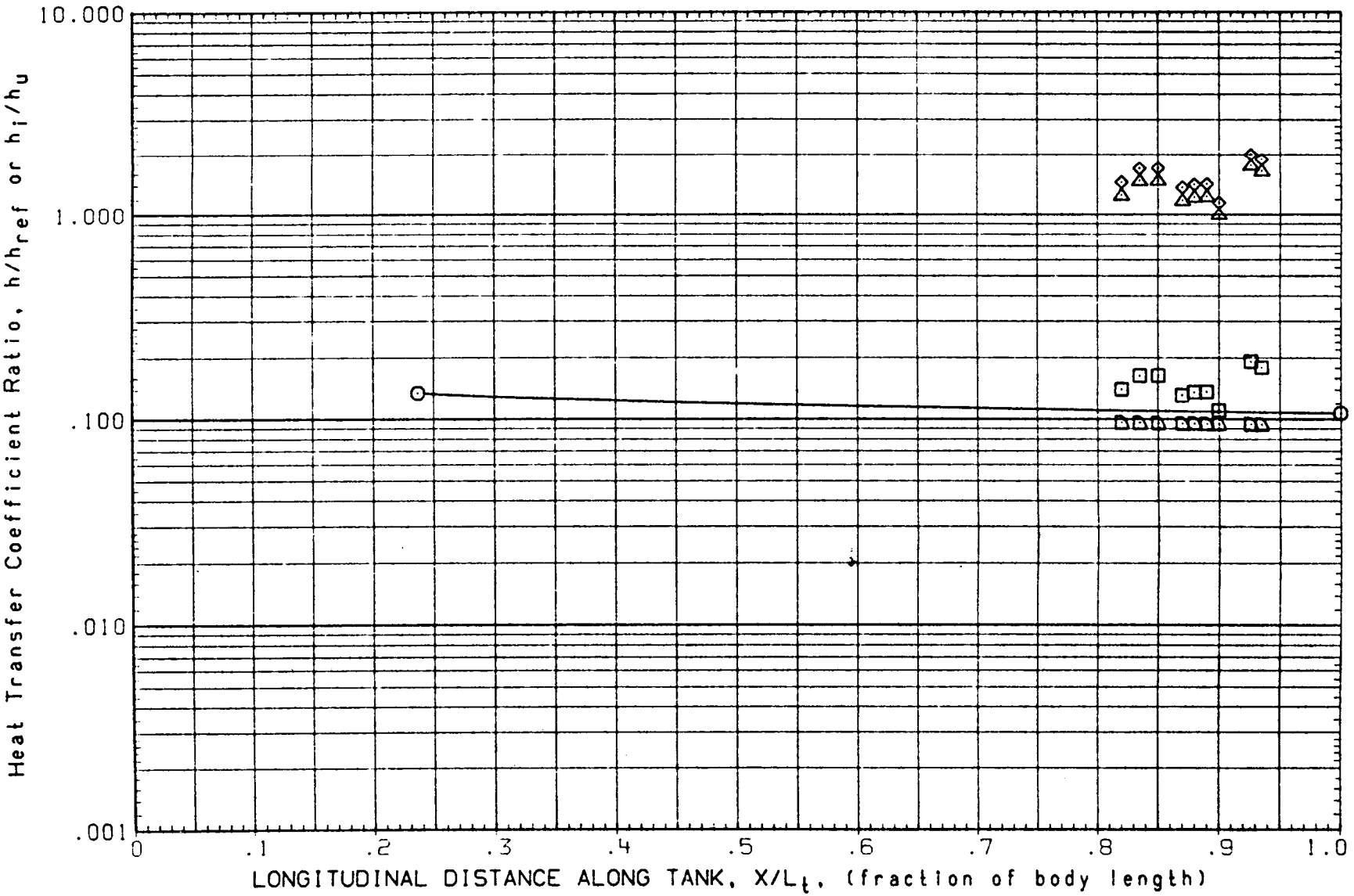

FIG. 4-20 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 301.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT04)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-5.000
(C9NT04)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-5.000
(V4LT12)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-5.000
(X4LT12)	◇	IH85 (W.L. TEST) OT/ET = V4LT12/C9NT04=	HI/HU	3.010	.000	-5.000
(Y4LT12)	△	IH85 (W.L. THEORY) OT/ET = V4LT12/A9NT04=	HI/HU	3.010	.000	-5.000

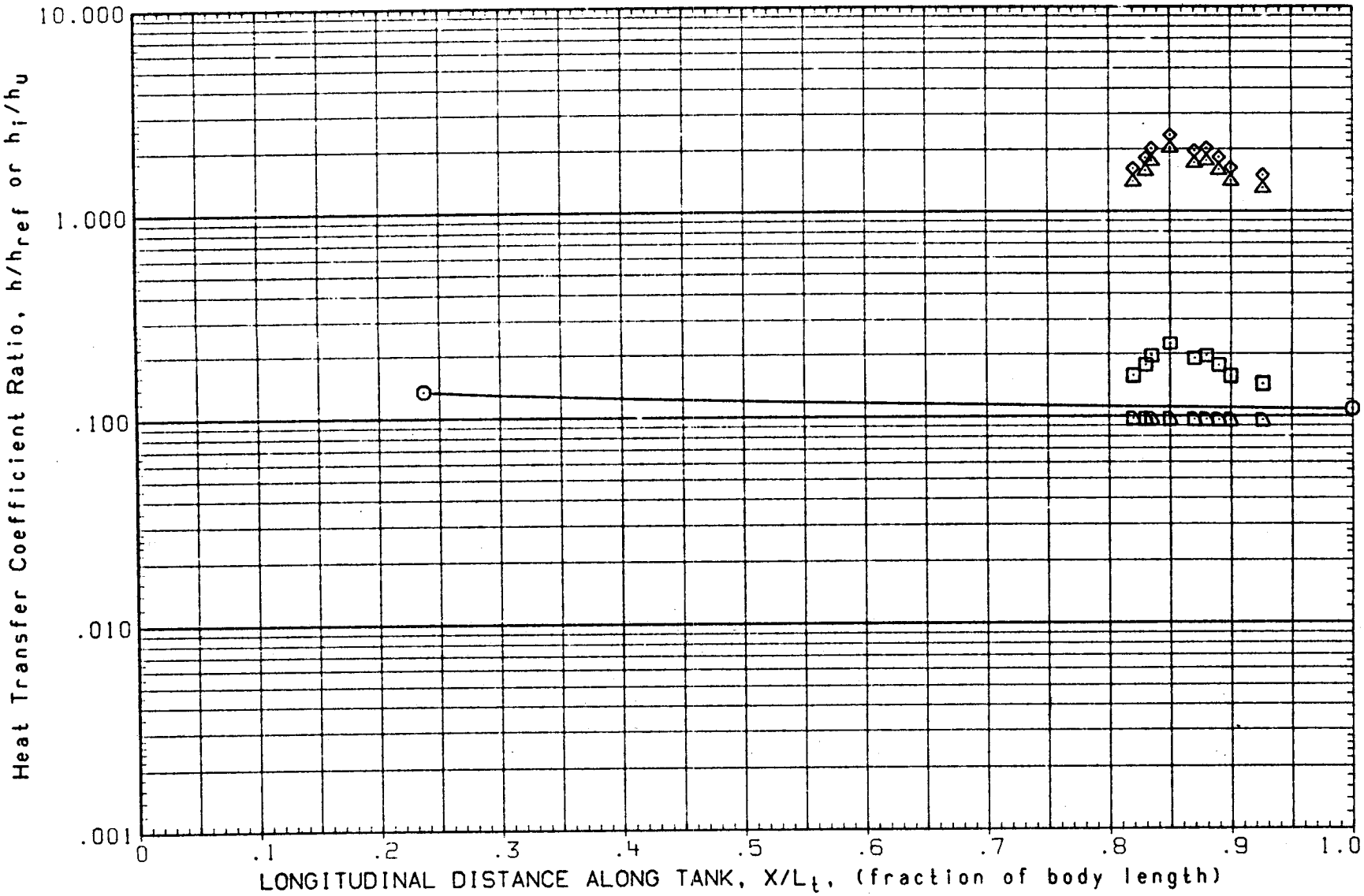

FIG. 4-20 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 305.400

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT04)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-5.000
(C9NT04)	▷	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-5.000
(V4LT12)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-5.000
(X4LT12)	◇	IH85 (W.L. TEST)	OT/ET = V4LT12/C9NT04= HI/HU	3.010	.000	-5.000
(Y4LT12)	△	IH85 (W.L. THEORY)	OT/ET = V4LT12/A9NT04= HI/HU	3.010	.000	-5.000

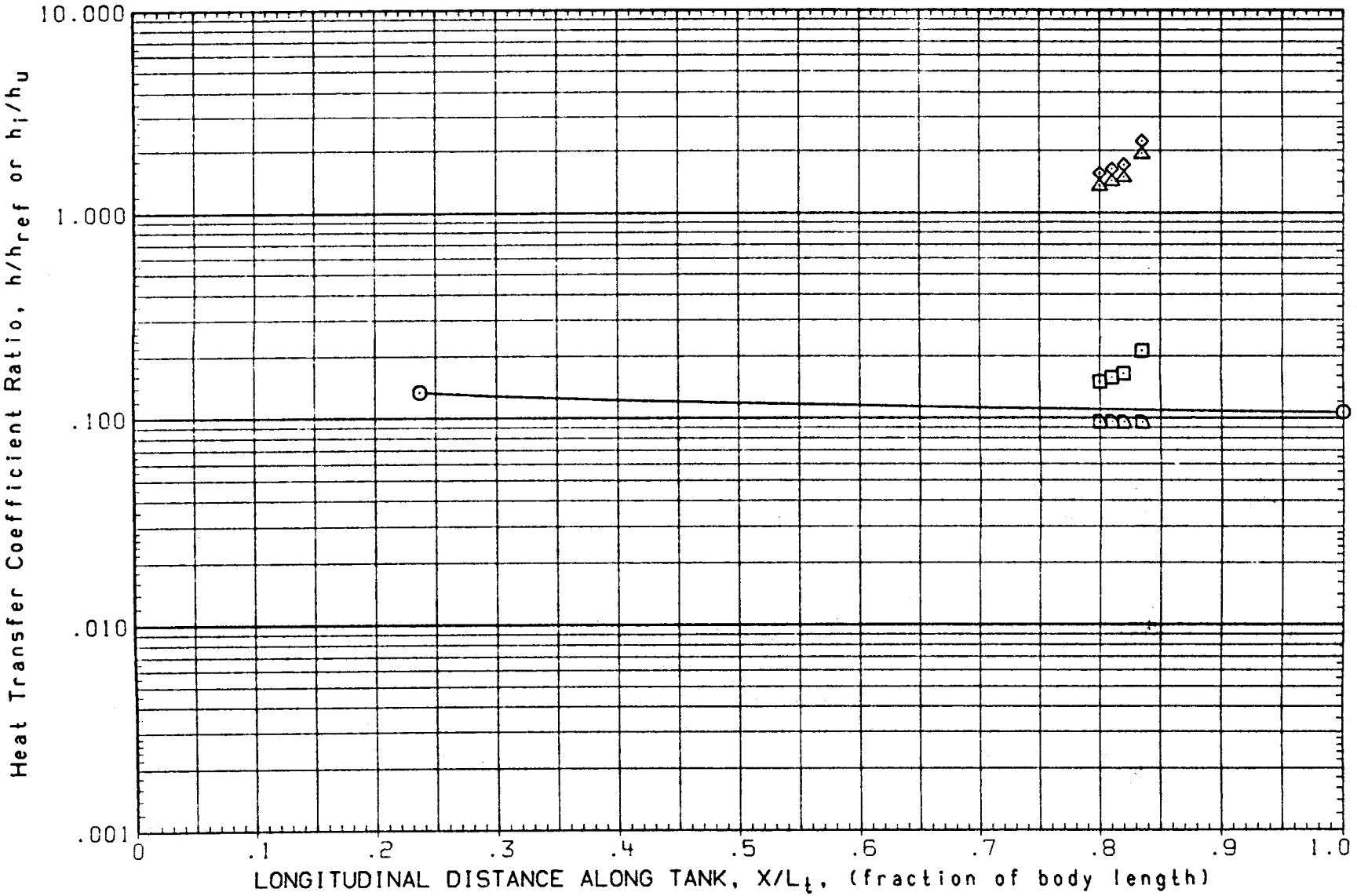

FIG. 4-20 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 309.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT04)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-5.000
(C9NT04)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-5.000
(V4LT12)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-5.000
(X4LT12)	◇	IH85 (W.L. TEST)	OT/ET = V4LT12/C9NT04= HI/HU	3.010	.000	-5.000
(Y4LT12)	△	IH85 (W.L. THEORY)	OT/ET = V4LT12/A9NT04= HI/HU	3.010	.000	-5.000

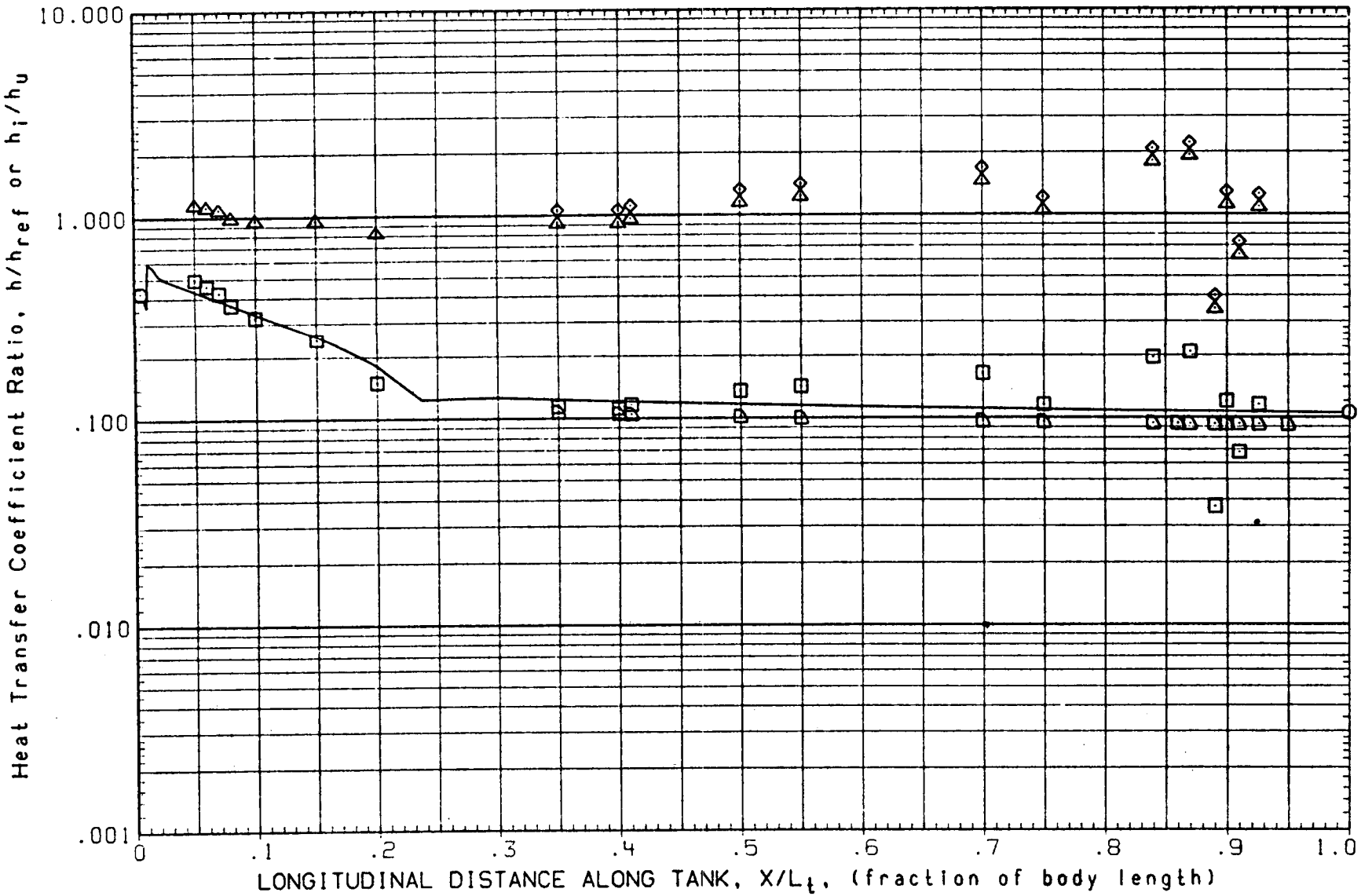

FIG. 4-20 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 315.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT04)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-5.000
(C9NT04)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-5.000
(V4LT12)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-5.000
(X4LT12)	◇	IH85 (W.L. TEST)	OT/ET = V4LT12/C9NT04= HI/HU	3.010	.000	-5.000
(Y4LT12)	△	IH85 (W.L. THEORY)	OT/ET = V4LT12/A9NT04= HI/HU	3.010	.000	-5.000

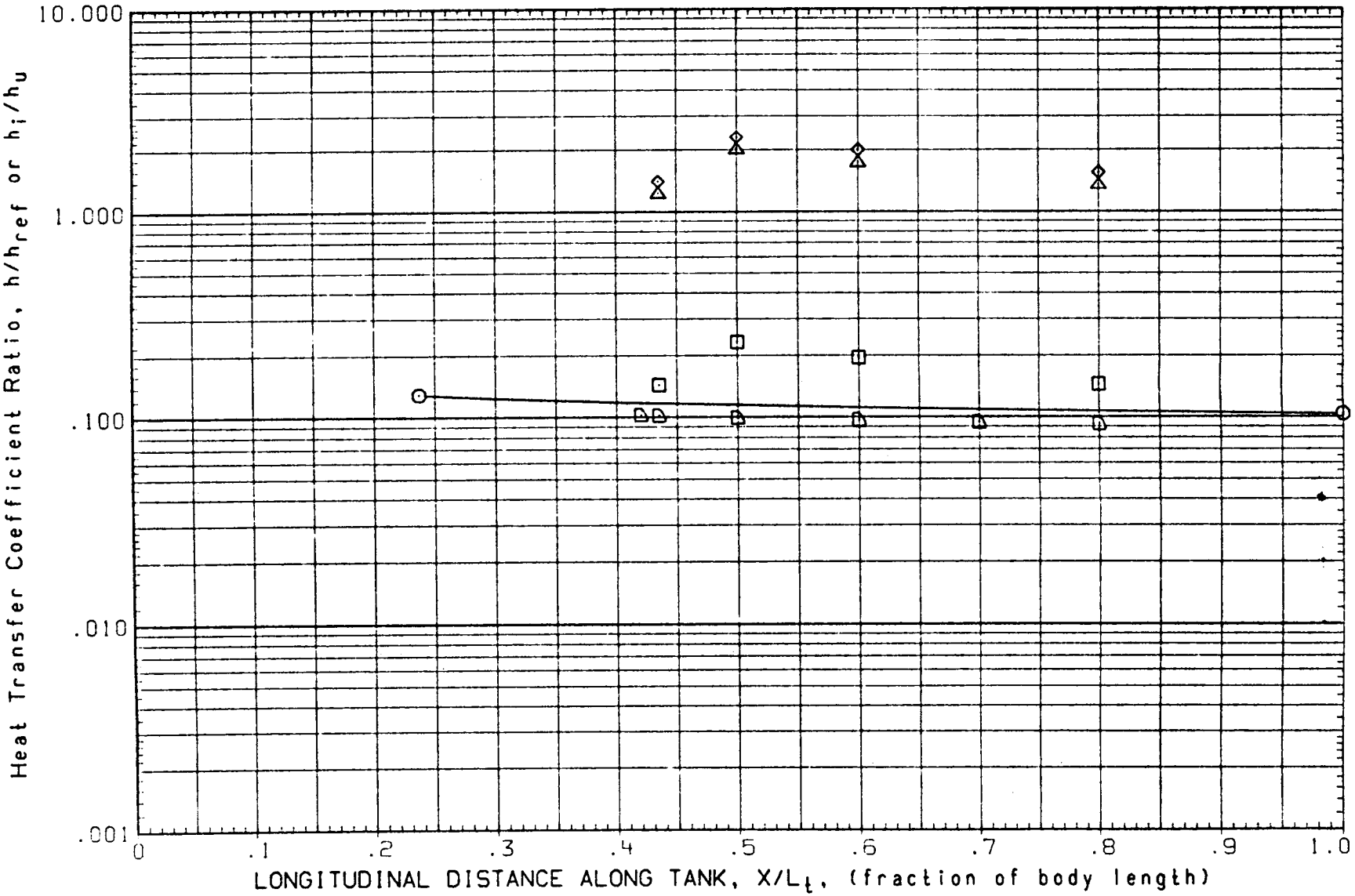

FIG. 4-20 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 322.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT04)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-5.000
(C9NT04)	◺	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-5.000
(V4LT12)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-5.000
(X4LT12)	◇	IH85 (W.L. TEST)	OT/ET = V4LT12/C9NT04= HI/HU	3.010	.000	-5.000
(Y4LT12)	△	IH85 (W.L. THEORY)	OT/ET = V4LT12/A9NT04= HI/HU	3.010	.000	-5.000

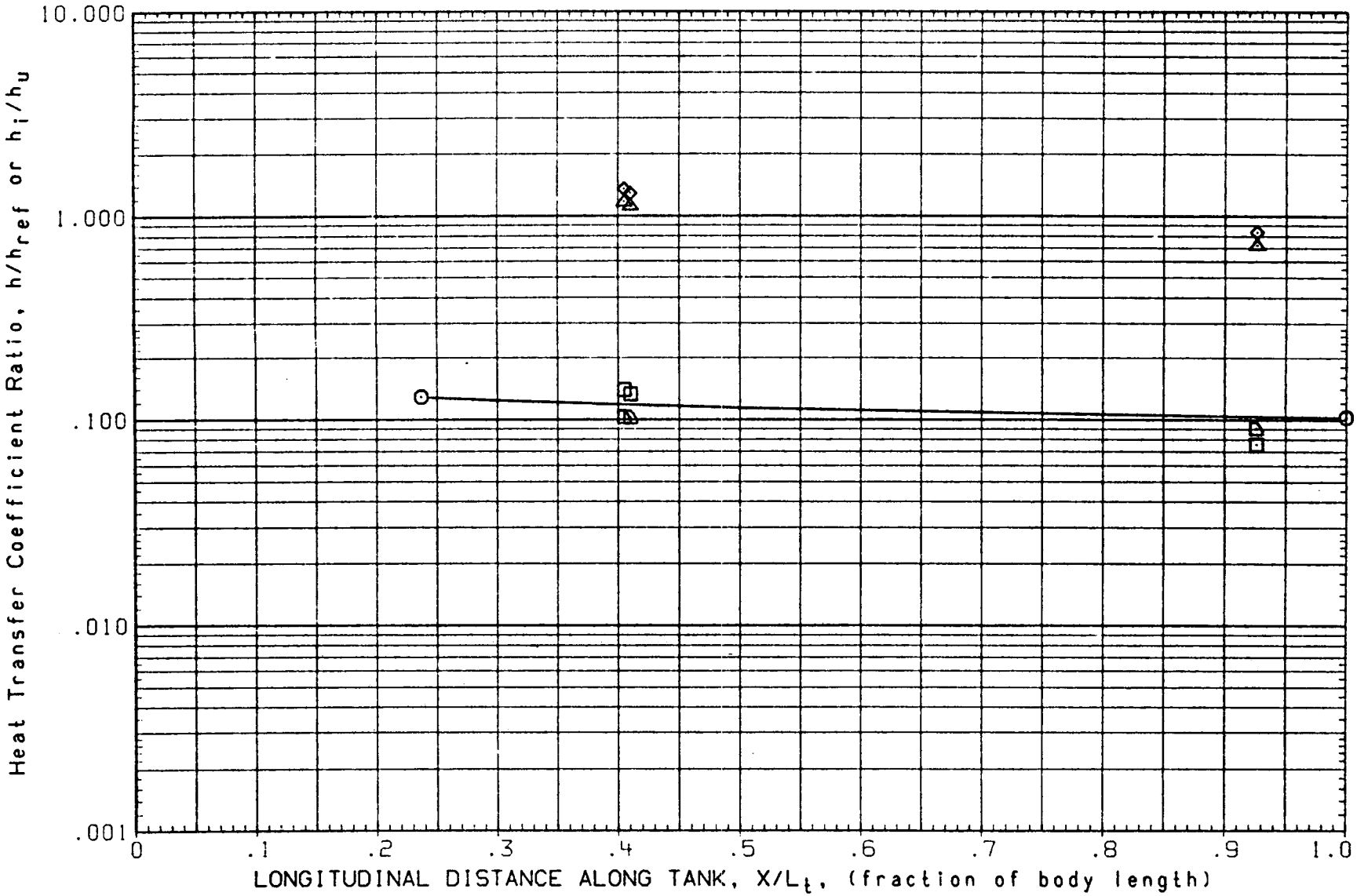

FIG. 4-20 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 324.450

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT04)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-5.000
(C9NT04)	⊿	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-5.000
(V4LT12)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-5.000
(X4LT12)	◇	IH85 (W.L. TEST) OT/ET = V4LT12/C9NT04=	HI/HU	3.010	.000	-5.000
(Y4LT12)	△	IH85 (W.L. THEORY) OT/ET = V4LT12/A9NT04=	HI/HU	3.010	.000	-5.000

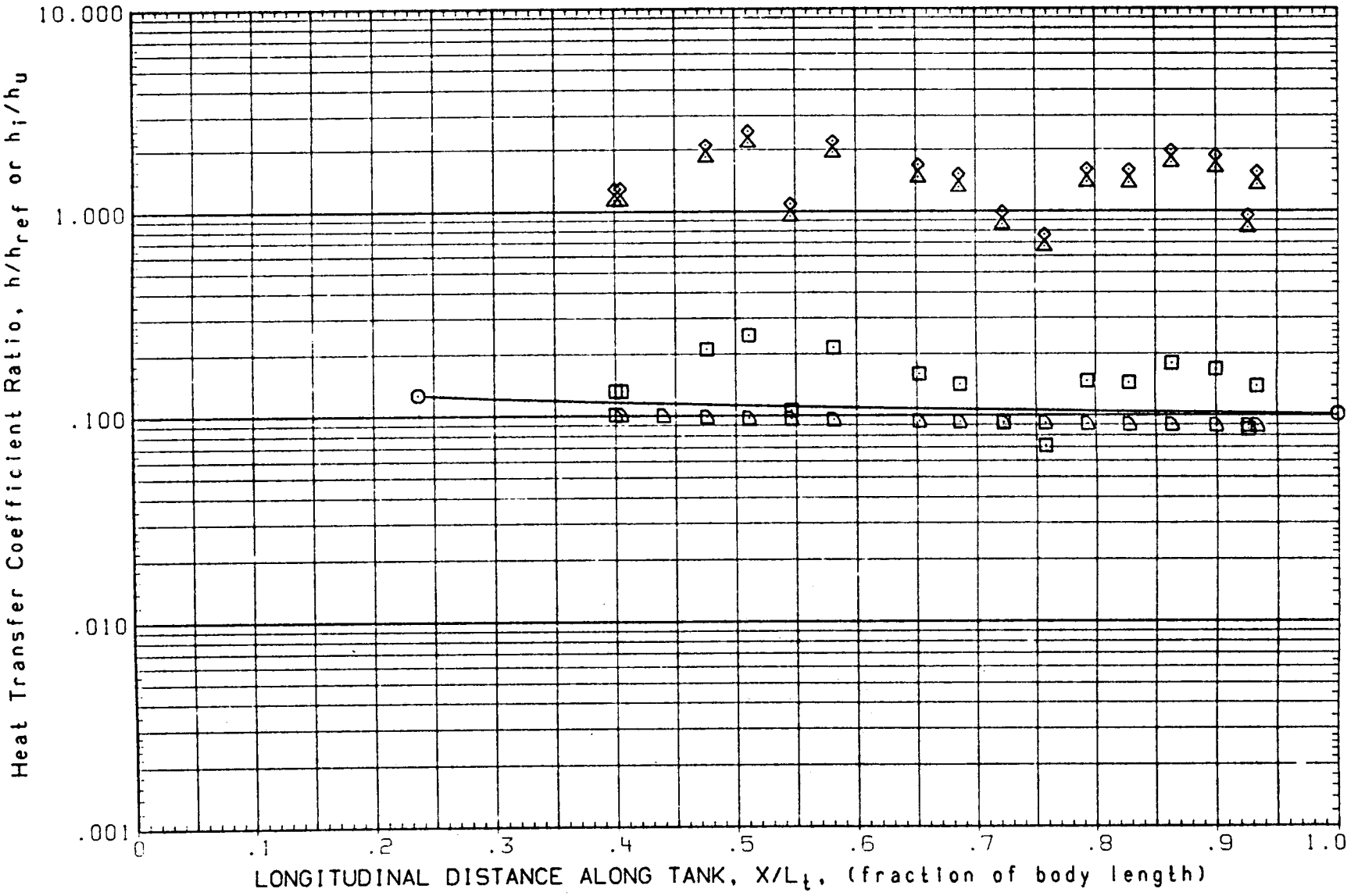

FIG. 4-20 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 326.850

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT04)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-5.000
(C9NT04)	△	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-5.000
(V4LT12)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-5.000
(X4LT12)	◇	IH85 (W.L. TEST) OT/ET = V4LT12/C9NT04=	HI/HU	3.010	.000	-5.000
(Y4LT12)	△	IH85 (W.L. THEORY) OT/ET = V4LT12/A9NT04=	HI/HU	3.010	.000	-5.000

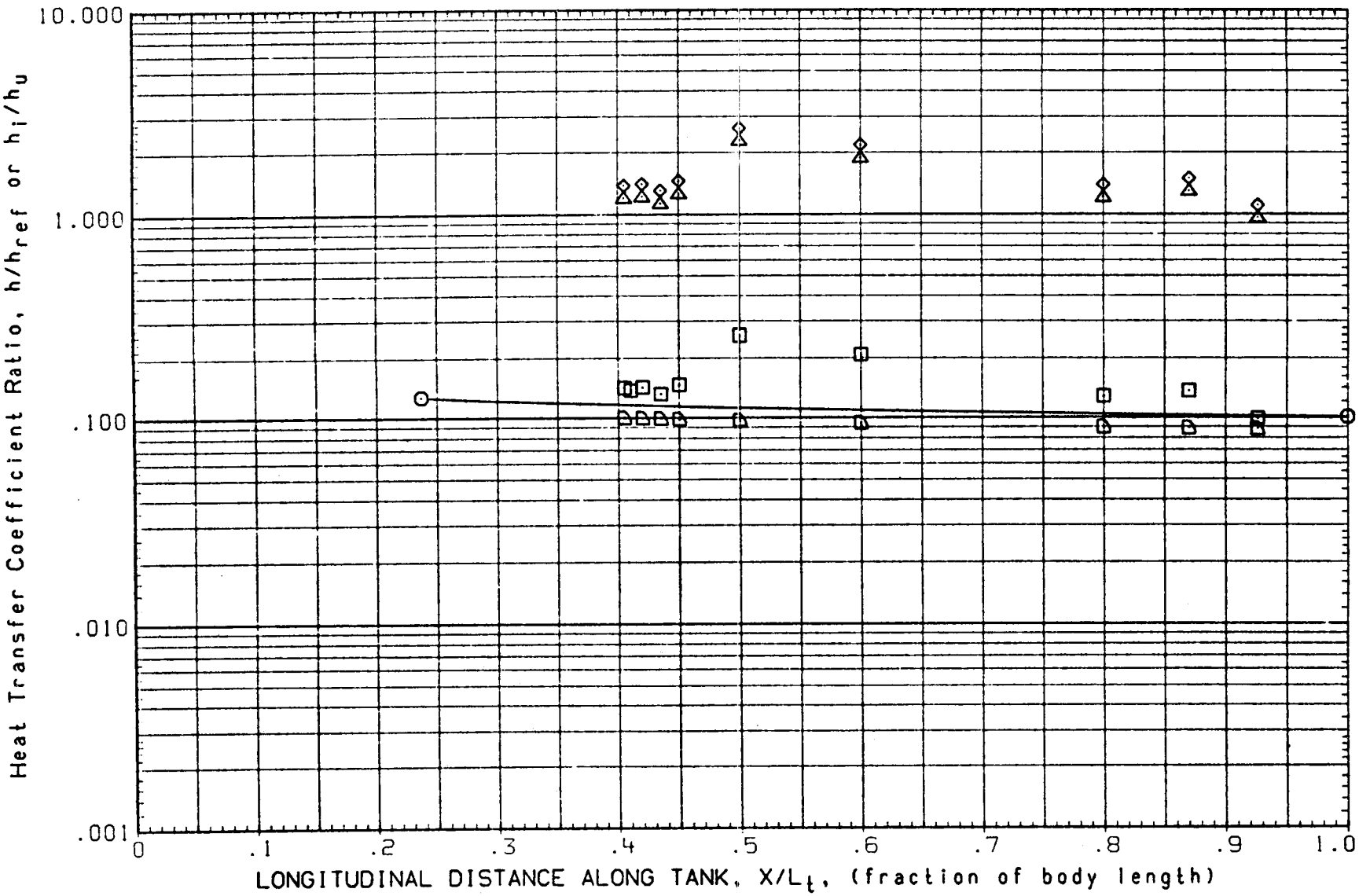

FIG. 4-20 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 330.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT04)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-5.000
(C9NT04)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-5.000
(V4LT12)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-5.000
(X4LT12)	◇	IH85 (W.L. TEST) OT/ET = V4LT12/C9NT04=	HI/HU	3.010	.000	-5.000
(Y4LT12)	△	IH85 (W.L. THEORY) OT/ET = V4LT12/A9NT04=	HI/HU	3.010	.000	-5.000

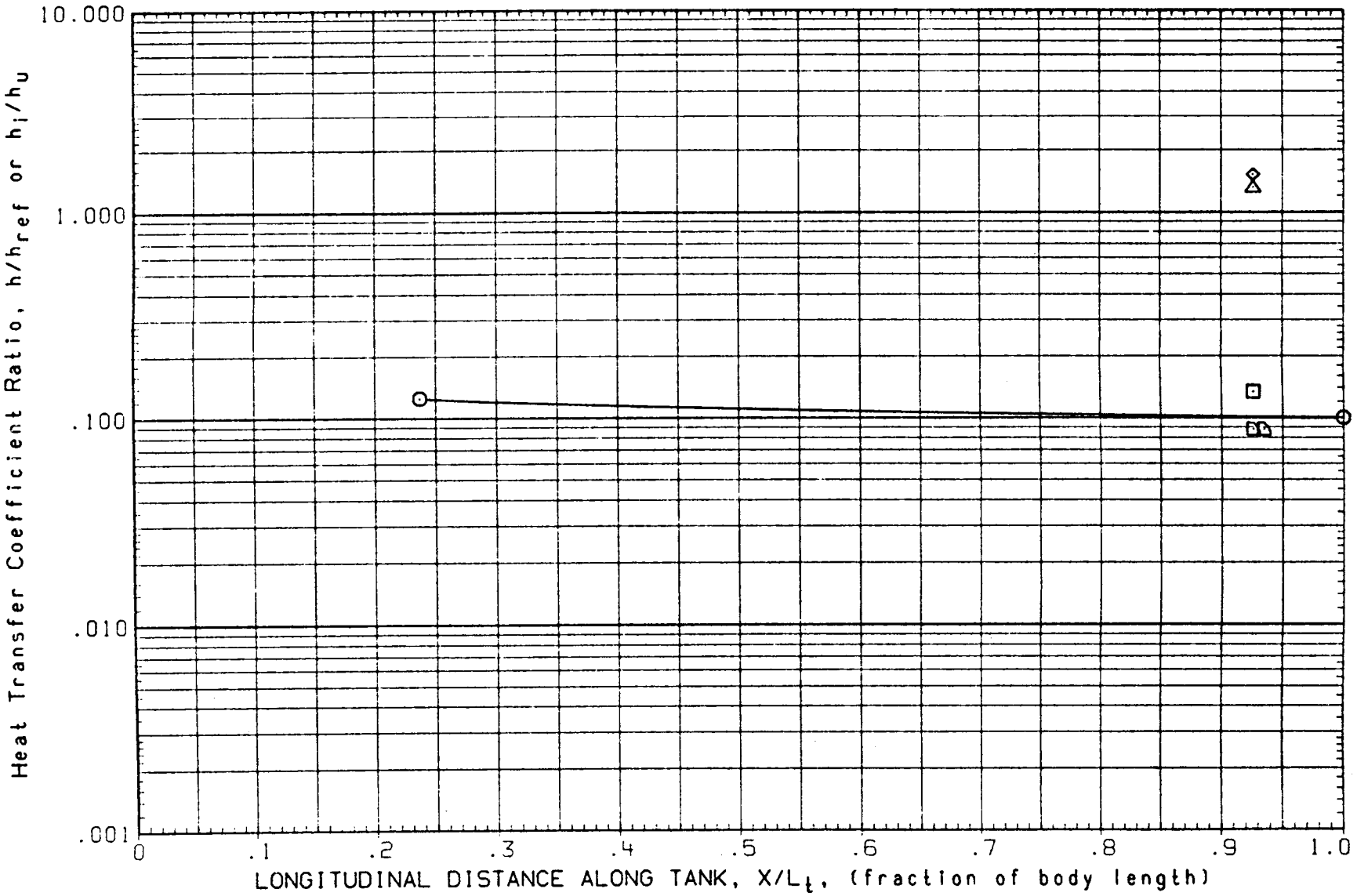

FIG. 4-20 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 334.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT04)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-5.000
(C9NT04)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-5.000
(V4LT12)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-5.000
(X4LT12)	◇	IH85 (W.L. TEST)	OT/ET = V4LT12/C9NT04= HI/HU	3.010	.000	-5.000
(Y4LT12)	△	IH85 (W.L. THEORY)	OT/ET = V4LT12/A9NT04= HI/HU	3.010	.000	-5.000

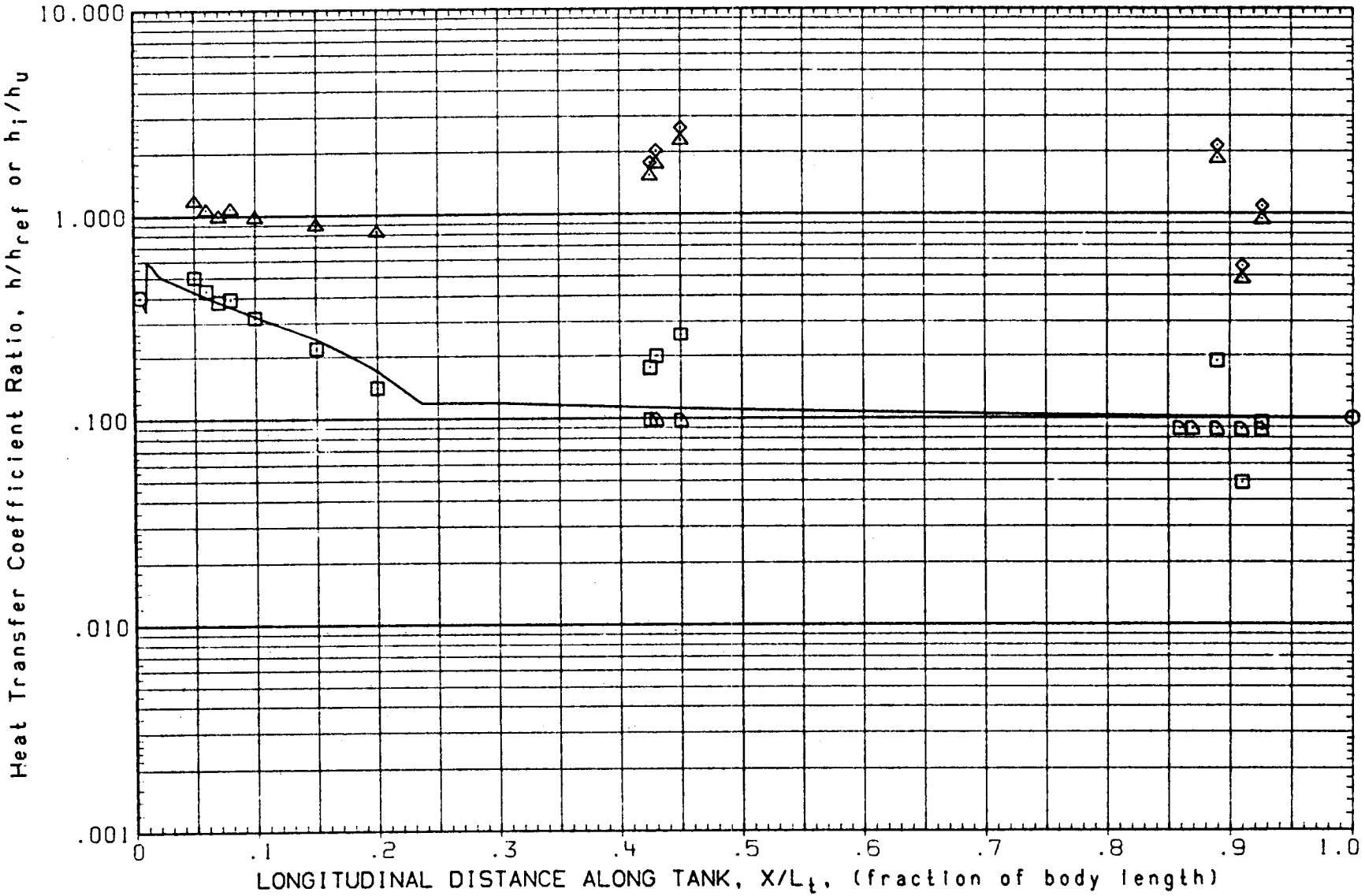

FIG. 4-20 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 337.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT04)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-5.000
(C9NT04)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-5.000
(V4LT12)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-5.000
(X4LT12)	◇	IH85 (W.L. TEST)	OT/ET = V4LT12/C9NT04= HI/HU	3.010	.000	-5.000
(Y4LT12)	△	IH85 (W.L. THEORY)	OT/ET = V4LT12/A9NT04= HI/HU	3.010	.000	-5.000

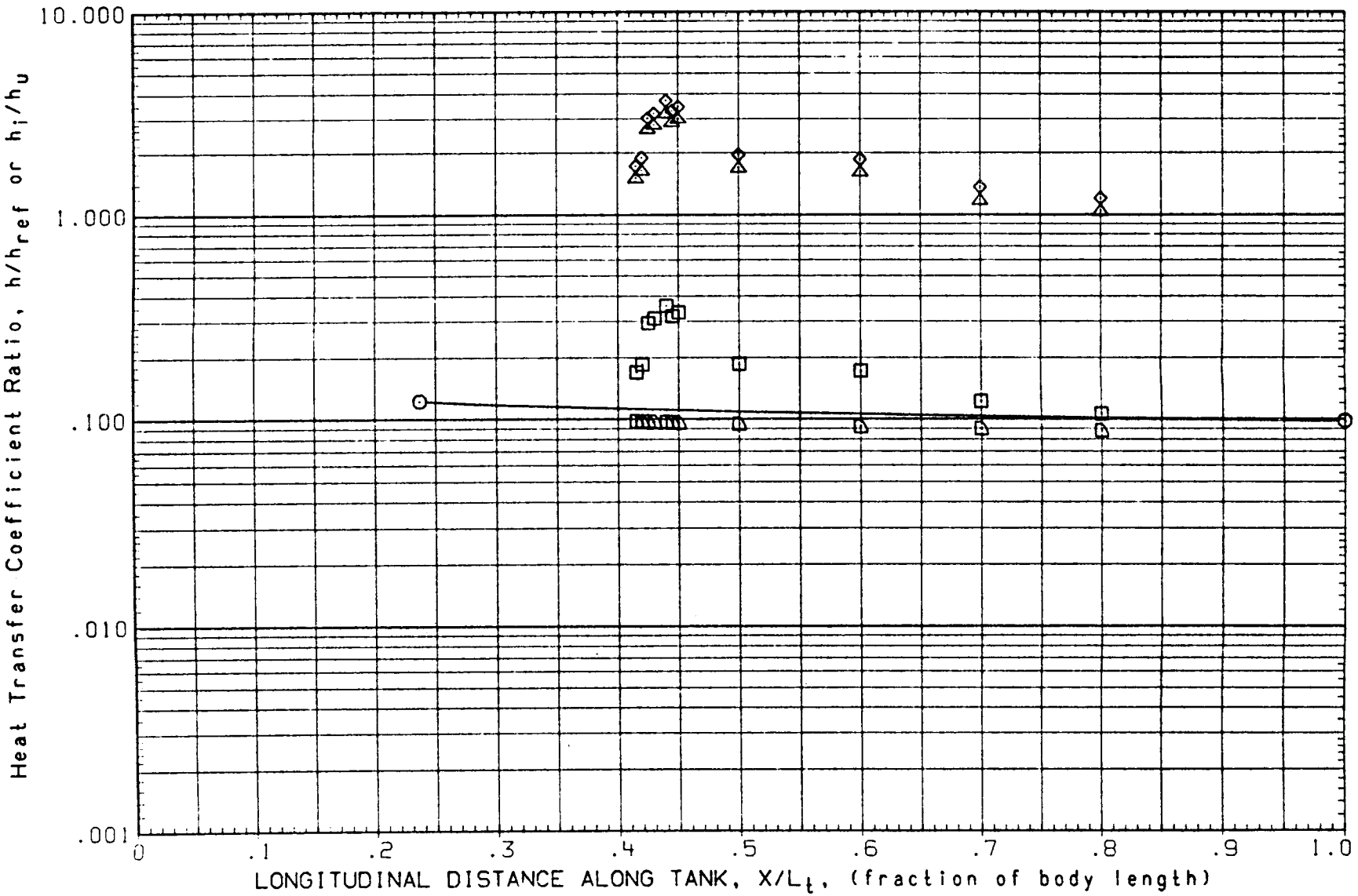

FIG. 4-20 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 343.120

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT04)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-5.000
(C9NT04)	⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-5.000
(V4LT12)	□	IH85, AEDC V4:A-W5, CONFIGURATION 0 (T)		3.010	.000	-5.000
(X4LT12)	◇	IH85 (W,L, TEST)	OT/ET = V4LT12/C9NT04= HI/HU	3.010	.000	-5.000
(Y4LT12)	△	IH85 (W,L, THEORY)	OT/ET = V4LT12/A9NT04= HI/HU	3.010	.000	-5.000

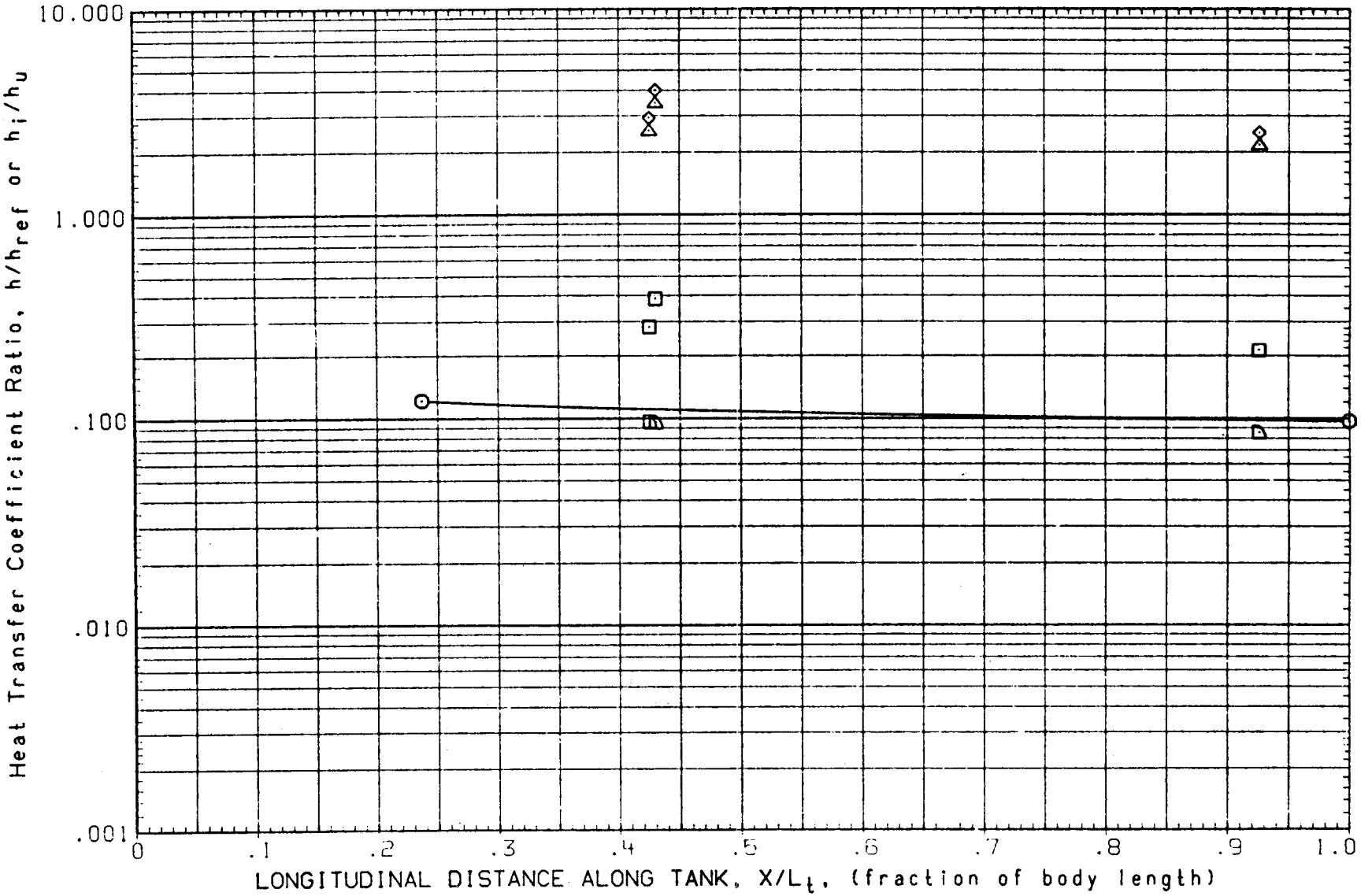

FIG. 4-20 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA .000 PHI = 345.560

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT04)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-5.000
(C9NT04)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-5.000
(V4LT12)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-5.000
(X4LT12)	◇	IH85 (W.L. TEST)	OT/ET = V4LT12/C9NT04= HI/HU	3.010	.000	-5.000
(Y4LT12)	△	IH85 (W.L. THEORY)	OT/ET = V4LT12/A9NT04= HI/HU	3.010	.000	-5.000

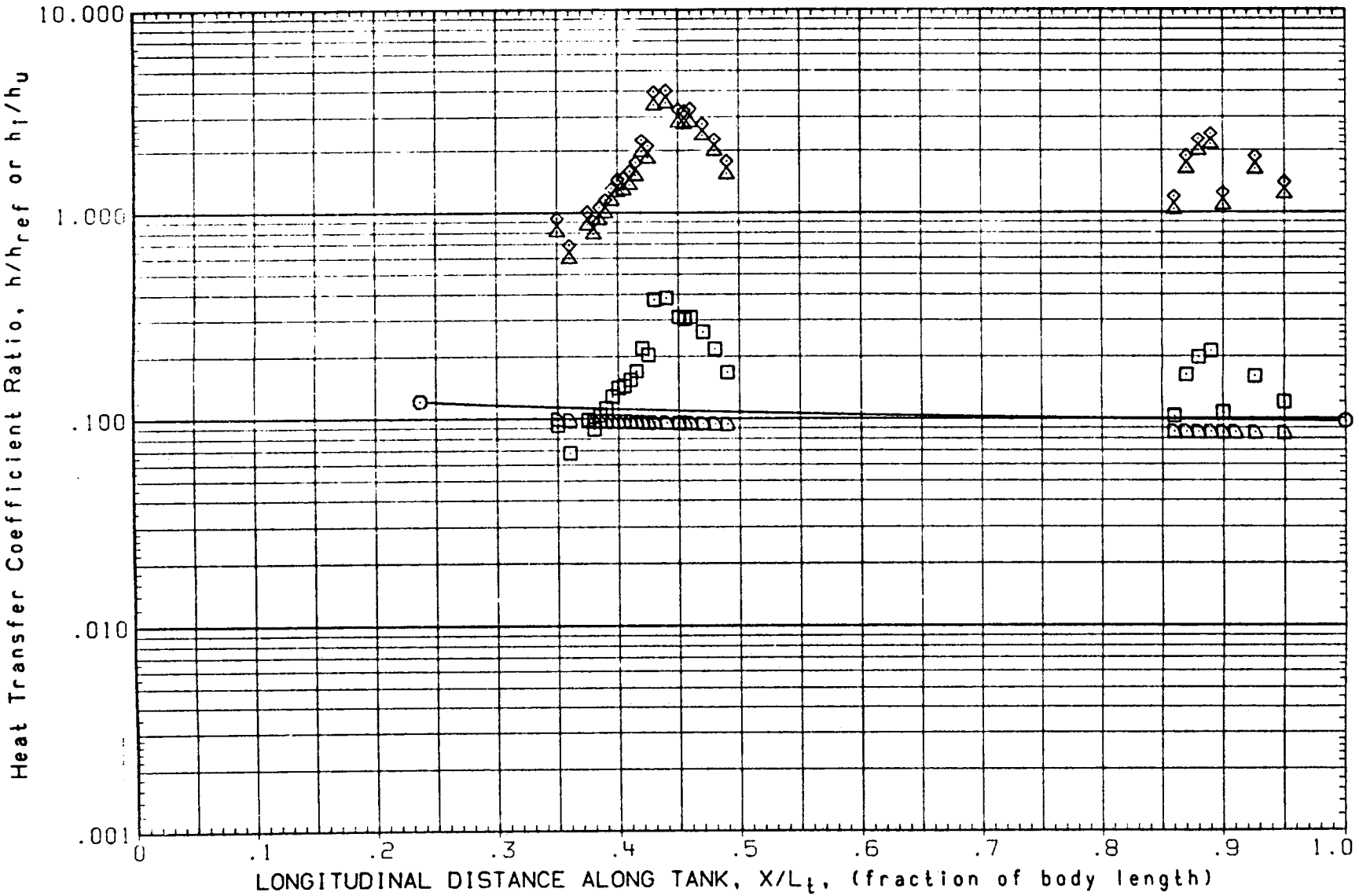

FIG. 4-20 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 348.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(O9NT04)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-5.000
(C9NT04)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-5.000
(V4LT12)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-5.000
(X4LT12)	◇	IH85 (W.L. TEST) OT/ET = V4LT12/C9NT04=	HI/HU	3.010	.000	-5.000
(Y4LT12)	△	IH85 (W.L. THEORY) OT/ET = V4LT12/A9NT04=	HI/HU	3.010	.000	-5.000

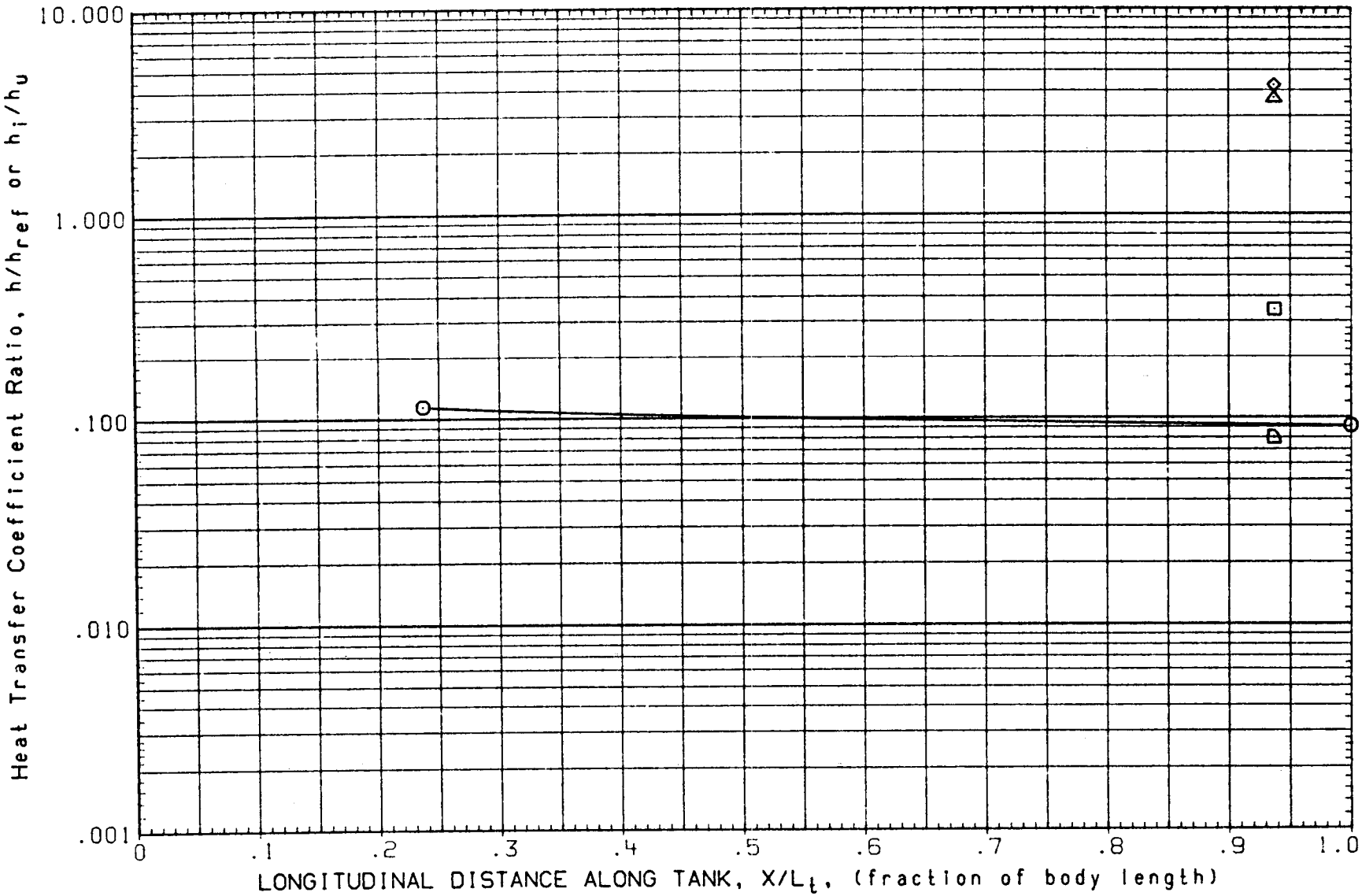

FIG. 4-20 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 352.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT04)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-5.000
(C9NT04)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-5.000
(V4LT12)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-5.000
(X4LT12)	◇	IH85 (W.L. TEST)	OT/ET = V4LT12/C9NT04= HI/HU	3.010	.000	-5.000
(Y4LT12)	△	IH85 (W.L. THEORY)	OT/ET = V4LT12/A9NT04= HI/HU	3.010	.000	-5.000

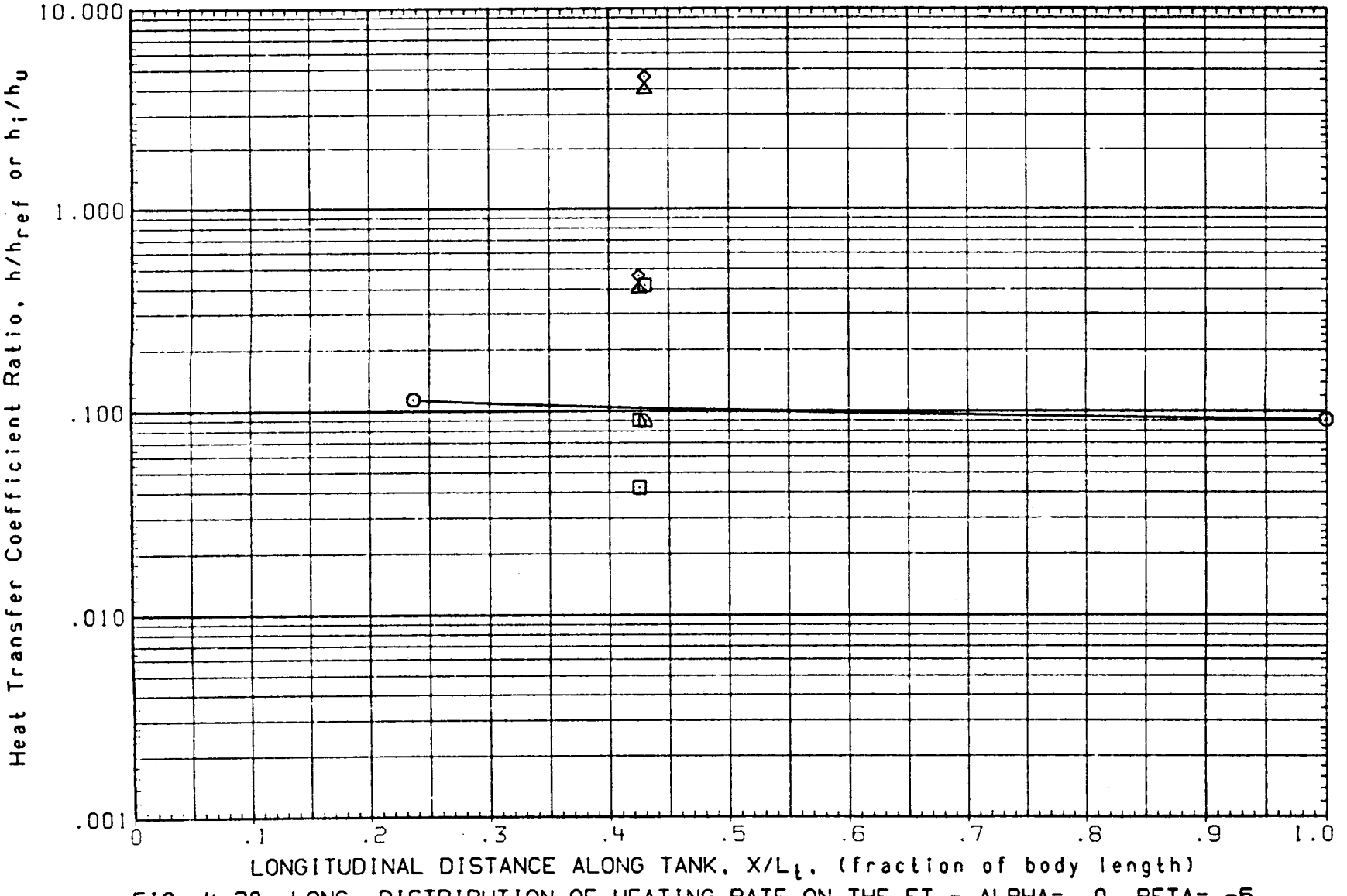

FIG. 4-20 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 354.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT04)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-5.000
(C9NT04)	⬠	DATA NOT AVAILABLE		3.010	.000	-5.000
(Y4LT12)	□	DATA NOT AVAILABLE		3.010	.000	-5.000
(X4LT12)	◇	DATA NOT AVAILABLE		3.010	.000	-5.000
(Y4LT12)	△	DATA NOT AVAILABLE		3.010	.000	-5.000

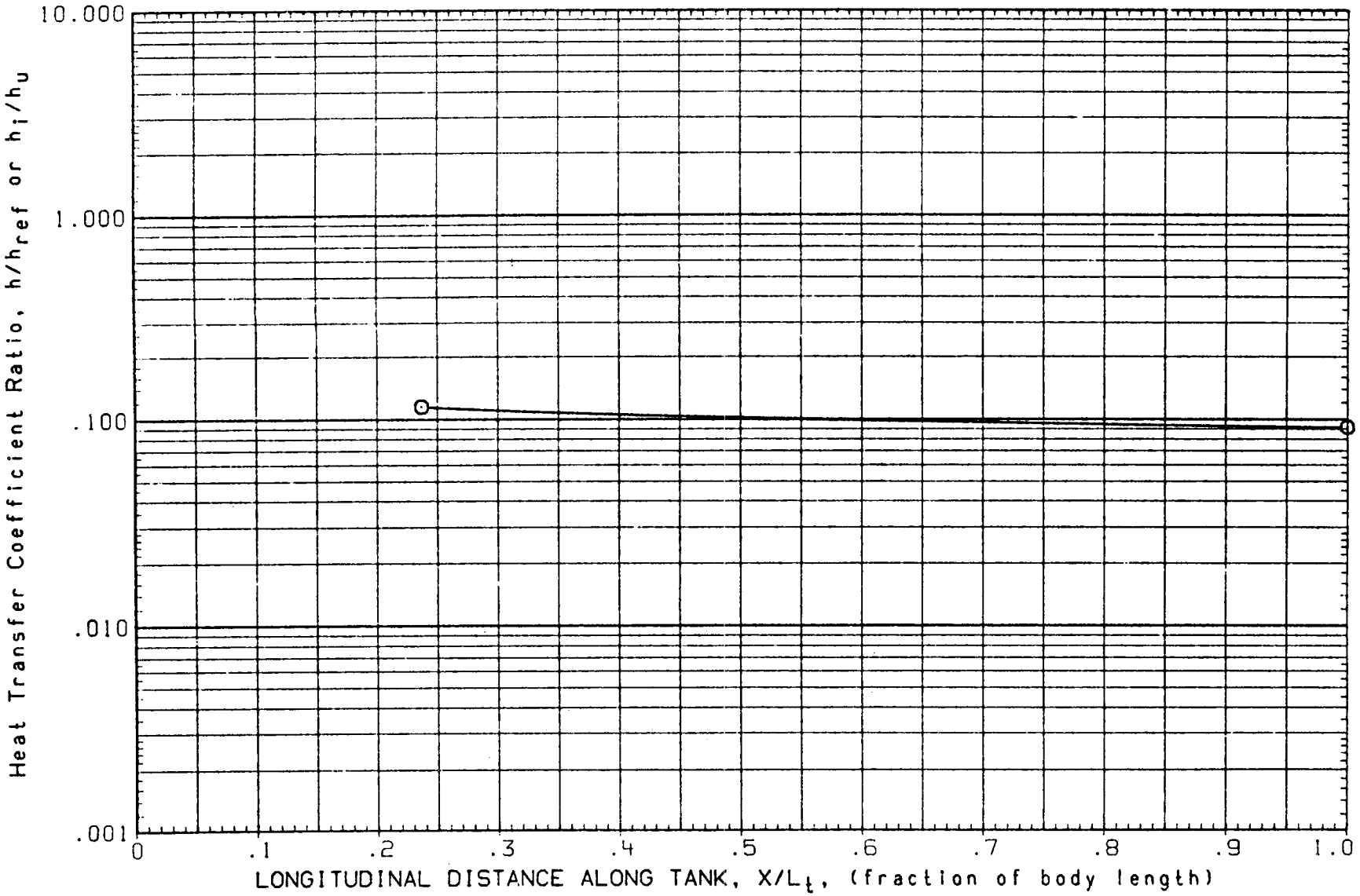

FIG. 4-20 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 355.160

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT04)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-5.000
(C9NT04)	⬡	DATA NOT AVAILABLE		3.010	.000	-5.000
(V4LT12)	□	DATA NOT AVAILABLE		3.010	.000	-5.000
(X4LT12)	◇	DATA NOT AVAILABLE		3.010	.000	-5.000
(Y4LT12)	△	DATA NOT AVAILABLE		3.010	.000	-5.000

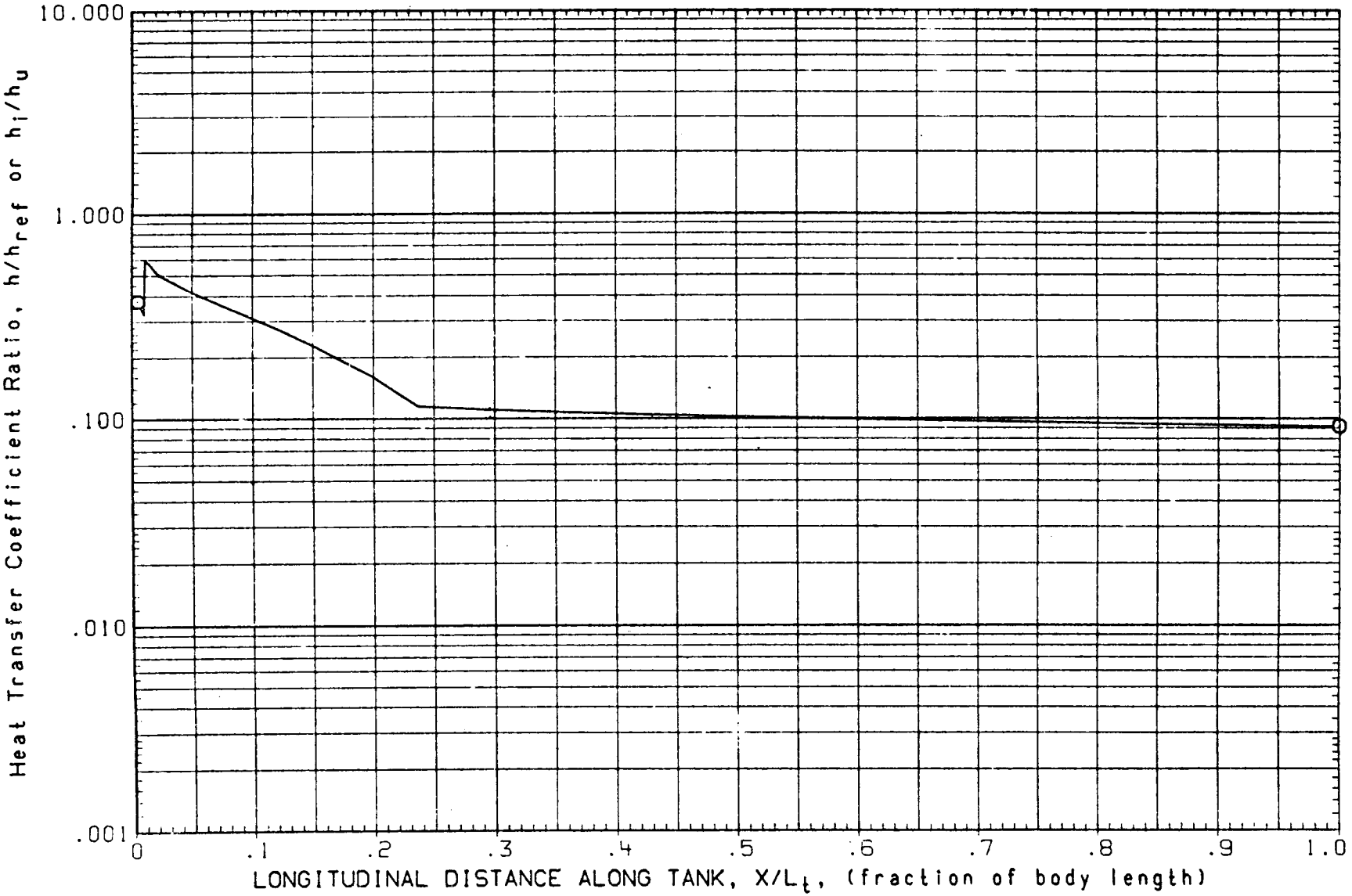

FIG. 4-20 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 360.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	3.010	.000	-3.000
(C9NT05)	□	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	3.010	.000	-3.000
(V4LT13)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)	3.010	.000	-3.000
(X4LT13)	◇	IH85 (W.L. TEST) OT/ET = V4LT13/C9NT05= HI/HU	3.010	.000	-3.000
(Y4LT13)	△	IH85 (W.L. THEORY) OT/ET = V4LT13/A9NT05= HI/HU	3.010	.000	-3.000

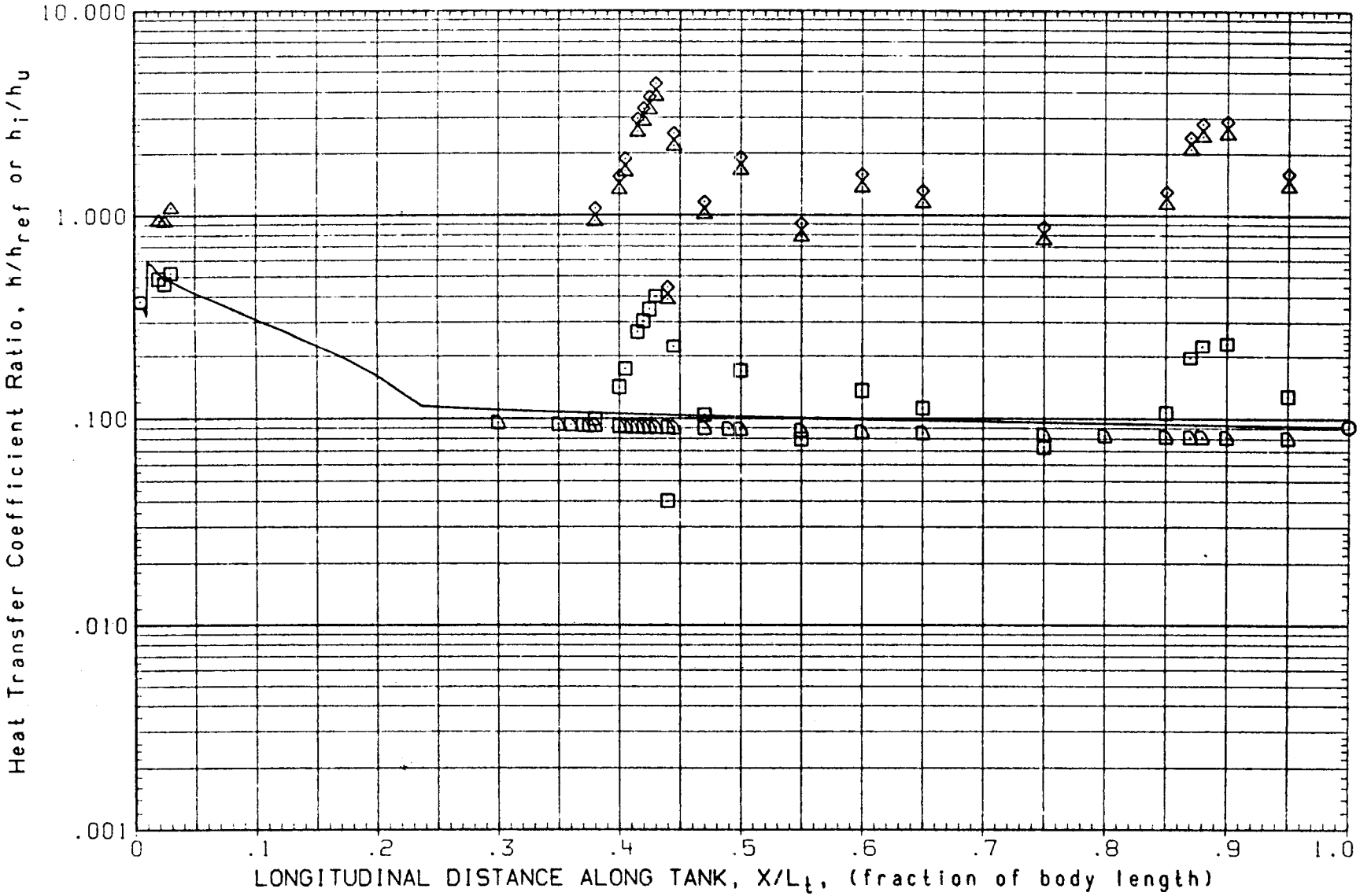

FIG. 4-21 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = .000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT05)	○	DATA NOT AVAILABLE	3.010	.000	-3.000
(C9NT05)	⊏	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	3.010	.000	-3.000
(V4LT13)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)	3.010	.000	-3.000
(X4LT13)	◇	IH85 (W.L. TEST) OT/ET = V4LT13/C9NT05= HI/HU	3.010	.000	-3.000
(Y4LT13)	△	IH85 (W.L. THEORY) OT/ET = V4LT13/A9NT05= HI/HU	3.010	.000	-3.000

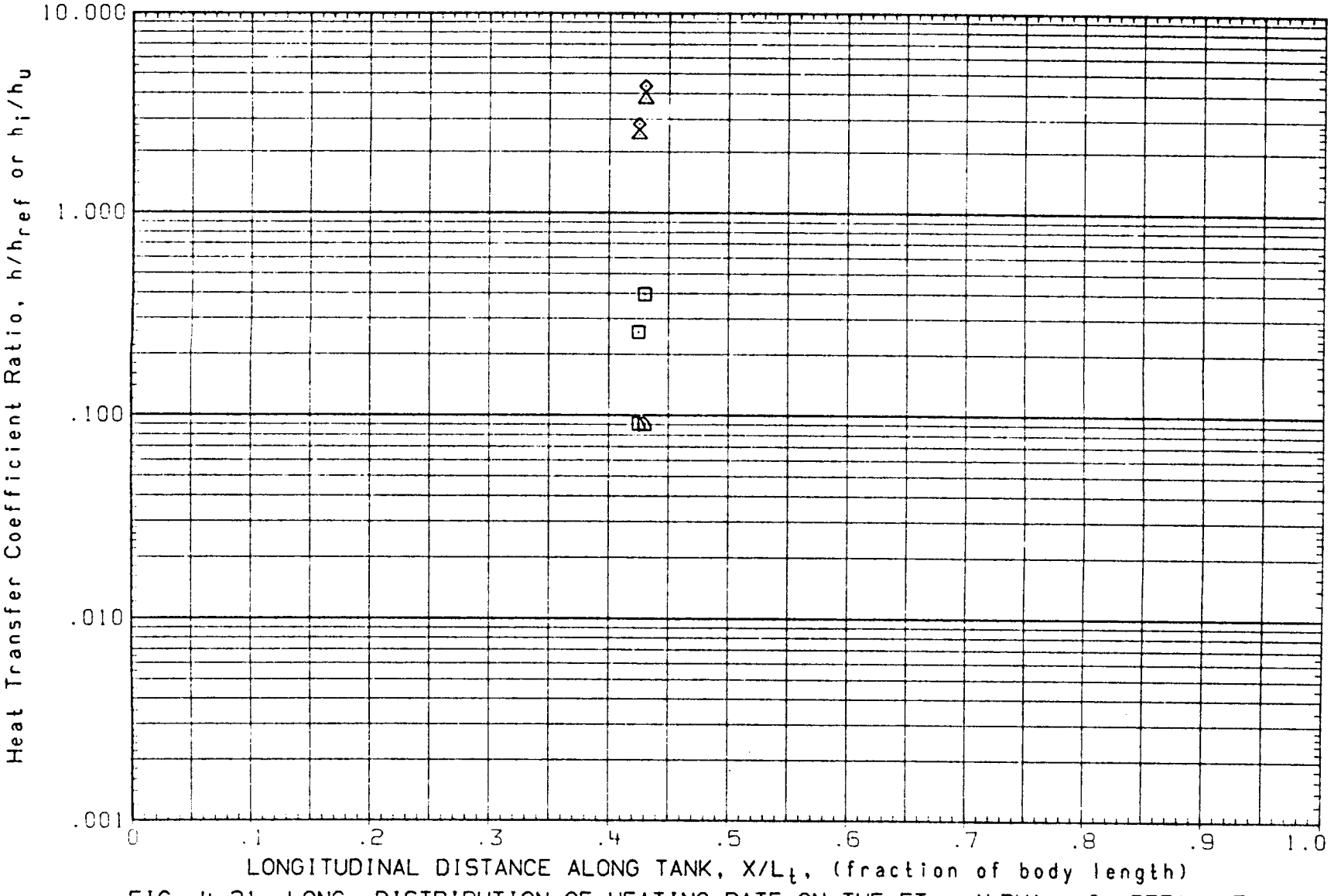

FIG. 4-21 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 5.625

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⌂	DATA NOT AVAILABLE		3.010	.000	-3.000
(V4LT13)	□	DATA NOT AVAILABLE		3.010	.000	-3.000
(X4LT13)	◇	DATA NOT AVAILABLE		3.010	.000	-3.000
(Y4LT13)	△	DATA NOT AVAILABLE		3.010	.000	-3.000

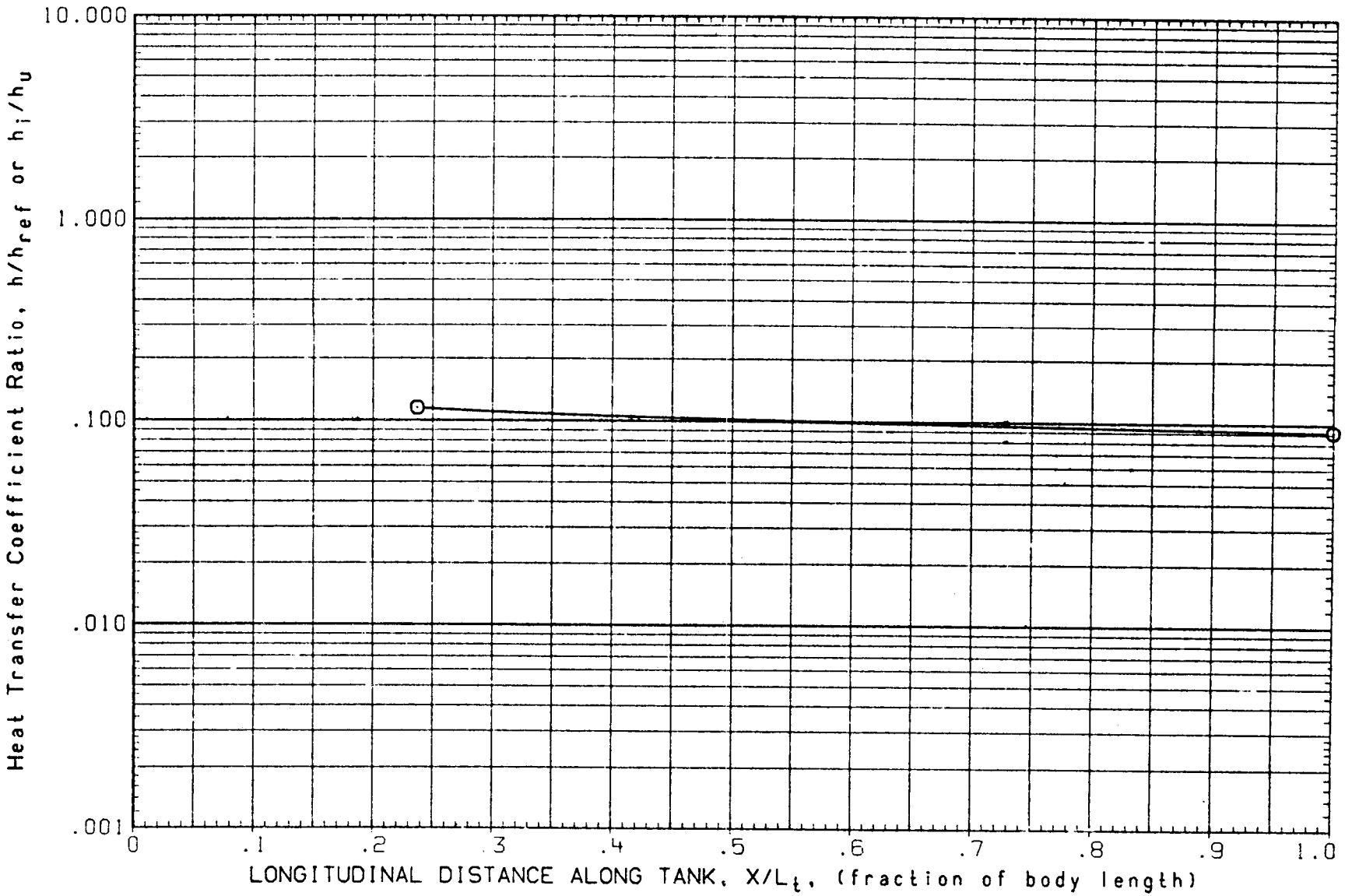

FIG. 4-21 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 5.630

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT13)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-3.000
(X4LT13)	◇	IH85 (W.L. TEST) OT/ET = V4LT13/C9NT05=	HI/HU	3.010	.000	-3.000
(Y4LT13)	△	IH85 (W.L. THEORY) OT/ET = V4LT13/A9NT05=	HI/HU	3.010	.000	-3.000

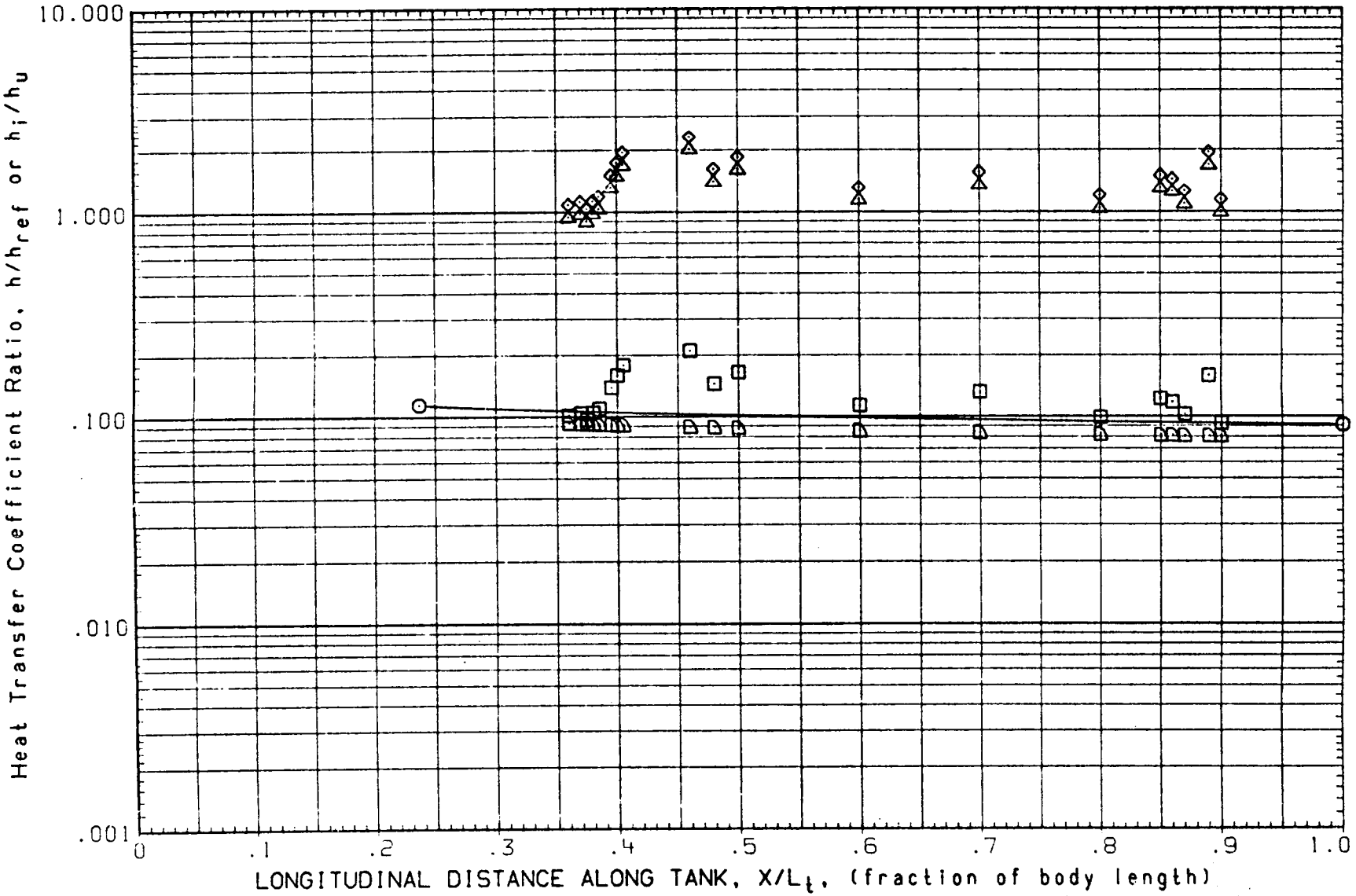

FIG. 4-21 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 11.250

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	3.010	.000	-3.000
(C9NT05)	⌂	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	3.010	.000	-3.000
(V4LT13)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)	3.010	.000	-3.000
(X4LT13)	◇	IH85 (W.L. TEST) OT/ET = V4LT13/C9NT05= HI/HU	3.010	.000	-3.000
(Y4LT13)	△	IH85 (W.L. THEORY) OT/ET = V4LT13/A9NT05= HI/HU	3.010	.000	-3.000

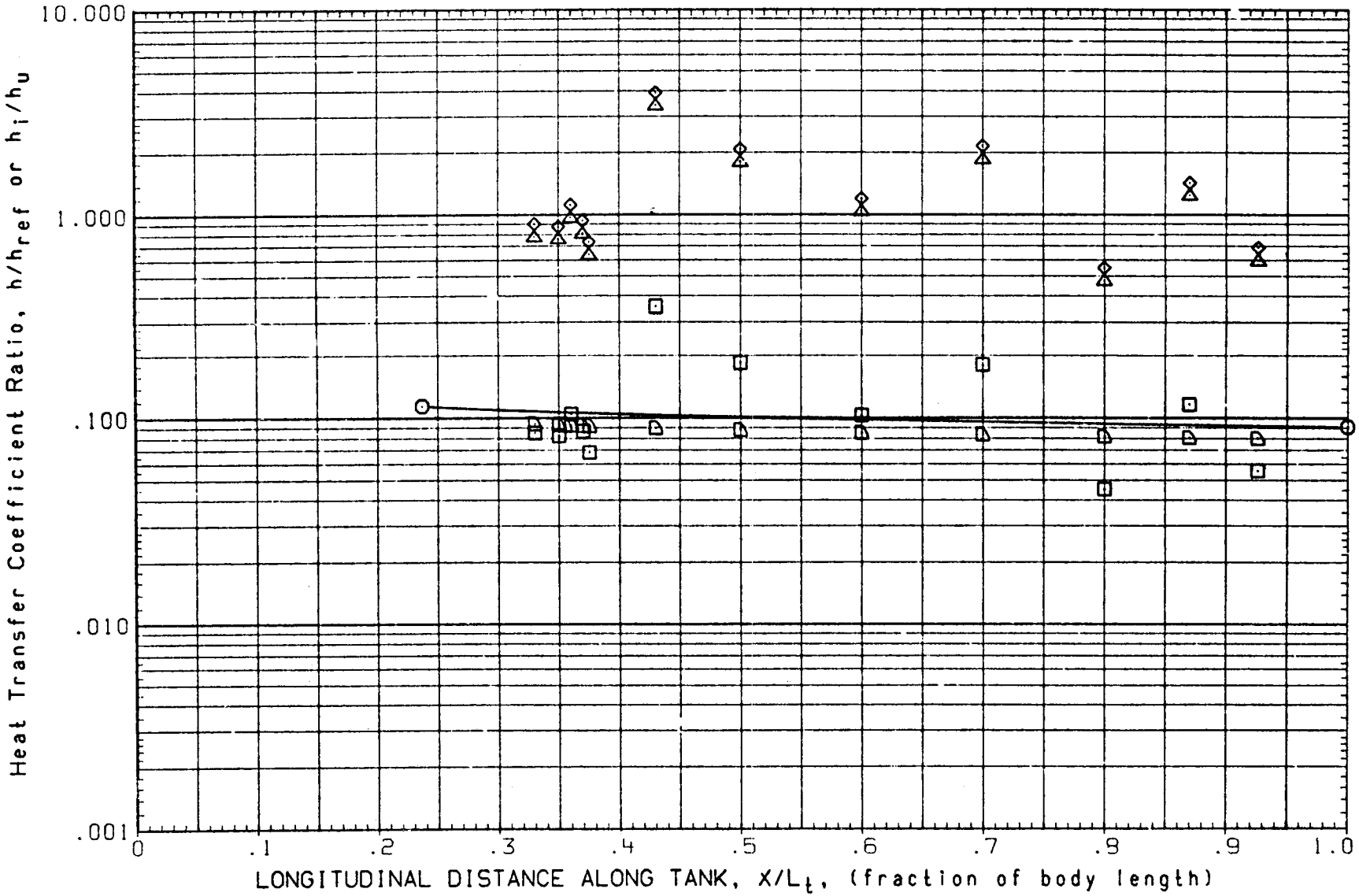

FIG. 4-21 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 17.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT13)	□	IH65, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-3.000
(X4LT13)	◇	IH85 (W.L. TEST)	OT/ET = V4LT13/C9NT05= HI/HU	3.010	.000	-3.000
(Y4LT13)	△	IH85 (W.L. THEORY)	OT/ET = V4LT13/A9NT05= HI/HU	3.010	.000	-3.000

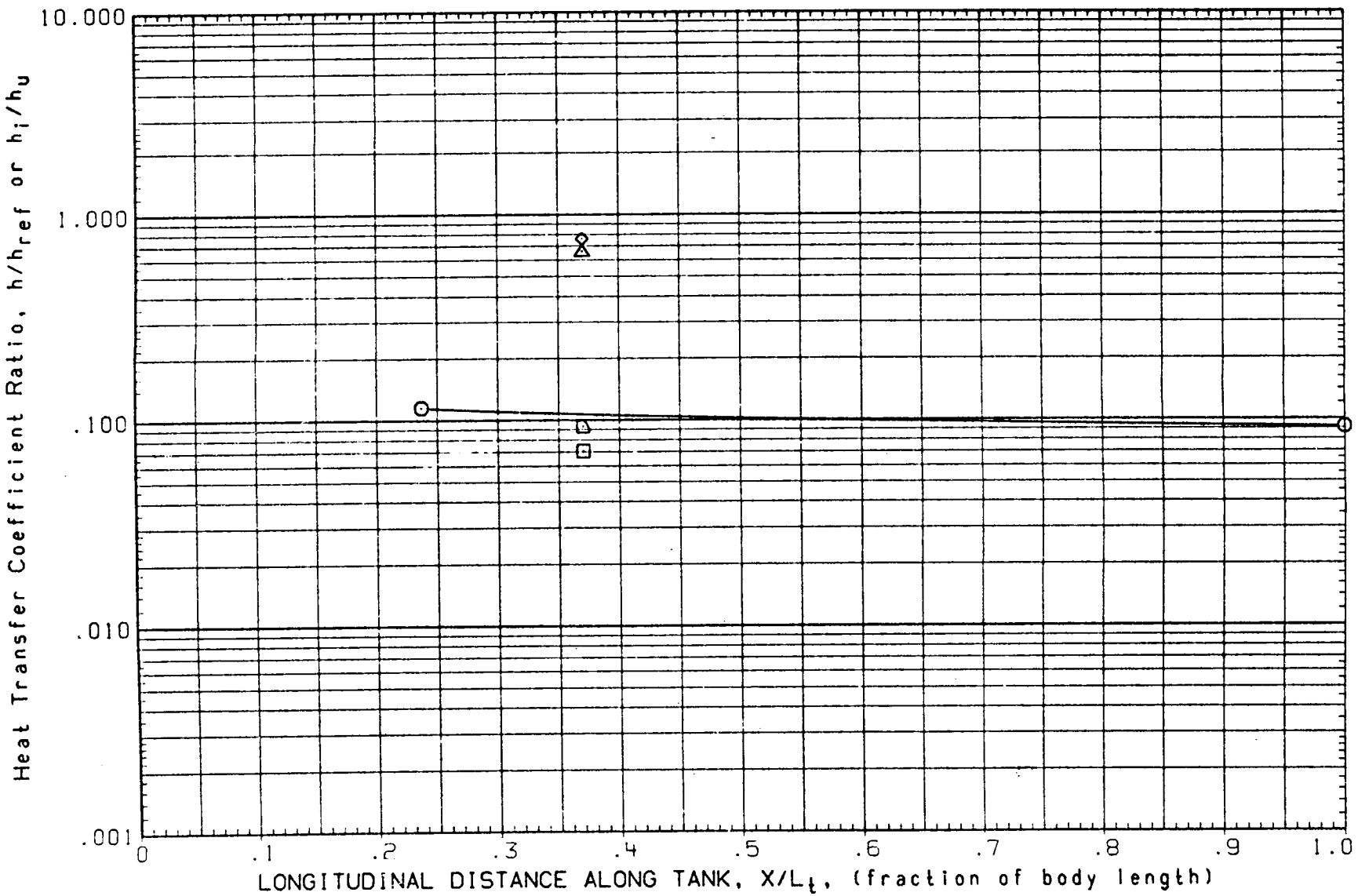

FIG. 4-21 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 20.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⊿	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT13)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-3.000
(X4LT13)	◇	IH85 (W.L. TEST)	OT/ET = V4LT13/C9NT05= HI/HU	3.010	.000	-3.000
(Y4LT13)	△	IH85 (W.L. THEORY)	OT/ET = V4LT13/A9NT05= HI/HU	3.010	.000	-3.000

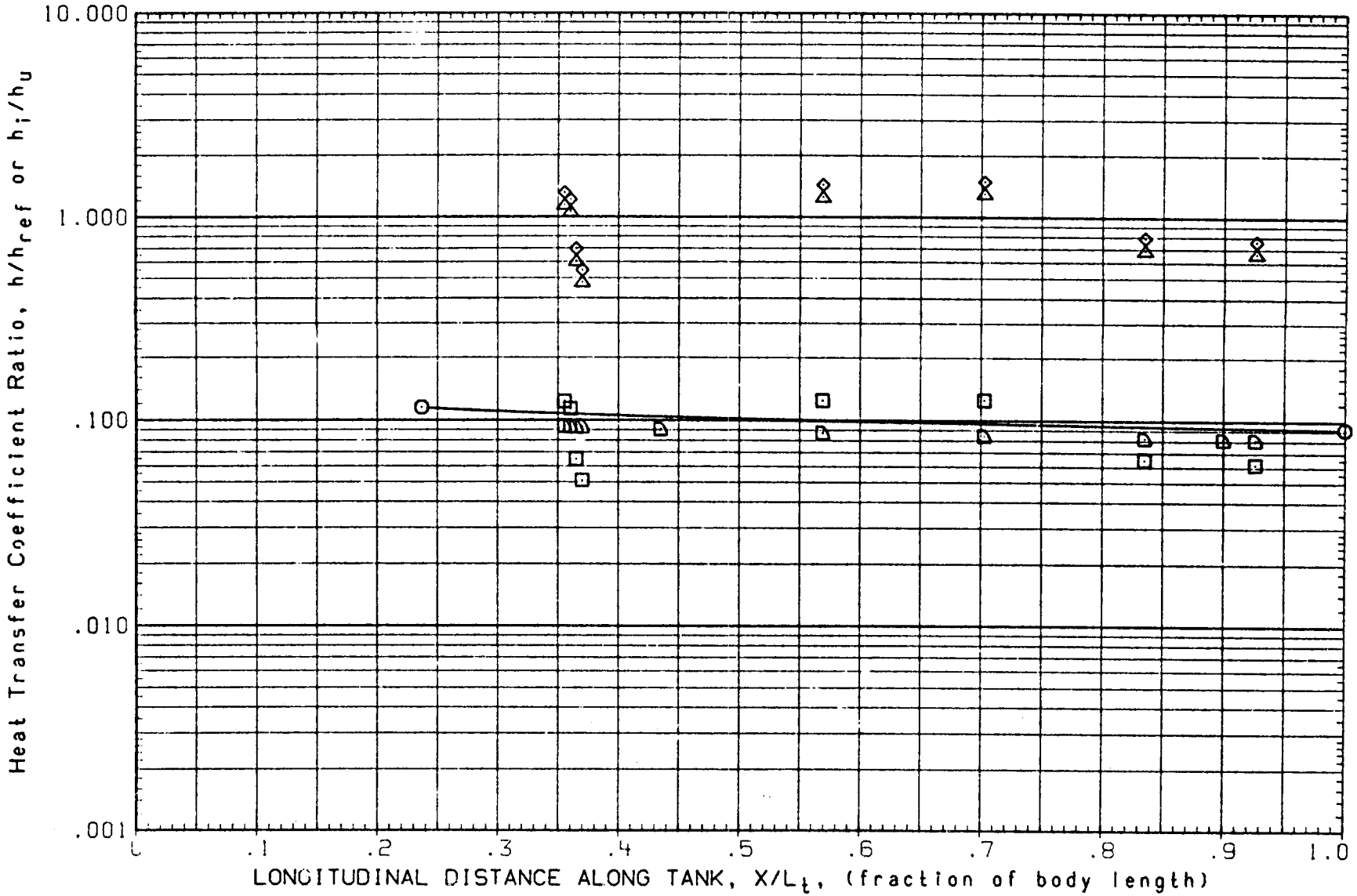

FIG. 4-21 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 23.070

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	◐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT13)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-3.000
(X4LT13)	◇	IH85 (W.L. TEST)	OT/ET = V4LT13/C9NT05= HI/HU	3.010	.000	-3.000
(Y4LT13)	△	IH85 (W.L. THEORY)	OT/ET = V4LT13/A9NT05= HI/HU	3.010	.000	-3.000

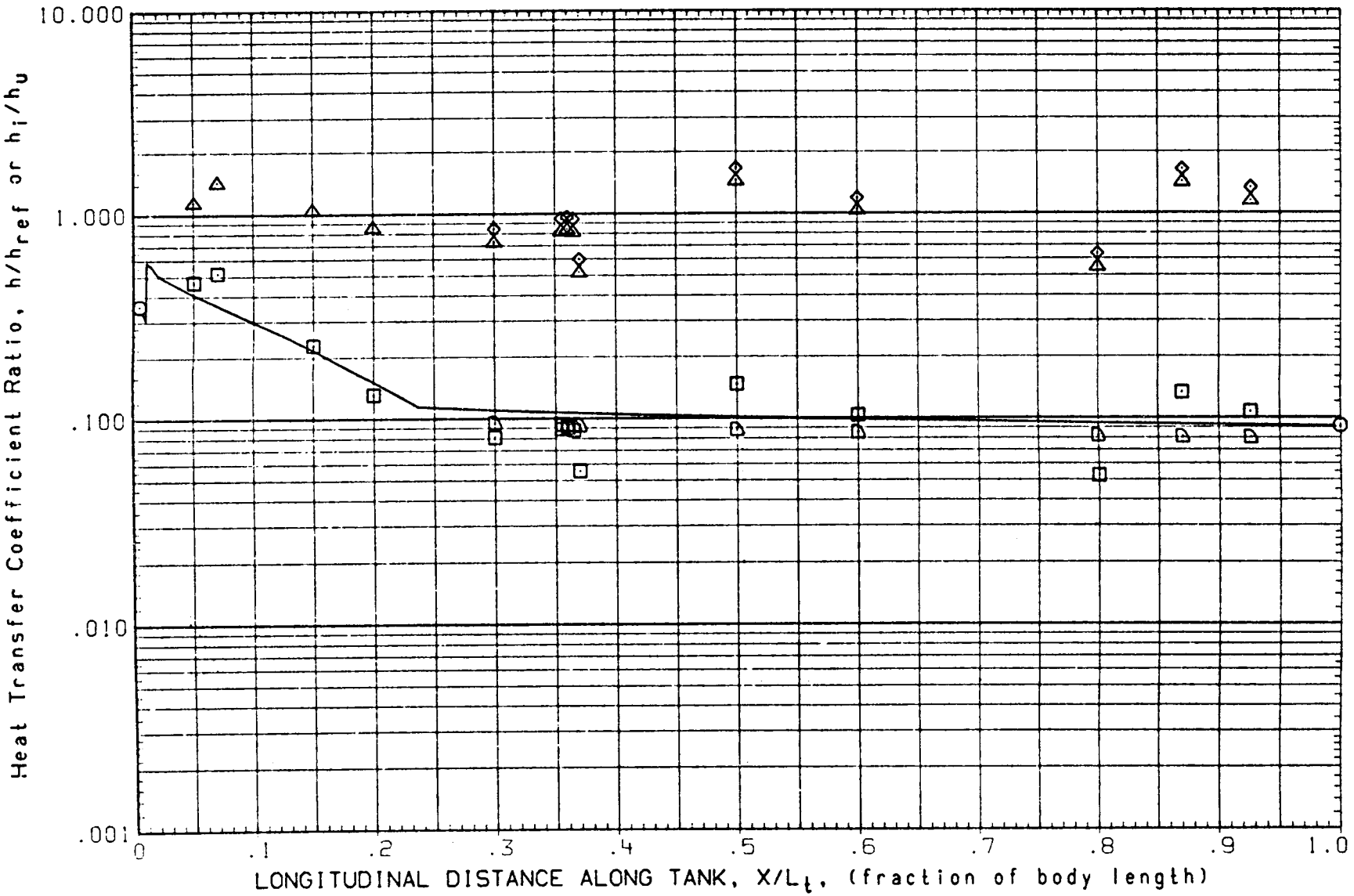

FIG. 4-21 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 29.800

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(C9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT13)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-3.000
(X4LT13)	◇	IH85 (W.L. TEST)	OT/ET = V4LT13/C9NT05= HI/HU	3.010	.000	-3.000
(Y4LT13)	△	IH85 (W.L. THEORY)	OT/ET = V4LT13/A9NT05= HI/HU	3.010	.000	-3.000

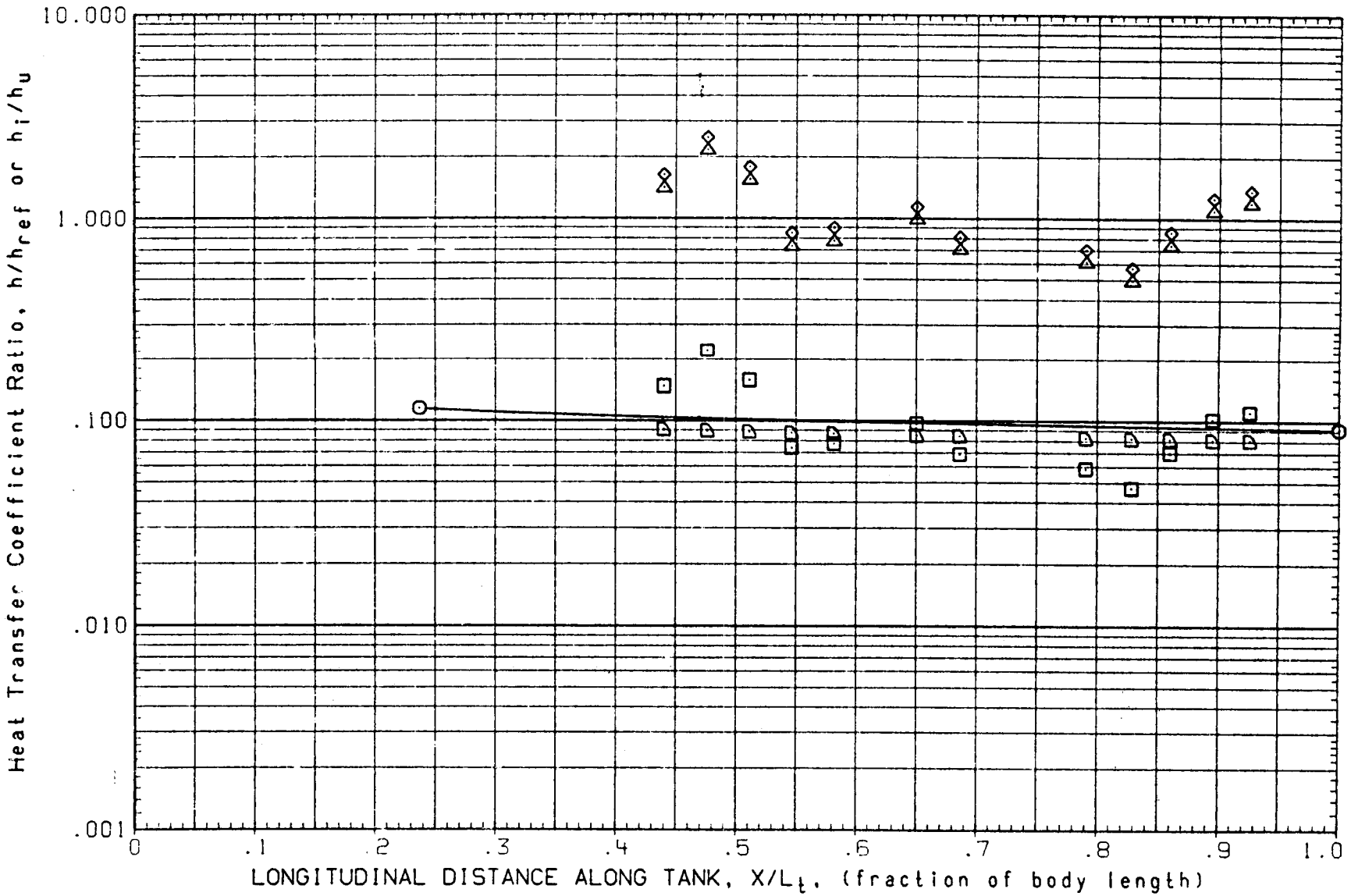

FIG. 4-21 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 31.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	◐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT13)	□	IH85, AEDC V4IA-W5, CONFIGURATION 0 (T)		3.010	.000	-3.000
(X4LT13)	◇	IH85 (W.L. TEST)	OT/ET = V4LT13/C9NT05= HI/HU	3.010	.000	-3.000
(Y4LT13)	△	IH85 (W.L. THEORY)	OT/ET = V4LT13/A9NT05= HI/HU	3.010	.000	-3.000

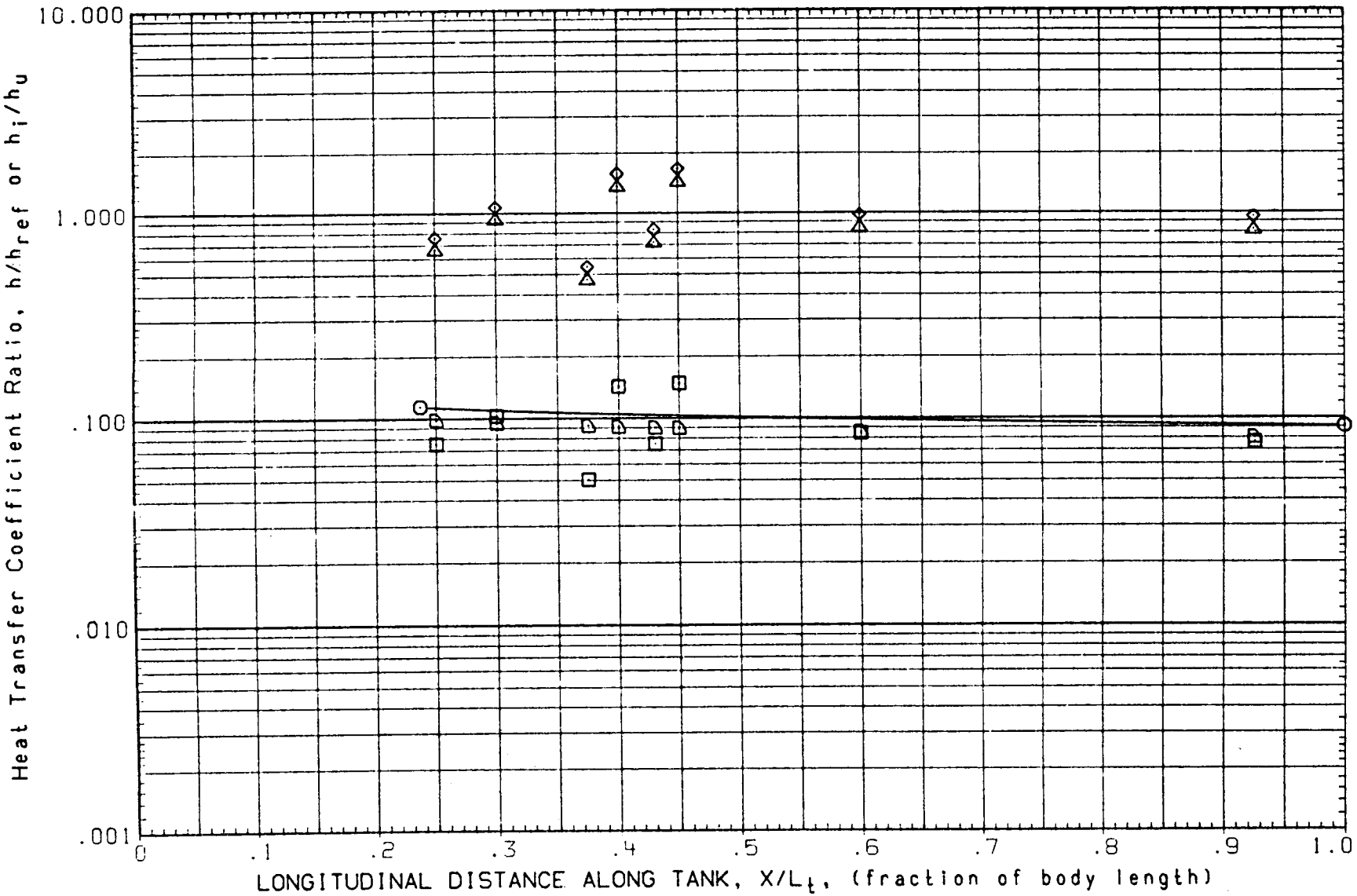

FIG. 4-21 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 33.750

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	◺	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT13)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-3.000
(X4LT13)	◇	IH85 (W.L. TEST)	OT/ET = V4LT13/C9NT05= HI/HU	3.010	.000	-3.000
(Y4LT13)	△	IH85 (W.L. THEORY)	OT/ET = V4LT13/A9NT05= HI/HU	3.010	.000	-3.000

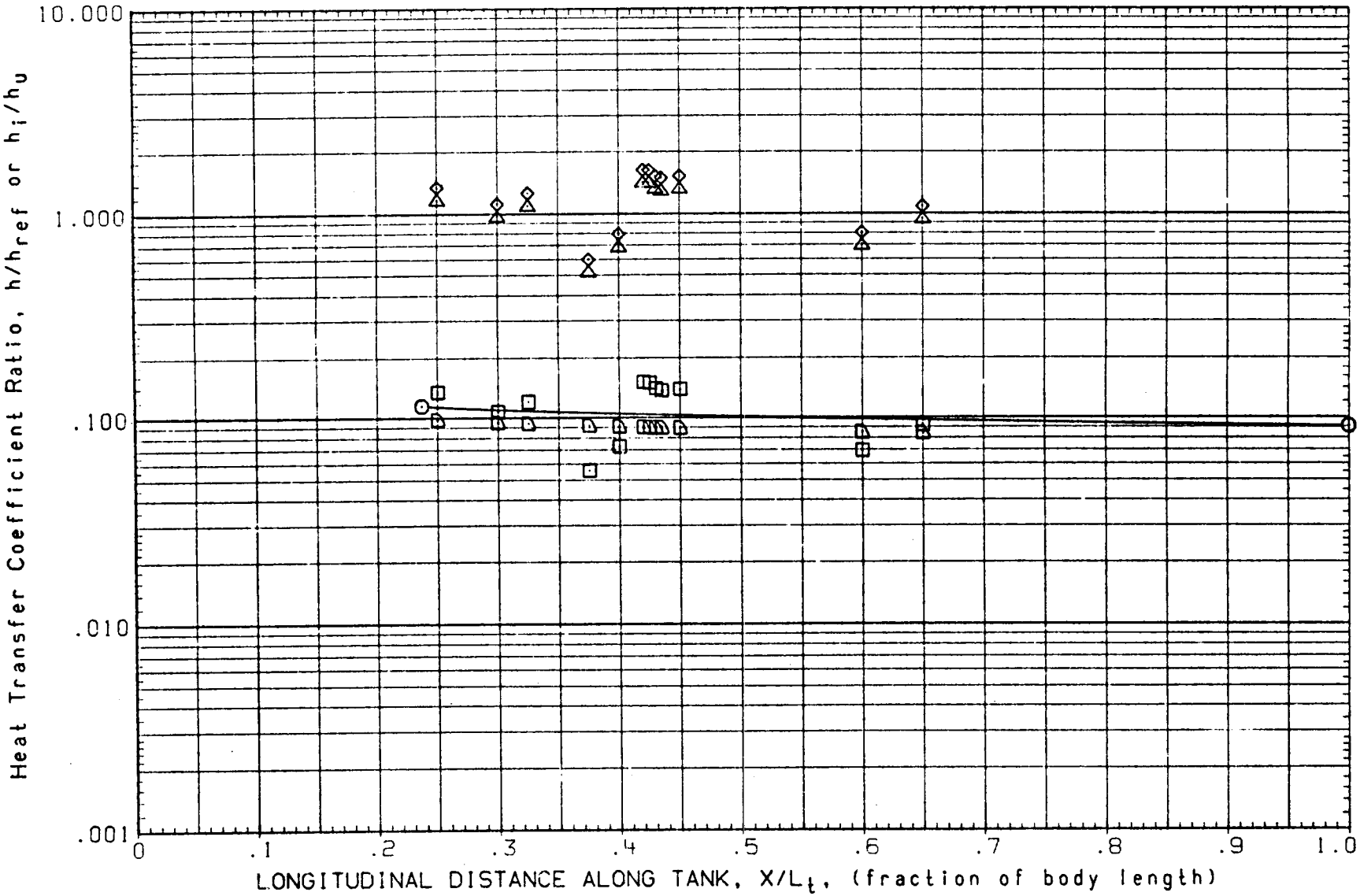

FIG. 4-21 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 36.320

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT13)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-3.000
(X4LT13)	◇	IH85 (W.L. TEST)	OT/ET = V4LT13/C9NT05= HI/HU	3.010	.000	-3.000
(Y4LT13)	△	IH85 (W.L. THEORY)	OT/ET = V4LT13/A9NT05= HI/HU	3.010	.000	-3.000

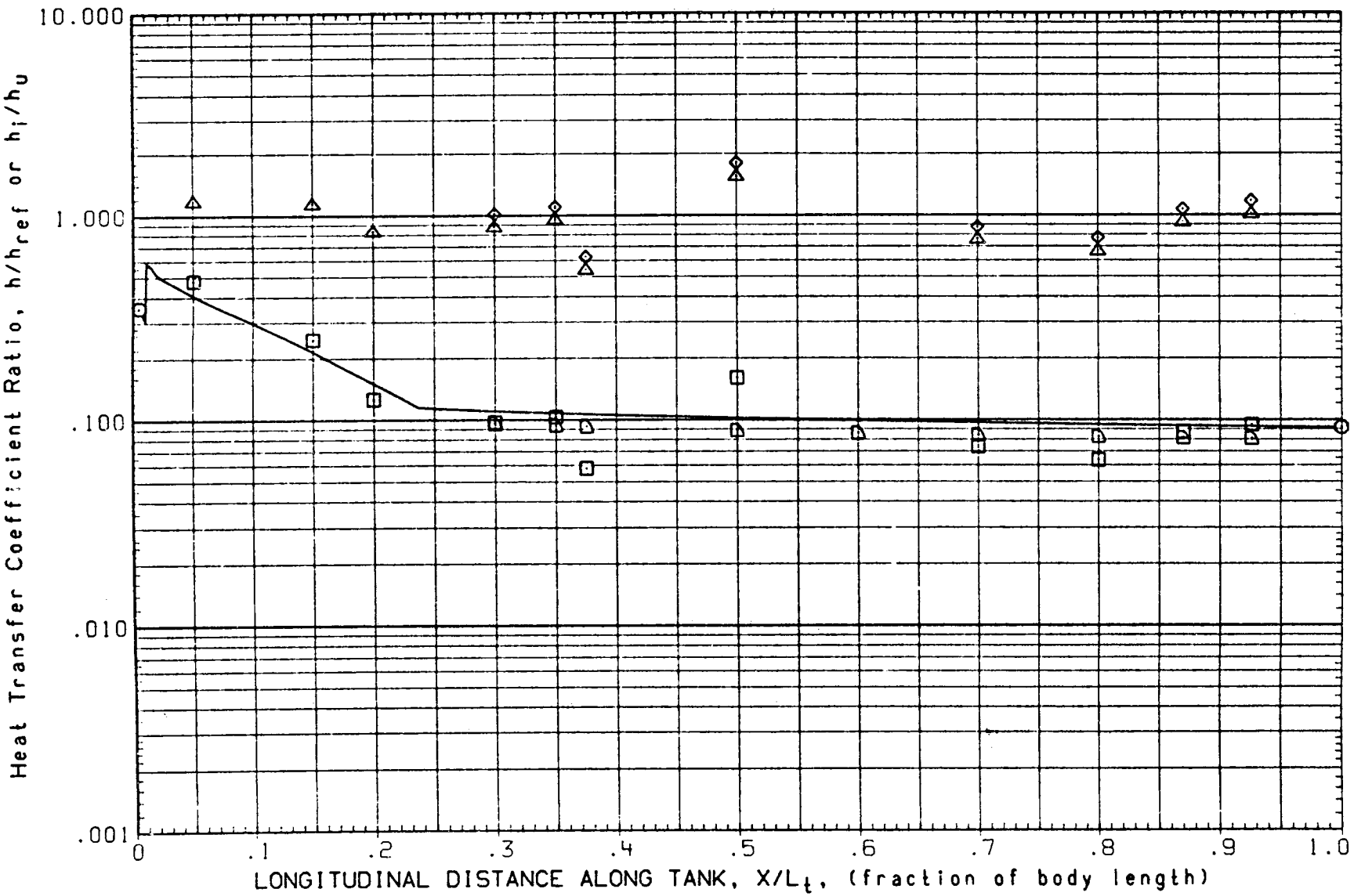

FIG. 4-21 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 37.700

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⬠	DATA NOT AVAILABLE		3.010	.000	-3.000
(V4LT13)	□	DATA NOT AVAILABLE		3.010	.000	-3.000
(X4LT13)	◇	DATA NOT AVAILABLE		3.010	.000	-3.000
(Y4LT13)	△	DATA NOT AVAILABLE		3.010	.000	-3.000

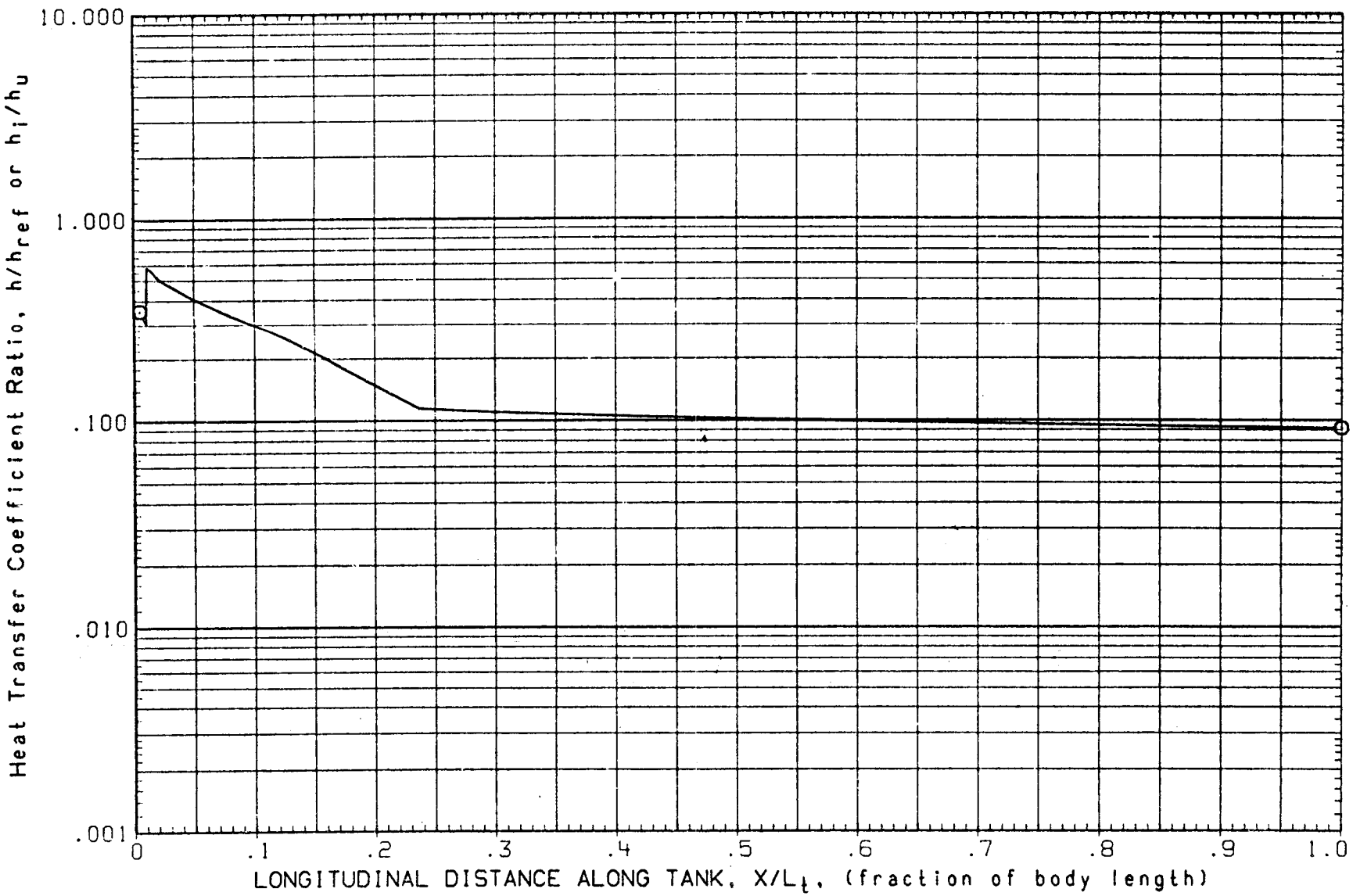

FIG. 4-21 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 39.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	3.010	.000	-3.000
(C9NT05)	◗	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	3.010	.000	-3.000
(V4LT13)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)	3.010	.000	-3.000
(X4LT13)	◇	IH85 (W.L. TEST) OT/ET = V4LT13/C9NT05= HI/HU	3.010	.000	-3.000
(Y4LT13)	△	IH85 (W.L. THEORY) OT/ET = V4LT13/A9NT05= HI/HU	3.010	.000	-3.000

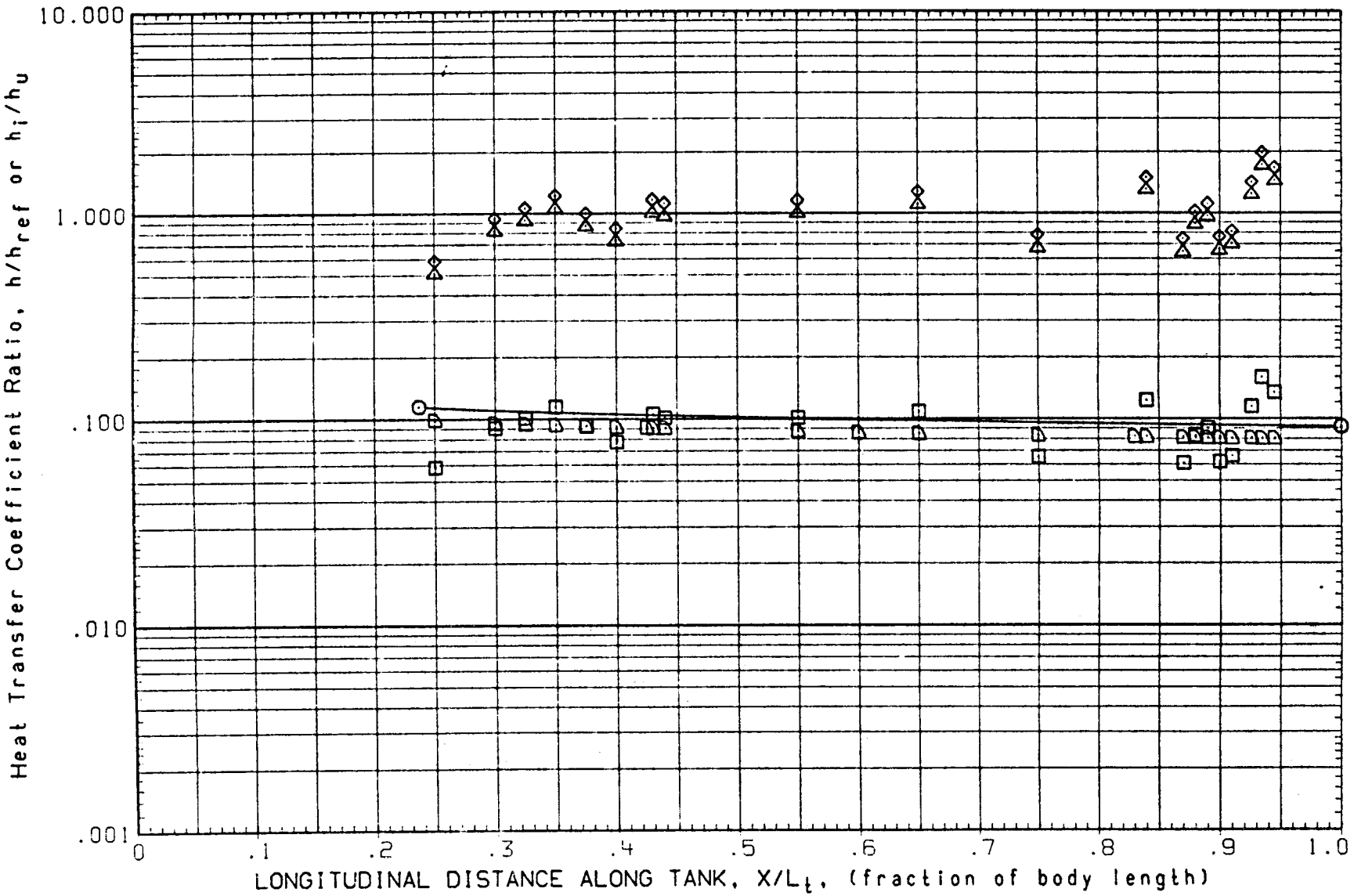

FIG. 4-21 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 45.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	3.010	.000	-3.000
(C9NT05)	⬠	DATA NOT AVAILABLE	3 010	.000	-3.000
(V4LT13)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)	3.010	.000	-3.000
(X4LT13)	◇	DATA NOT AVAILABLE	3.010	.000	-3.000
(Y4LT13)	△	IH85 (W.L. THEORY) OT/ET = V4LT13/A9NT05= HI/HU	3.010	.000	-3.000

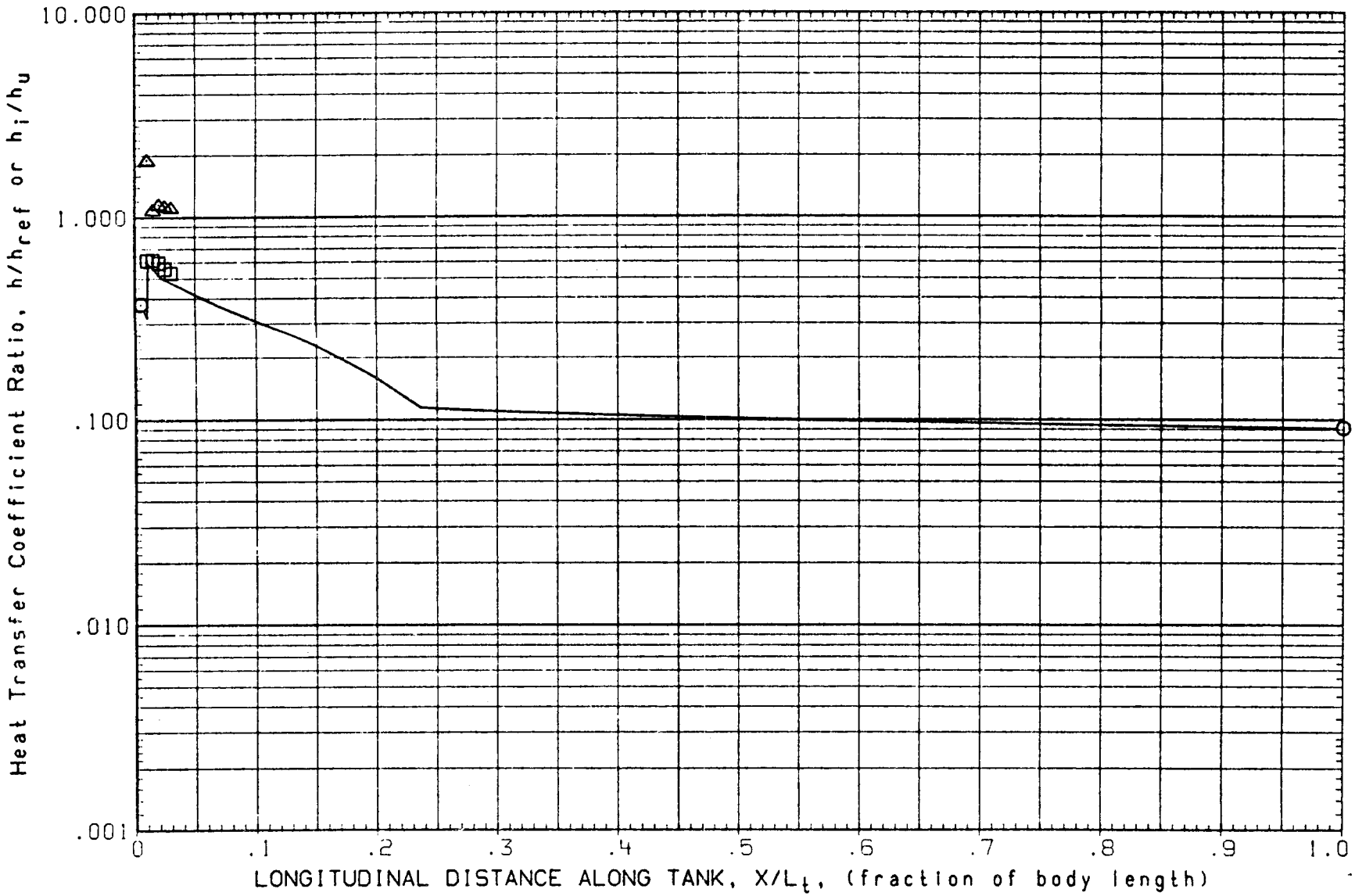

FIG. 4-21 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 180.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⬠	DATA NOT AVAILABLE		3.010	.000	-3.000
(V4LT13)	□	DATA NOT AVAILABLE		3.010	.000	-3.000
(X4LT13)	◇	DATA NOT AVAILABLE		3.010	.000	-3.000
(Y4LT13)	△	DATA NOT AVAILABLE		3.010	.000	-3.000

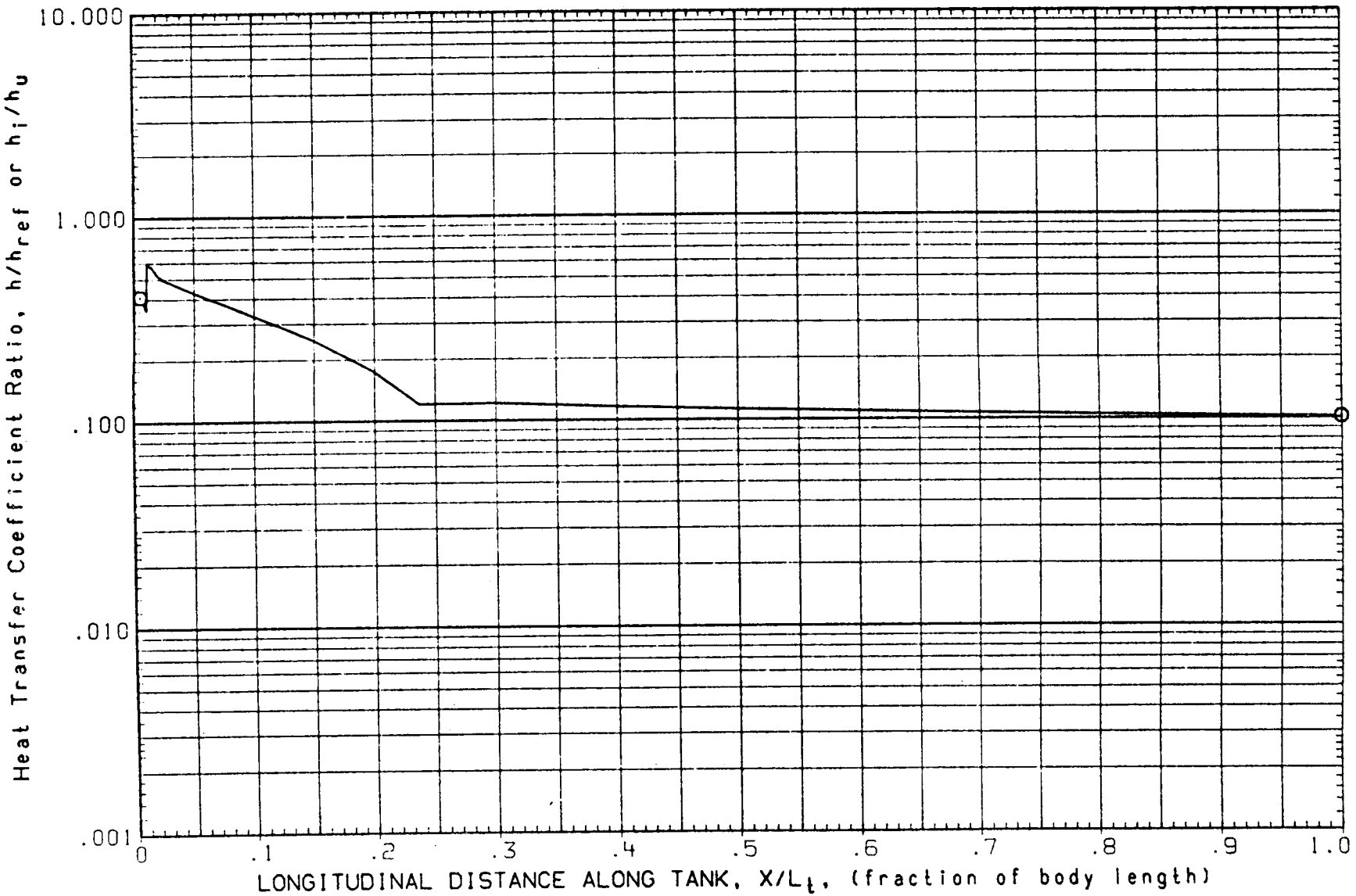

FIG. 4-21 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 235.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT13)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-3.000
(X4LT13)	◇	IH85 (W.L. TEST)	OT/ET = V4LT13/C9NT05= HI/HU	3.010	.000	-3.000
(Y4LT13)	△	IH85 (W.L. THEORY)	OT/ET = V4LT13/A9NT05= HI/HU	3.010	.000	-3.000

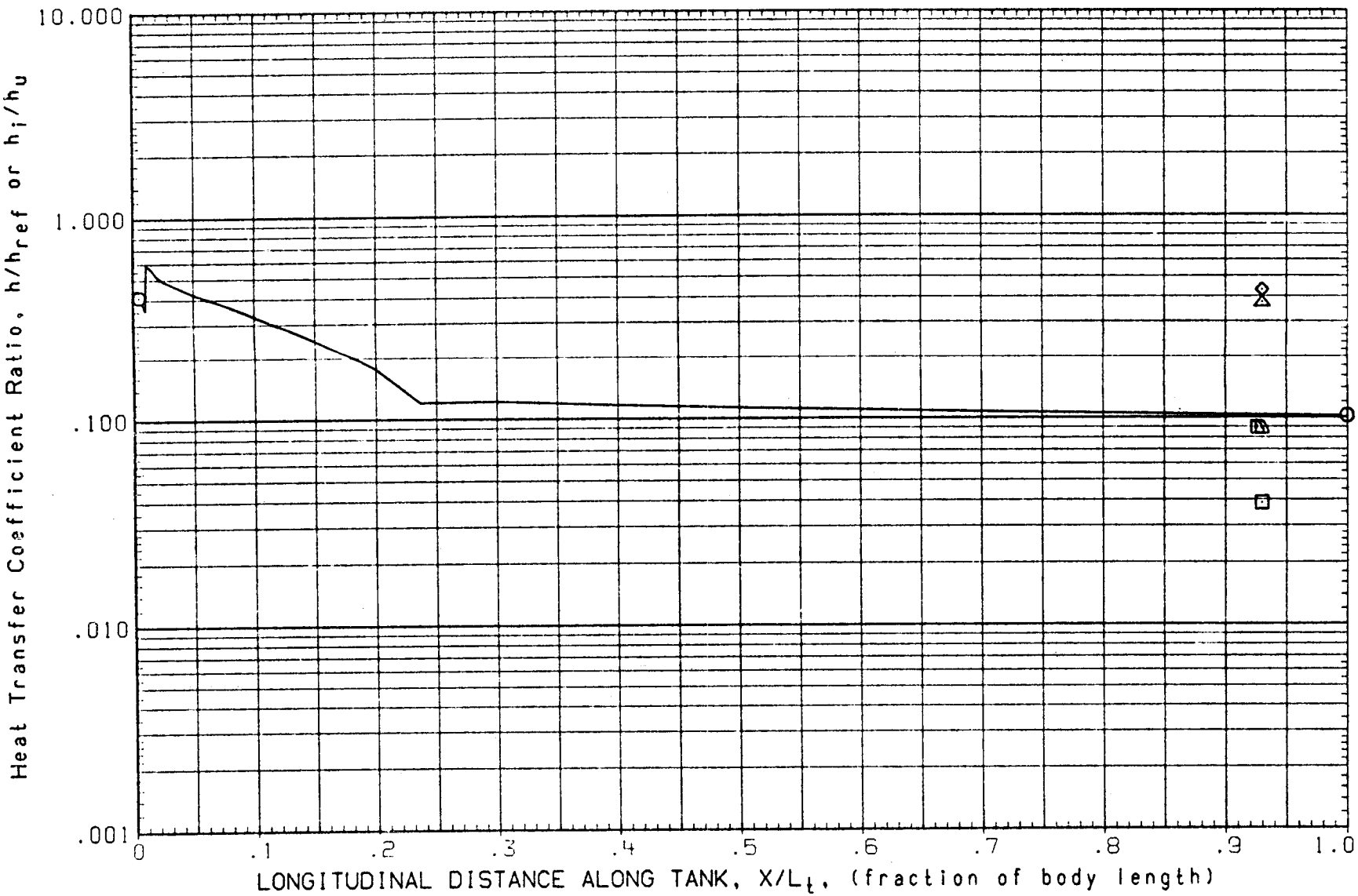

FIG. 4-21 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 247.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⬠	DATA NOT AVAILABLE		3.010	.000	-3.000
(V4LT13)	□	DATA NOT AVAILABLE		3.010	.000	-3.000
(X4LT13)	◇	DATA NOT AVAILABLE		3.010	.000	-3.000
(Y4LT13)	△	DATA NOT AVAILABLE		3.010	.000	-3.000

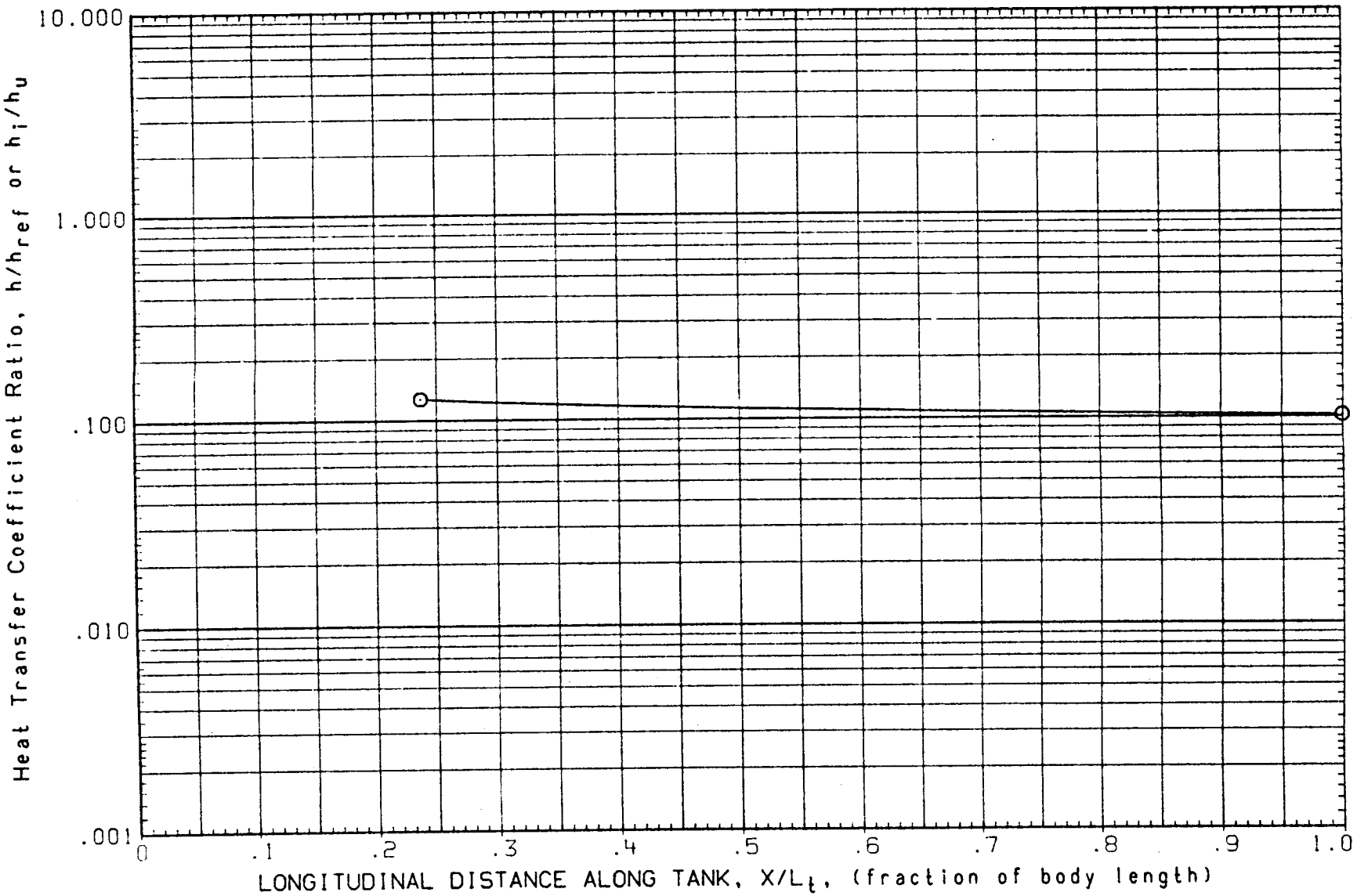

FIG. 4-21 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 247.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT13)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-3.000
(X4LT13)	◇	IH85 (W.L. TEST) OT/ET = V4LT13/C9NT05=	HI/HU	3.010	.000	-3.000
(Y4LT13)	△	IH85 (W.L. THEORY) OT/ET = V4LT13/A9NT05=	HI/HU	3.010	.000	-3.000

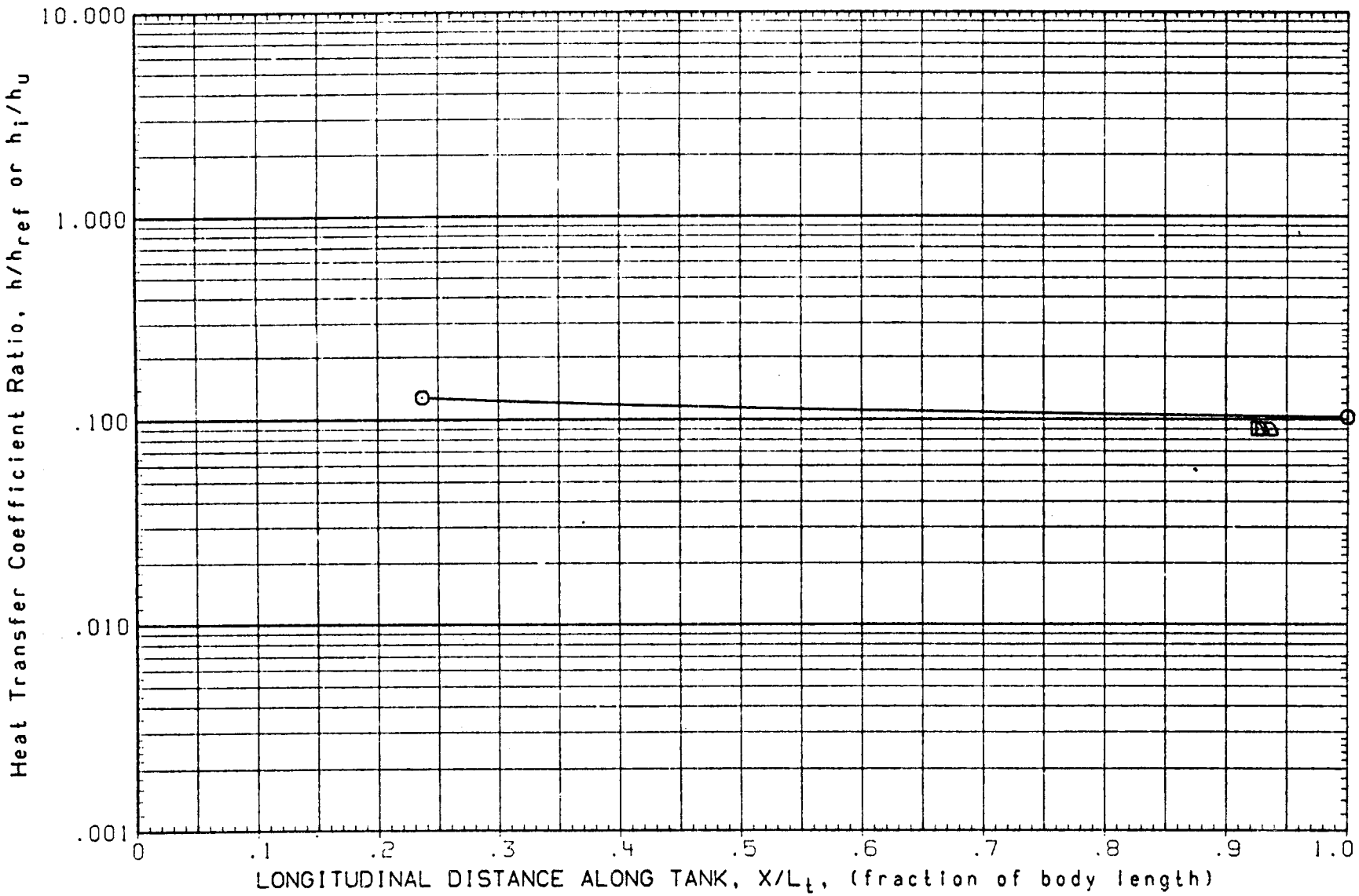

FIG. 4-21 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 250.570

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT13)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-3.000
(X4LT13)	◇	IH85 (W.L. TEST)	OT/ET = V4LT13/C9NT05= HI/HU	3.010	.000	-3.000
(Y4LT13)	△	IH85 (W.L. THEORY)	OT/ET = V4LT13/A9NT05= HI/HU	3.010	.000	-3.000

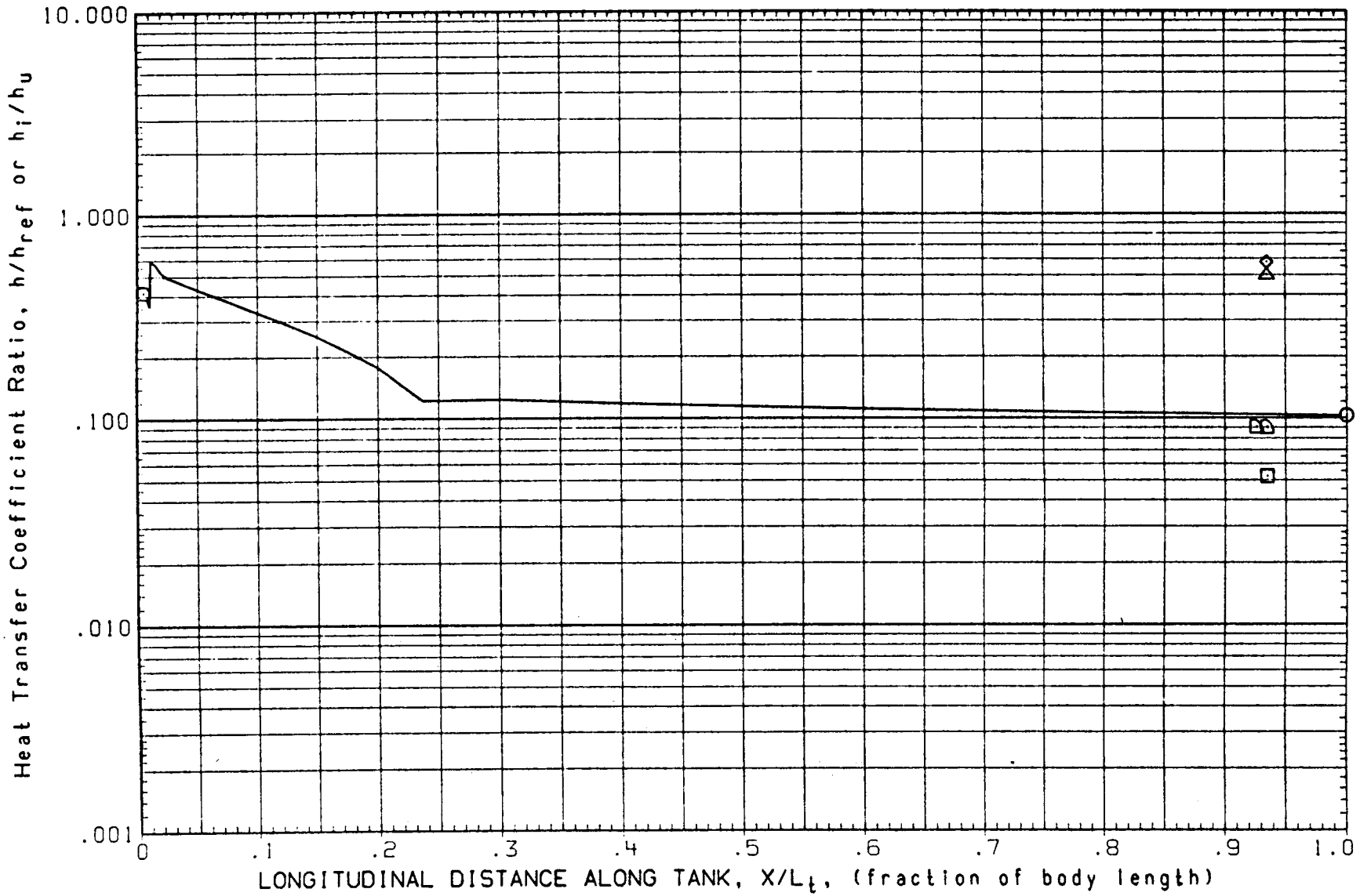

FIG. 4-21 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 258.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	3.010	.000	-3.000
(C9NT05)	⌂	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	3.010	.000	-3.000
(V4LT13)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)	3.010	.000	-3.000
(X4LT13)	◇	IH85 (W.L. TEST) OT/ET = V4LT13/C9NT05= HI/HU	3.010	.000	-3.000
(Y4LT13)	△	IH85 (W.L. THEORY) OT/ET = V4LT13/A9NT05= HI/HU	3.010	.000	-3.000

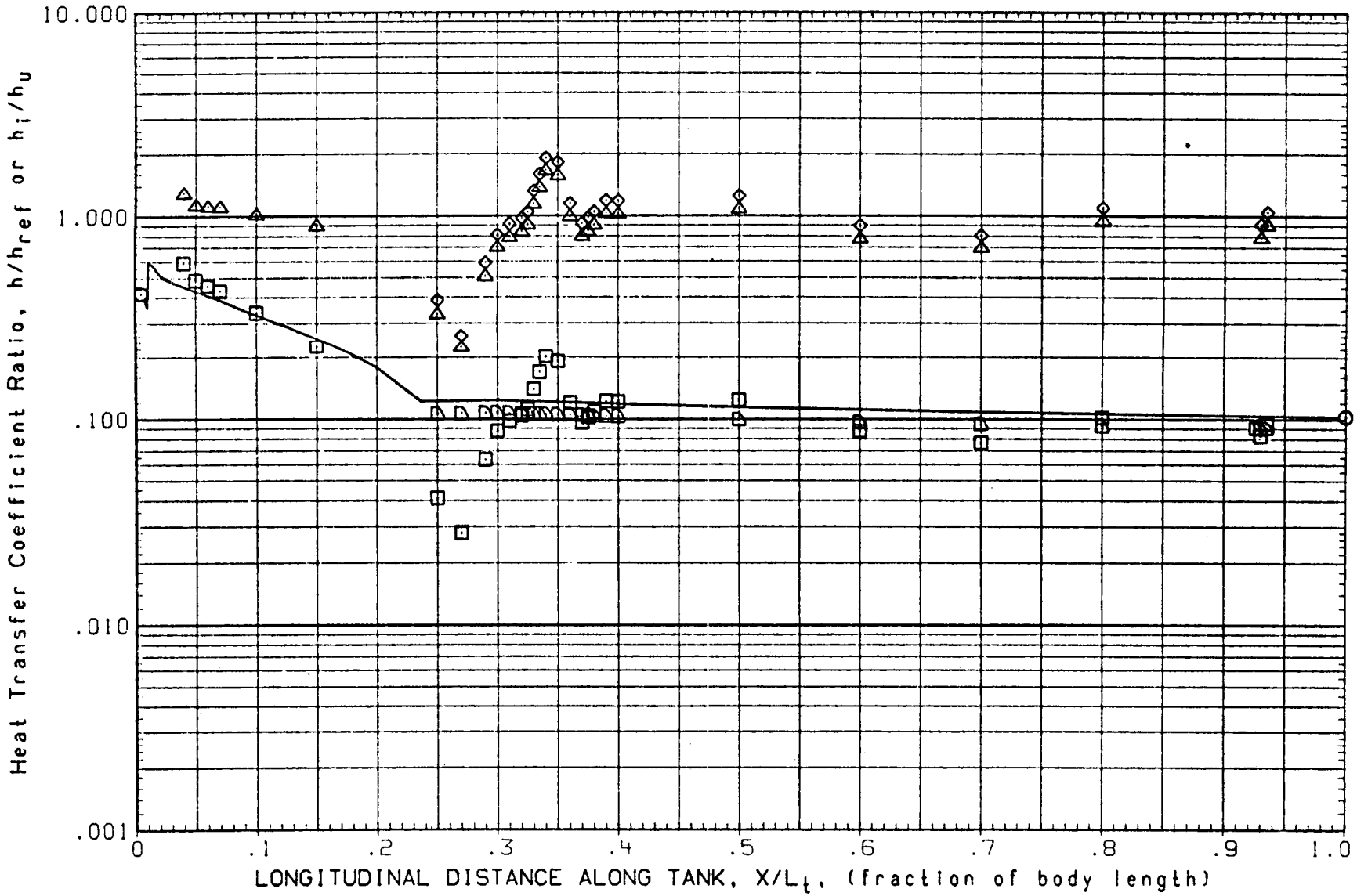

FIG. 4-21 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 270.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT13)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-3.000
(X4LT13)	◇	IH85 (W.L. TEST)	OT/ET = V4LT13/C9NT05= HI/HU	3.010	.000	-3.000
(Y4LT13)	△	IH85 (W.L. THEORY)	OT/ET = V4LT13/A9NT05= HI/HU	3.010	.000	-3.000

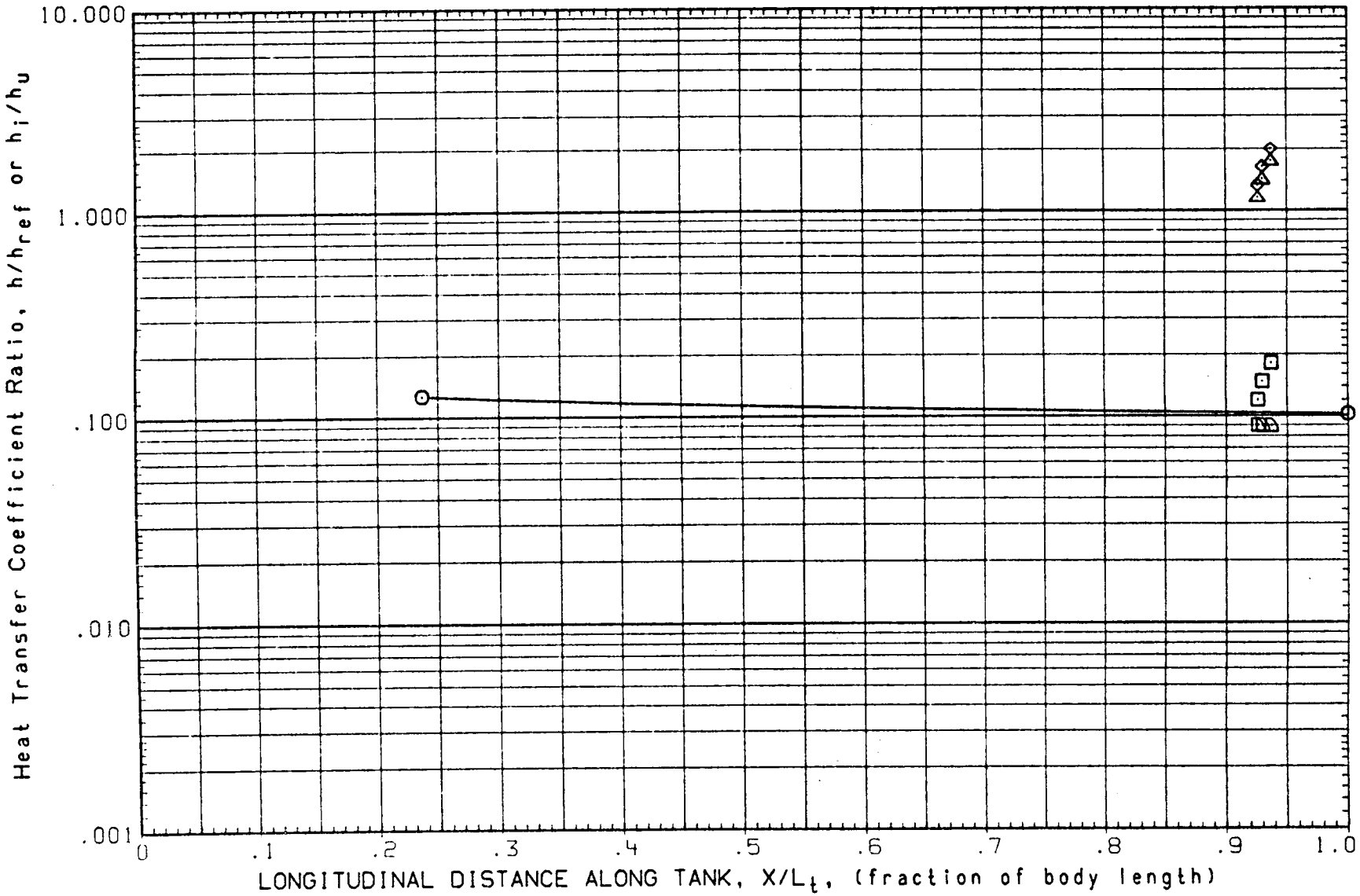

FIG. 4-21 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 289.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	3.010	.000	-3.000
(C9NT05)	◗	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	3.010	.000	-3.000
(V4LT13)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)	3.010	.000	-3.000
(X4LT13)	◇	IH85 (W,L, TEST) OT/ET = V4LT13/C9NT05= HI/HU	3.010	.000	-3.000
(Y4LT13)	△	IH85 (W,L, THEORY) OT/ET = V4LT13/A9NT05= HI/HU	3.010	.000	-3.000

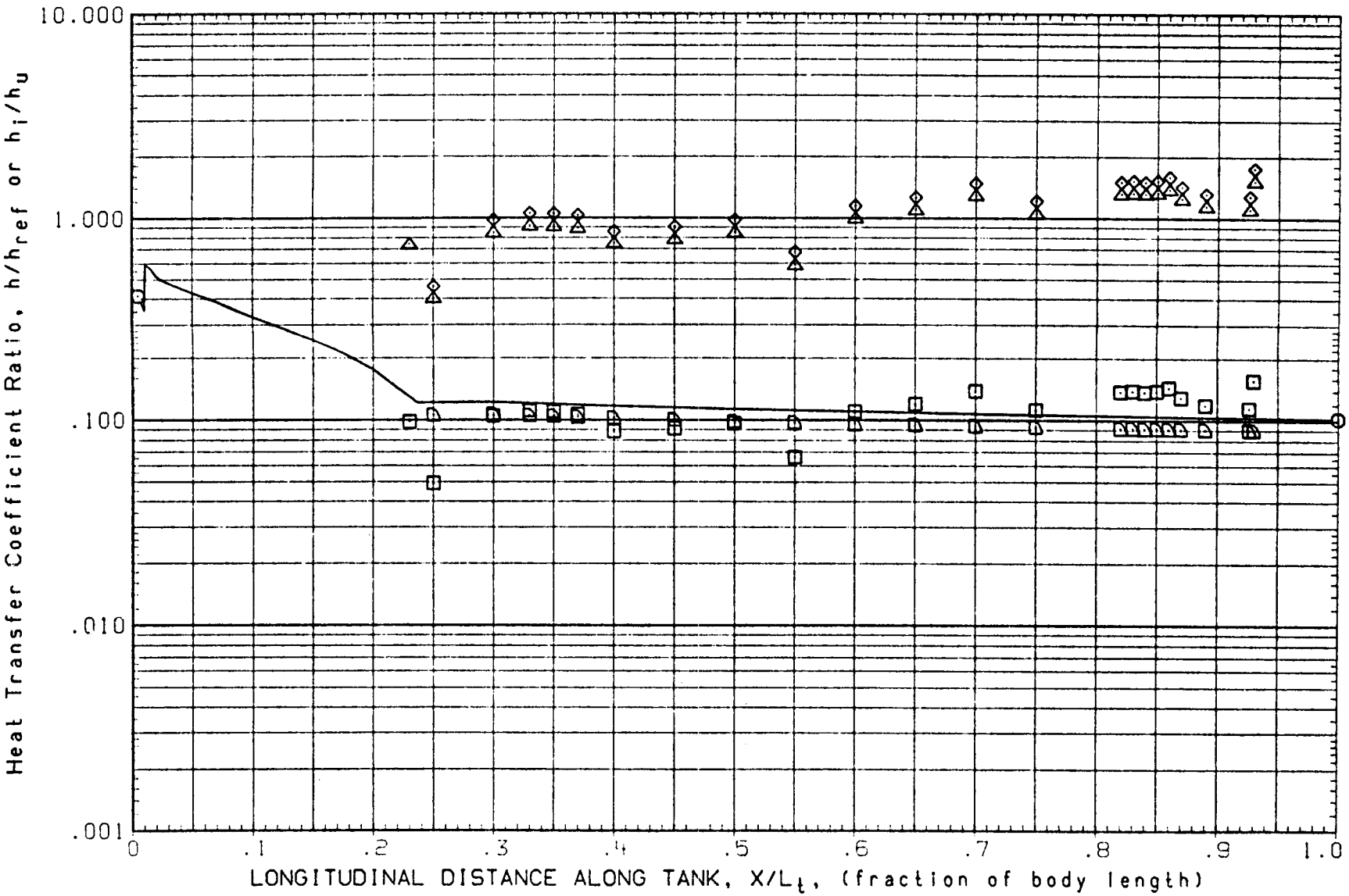

FIG. 4-21 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 292.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	◻	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT13)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-3.000
(X4LT13)	◇	IH85 (W.L. TEST)	OT/ET = V4LT13/C9NT05= HI/HU	3.010	.000	-3.000
(Y4LT13)	△	IH85 (W.L. THEORY)	OT/ET = V4LT13/A9NT05= HI/HU	3.010	.000	-3.000

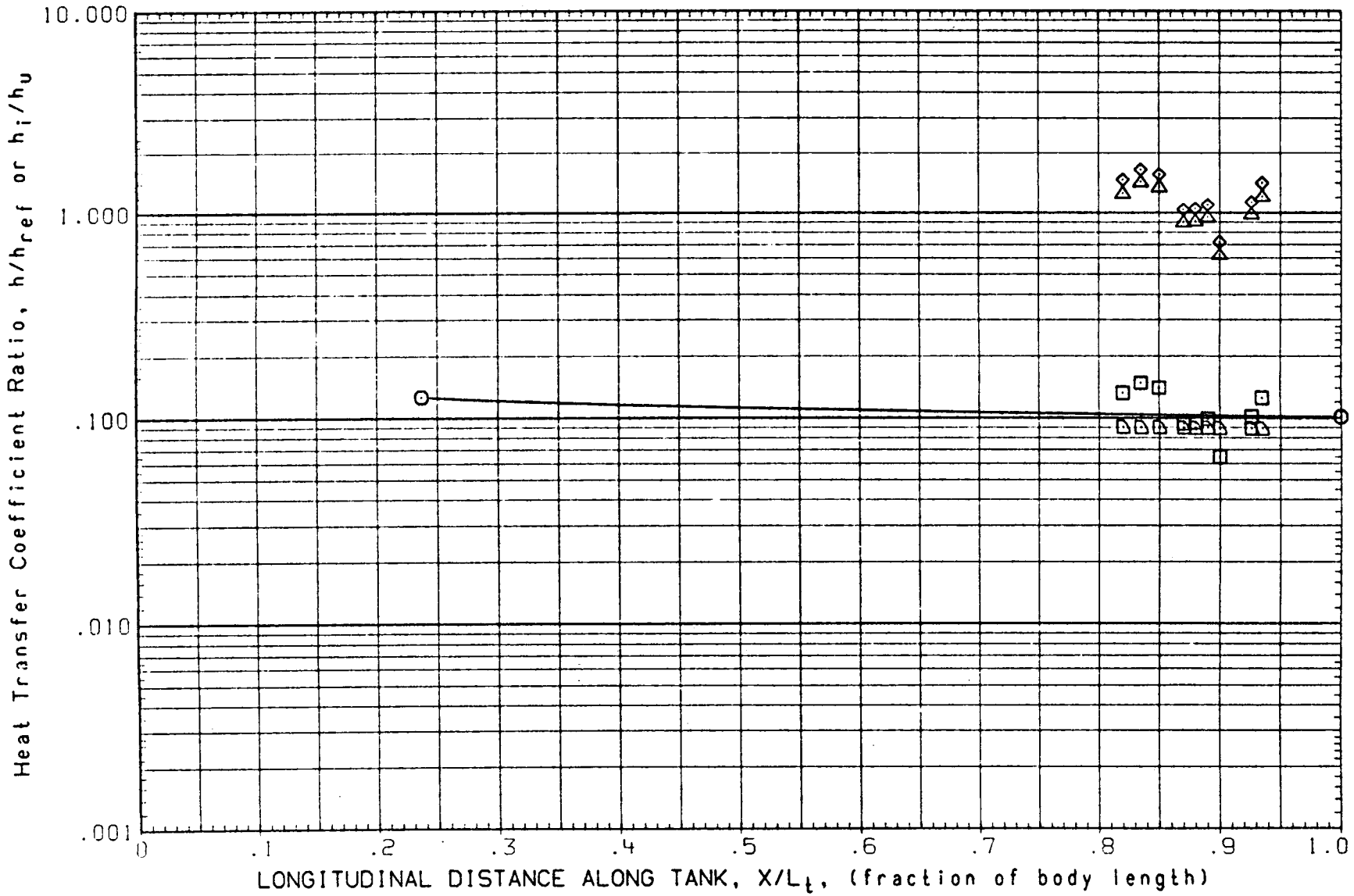

FIG. 4-21 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 301.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT13)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-3.000
(X4LT13)	◇	IH85 (W.L. TEST)	OT/ET = V4LT13/C9NT05= HI/HU	3.010	.000	-3.000
(Y4LT13)	△	IH85 (W.L. THEORY)	OT/ET = V4LT13/A9NT05= HI/HU	3.010	.000	-3.000

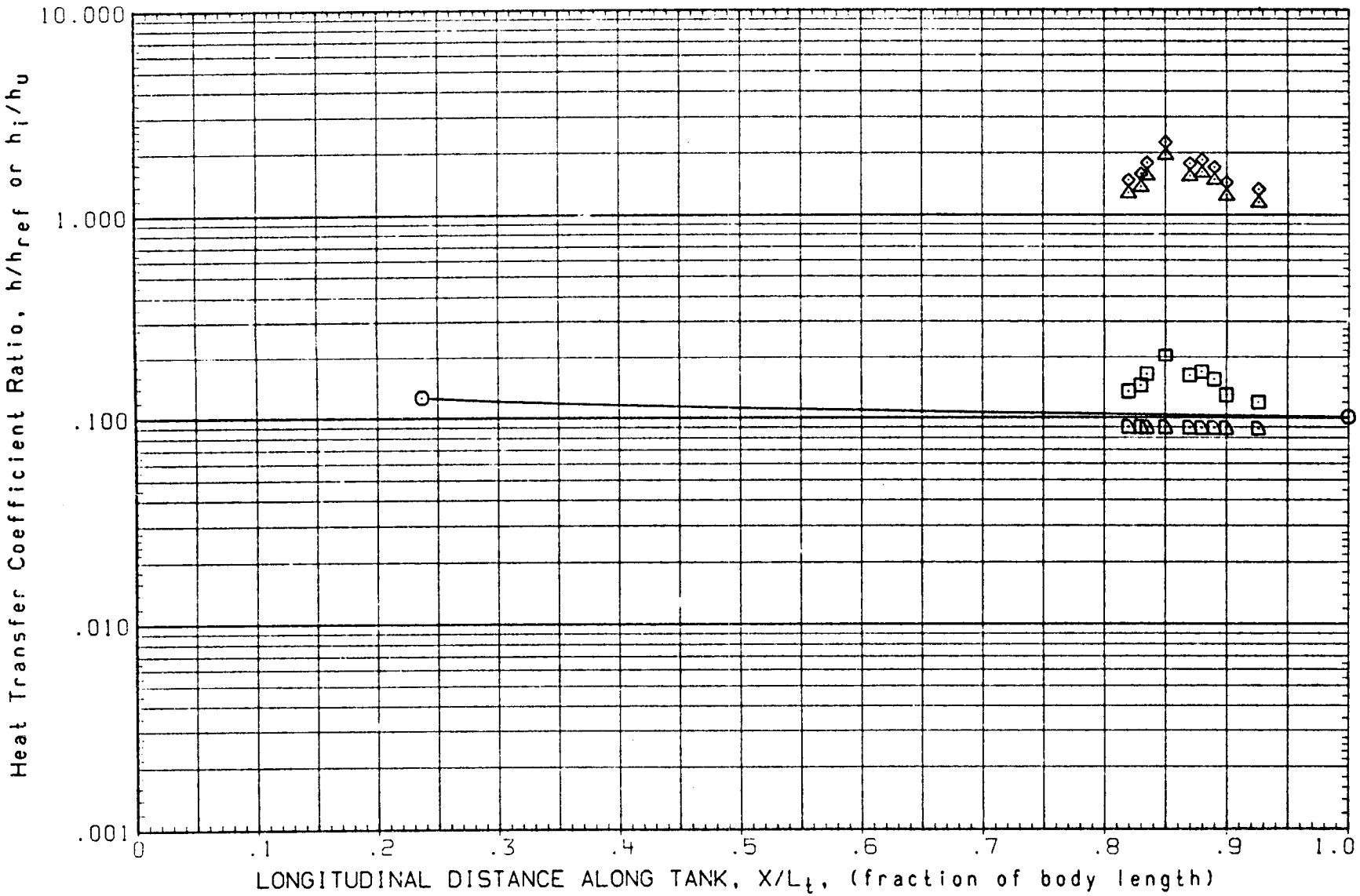

FIG. 4-21 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 305.400

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT13)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-3.000
(X4LT13)	◇	IH85 (W.L. TEST)	OT/ET = V4LT13/C9NT05= HI/HU	3.010	.000	-3.000
(Y4LT13)	△	IH85 (W.L. THEORY)	OT/ET = V4LT13/A9NT05= HI/HU	3.010	.000	-3.000

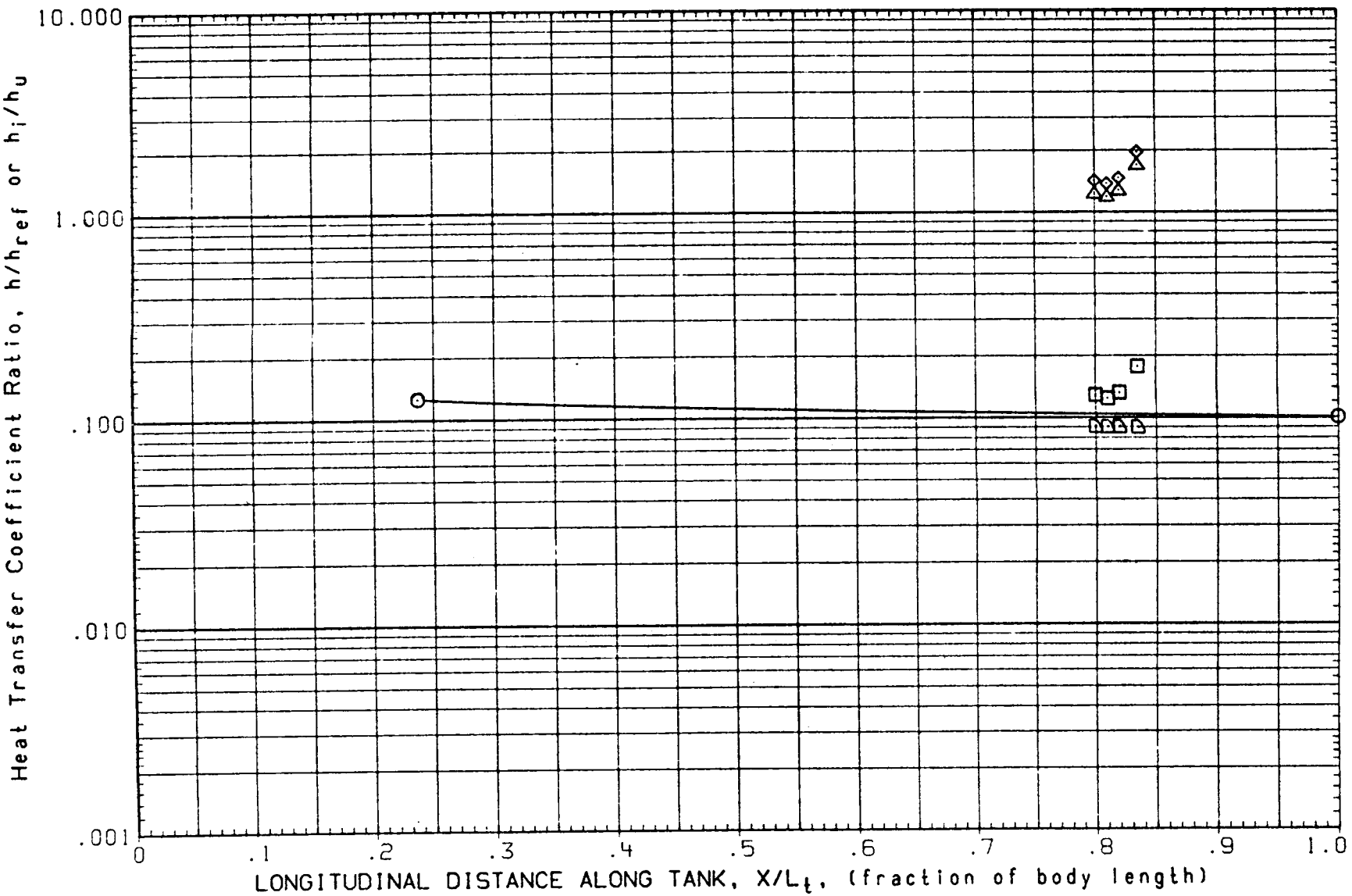

FIG. 4-21 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 309.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT13)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-3.000
(X4LT13)	◇	IH85 (W.L. TEST)	OT/ET = V4LT13/C9NT05= HI/HU	3.010	.000	-3.000
(Y4LT13)	△	IH85 (W.L. THEORY)	OT/ET = V4LT13/A9NT05= HI/HU	3.010	.000	-3.000

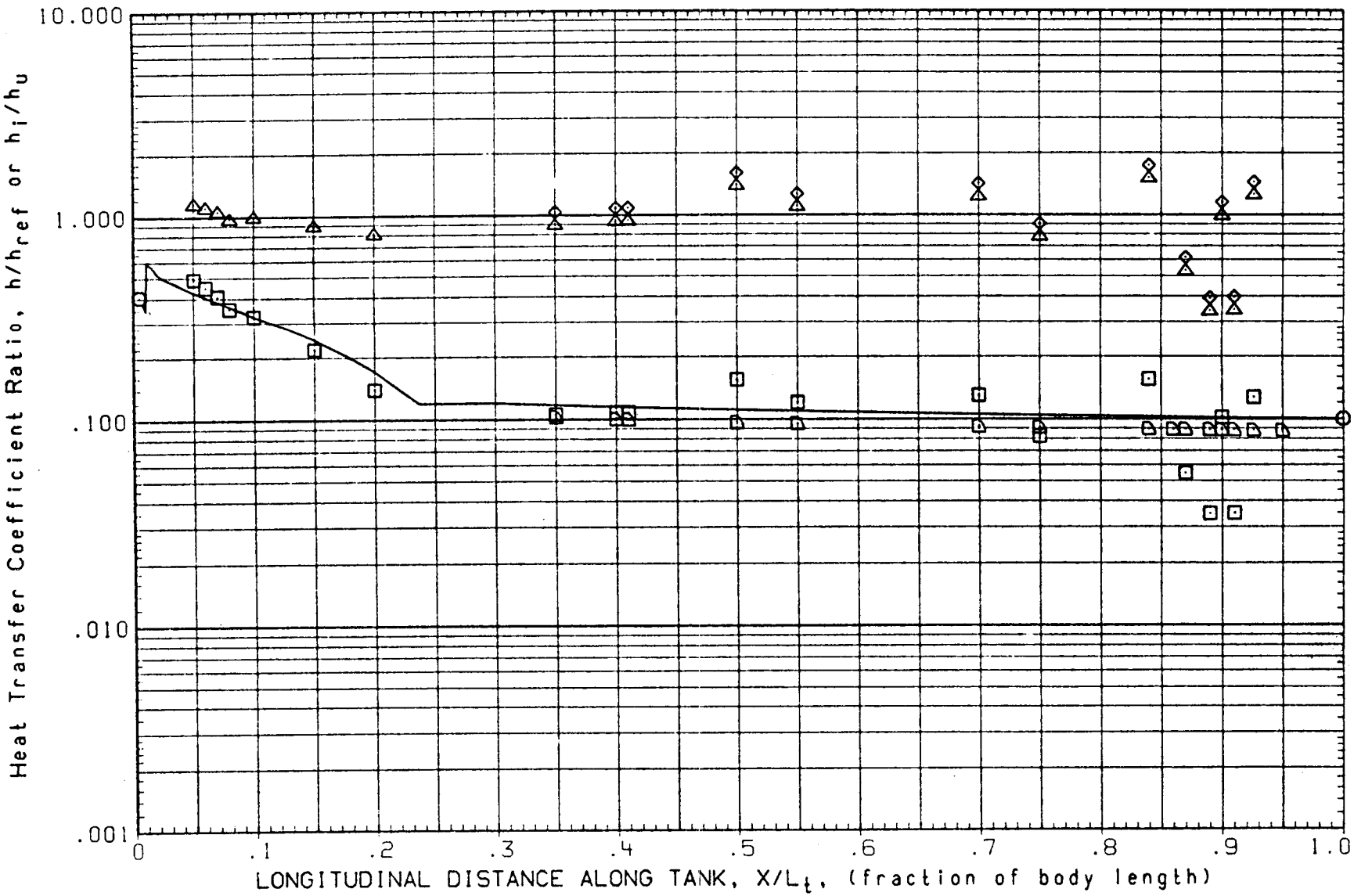

FIG. 4-21 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 315.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT13)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-3.000
(X4LT13)	◇	IH85 (W.L. TEST) OT/ET = V4LT13/C9NT05= HI/HU		3.010	.000	-3.000
(Y4LT13)	△	IH85 (W.L. THEORY) OT/ET = V4LT13/A9NT05= HI/HU		3.010	.000	-3.000

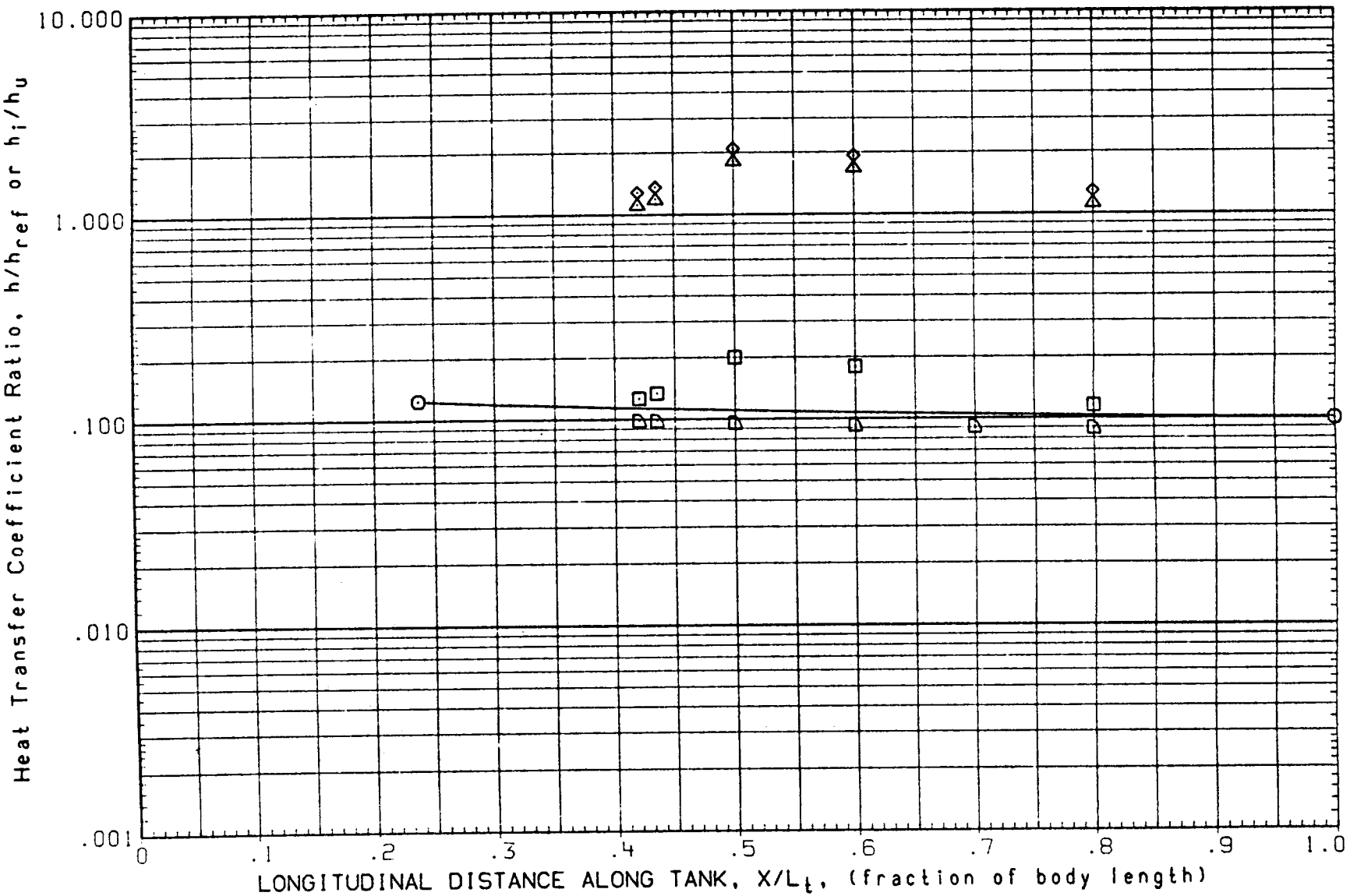

FIG. 4-21 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 322.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S., TURBULENT HU/HREF	3.010	.000	-3.000
(C9NT05)	⬠	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	3.010	.000	-3.000
(V4LT13)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)	3.010	.000	-3.000
(X4LT13)	◇	IH85 (W.L. TEST) OT/ET = V4LT13/C9NT05= HI/HU	3.010	.000	-3.000
(Y4LT13)	△	IH85 (W.L. THEORY) OT/ET = V4LT13/A9NT05= HI/HU	3.010	.000	-3.000

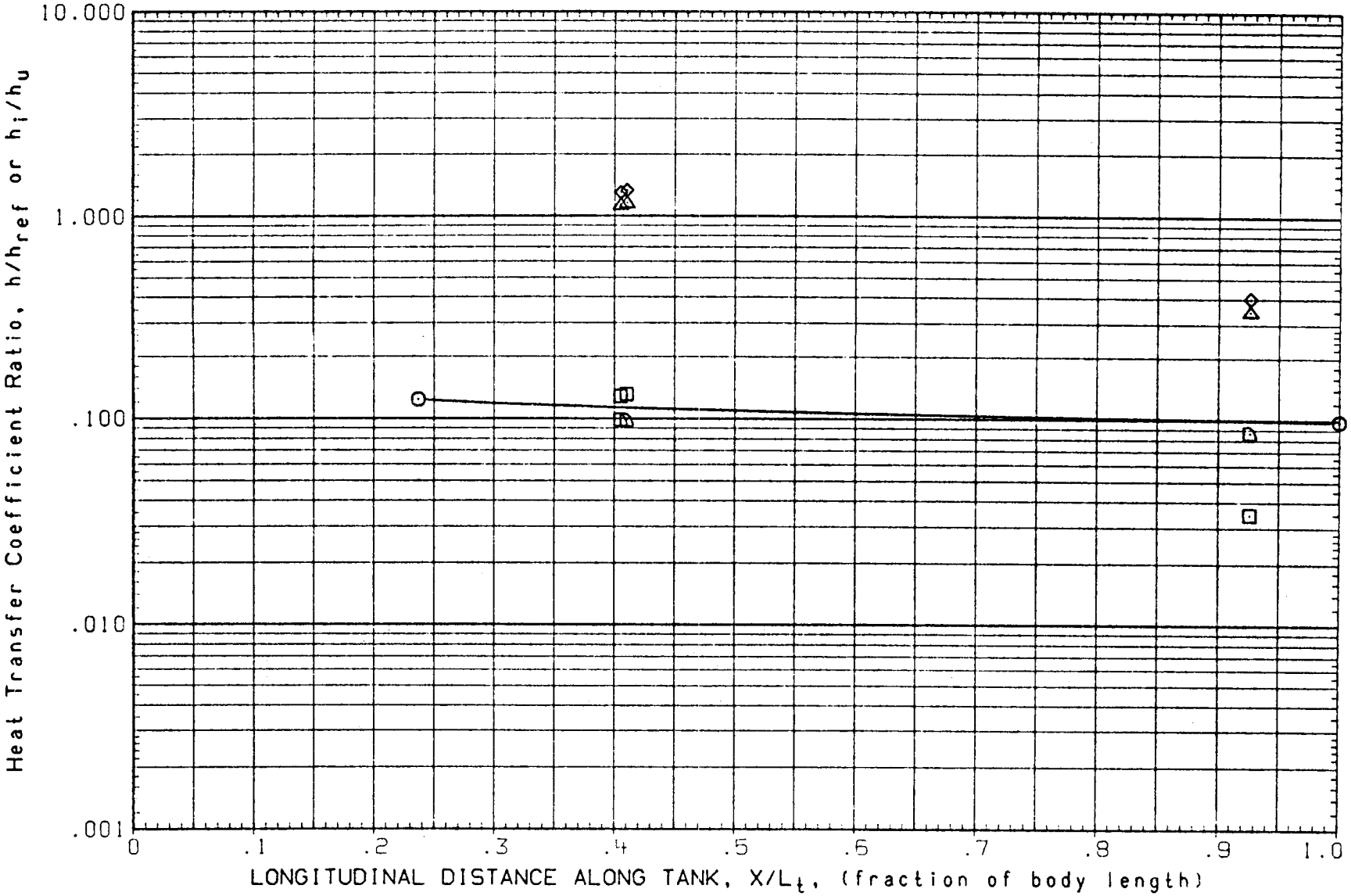

FIG. 4-21 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 324.450

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT13)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-3.000
(X4LT13)	◇	IH85 (W.L. TEST)	OT/ET = V4LT13/C9NT05= HI/HU	3.010	.000	-3.000
(Y4LT13)	△	IH85 (W.L. THEORY)	OT/ET = V4LT13/A9NT05= HI/HU	3.010	.000	-3.000

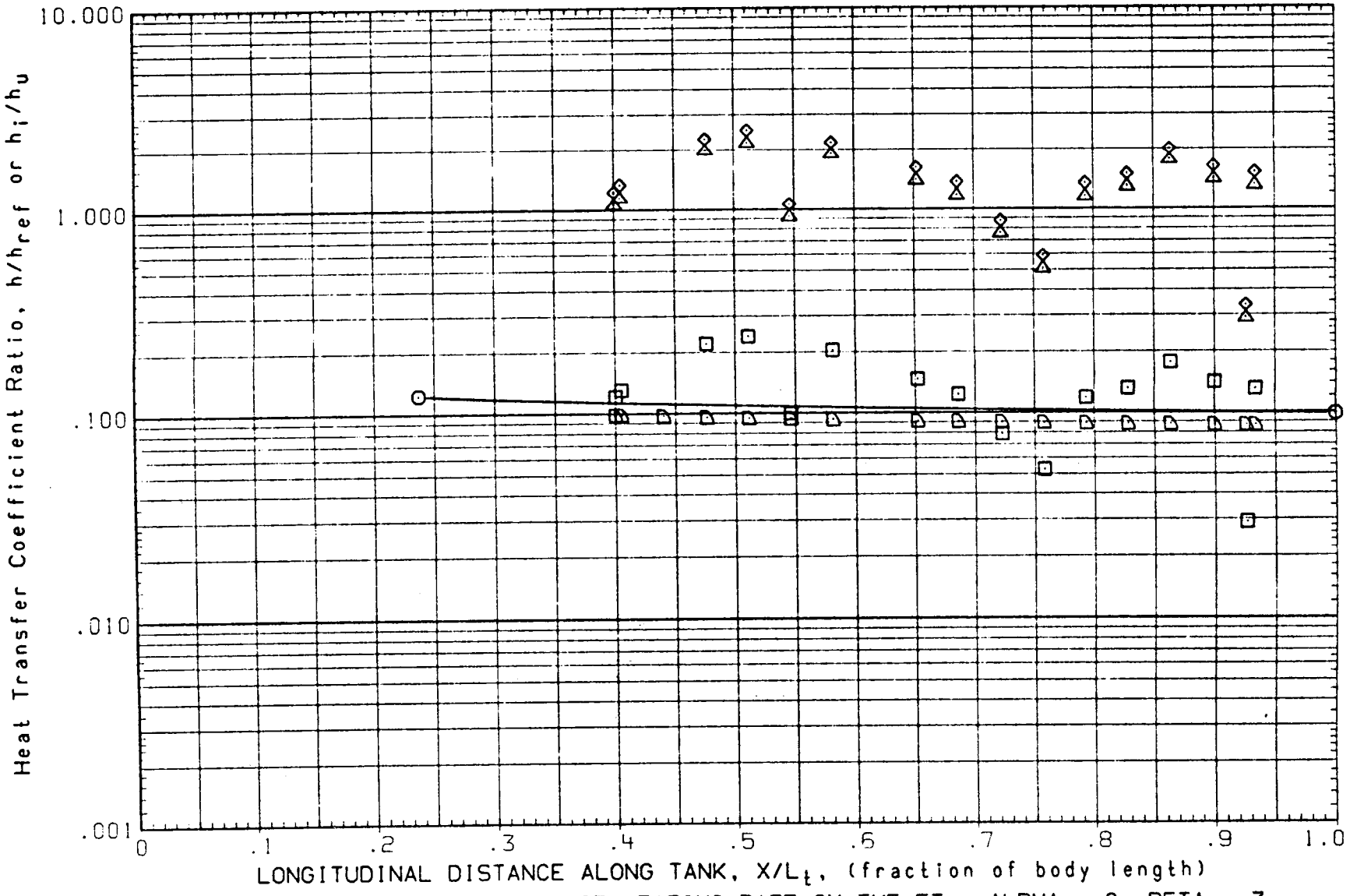

FIG. 4-21 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 326.850

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT13)	□	IH95, AEDC V41A-W5, CONFIGURATION 0 (T:		3.010	.000	-3.000
(X4LT13)	◇	IH85 (W.L. TEST)	OT/ET = V4LT13/C9NT05= HI/HU	3.010	.000	-3.000
(Y4LT13)	△	IH85 (W.L. THEORY)	OT/ET = V4LT13/A9NT05= HI/HU	3.010	.000	-3.000

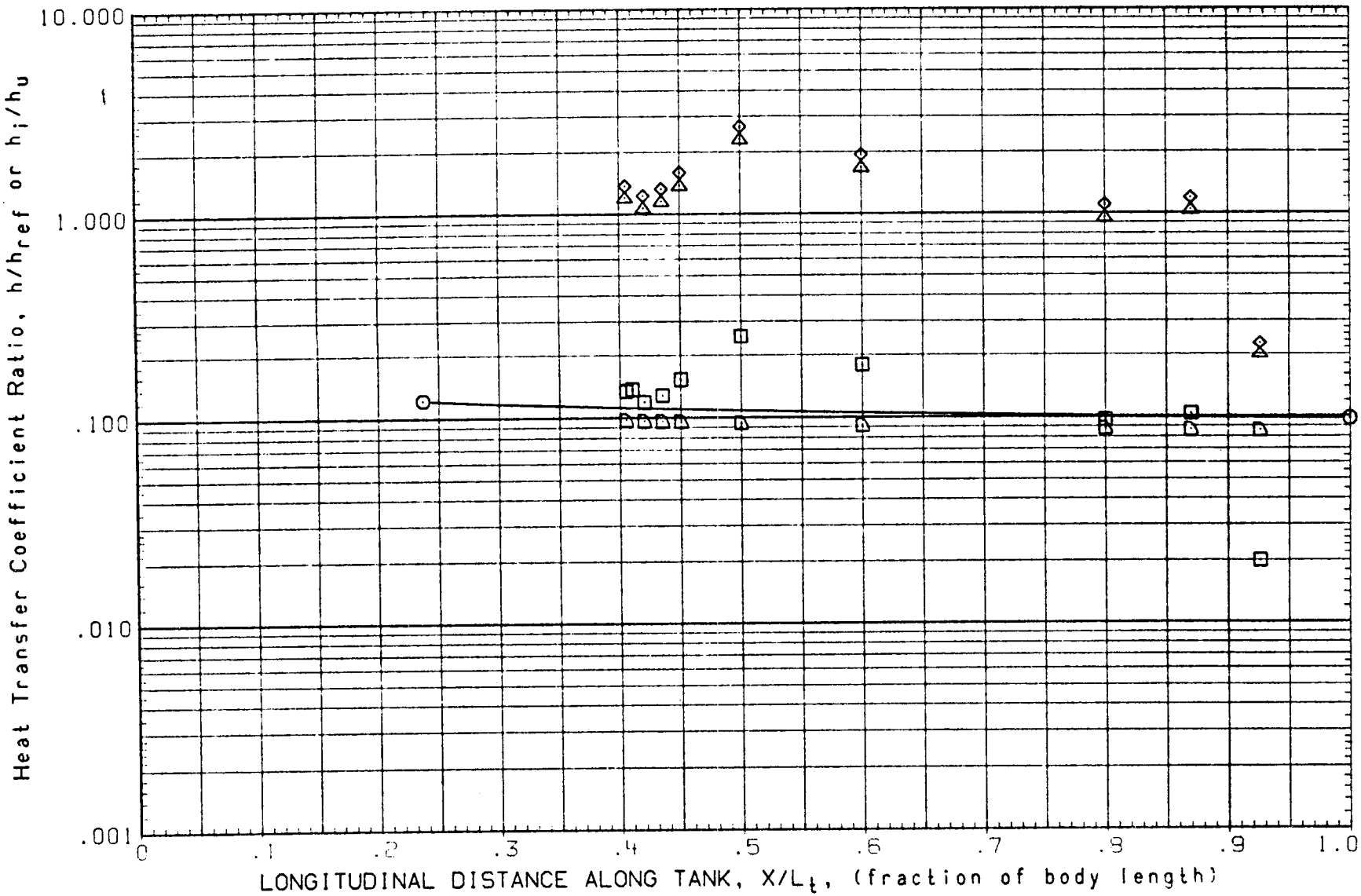

FIG. 4-21 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 330.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⌒	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT13)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-3.000
(X4LT13)	◇	IH85 (W.L. TEST)	OT/ET = V4LT13/C9NT05= HI/HU	3.010	.000	-3.000
(Y4LT13)	△	IH85 (W.L. THEORY)	OT/ET = V4LT13/A9NT05= HI/HU	3.010	.000	-3.000

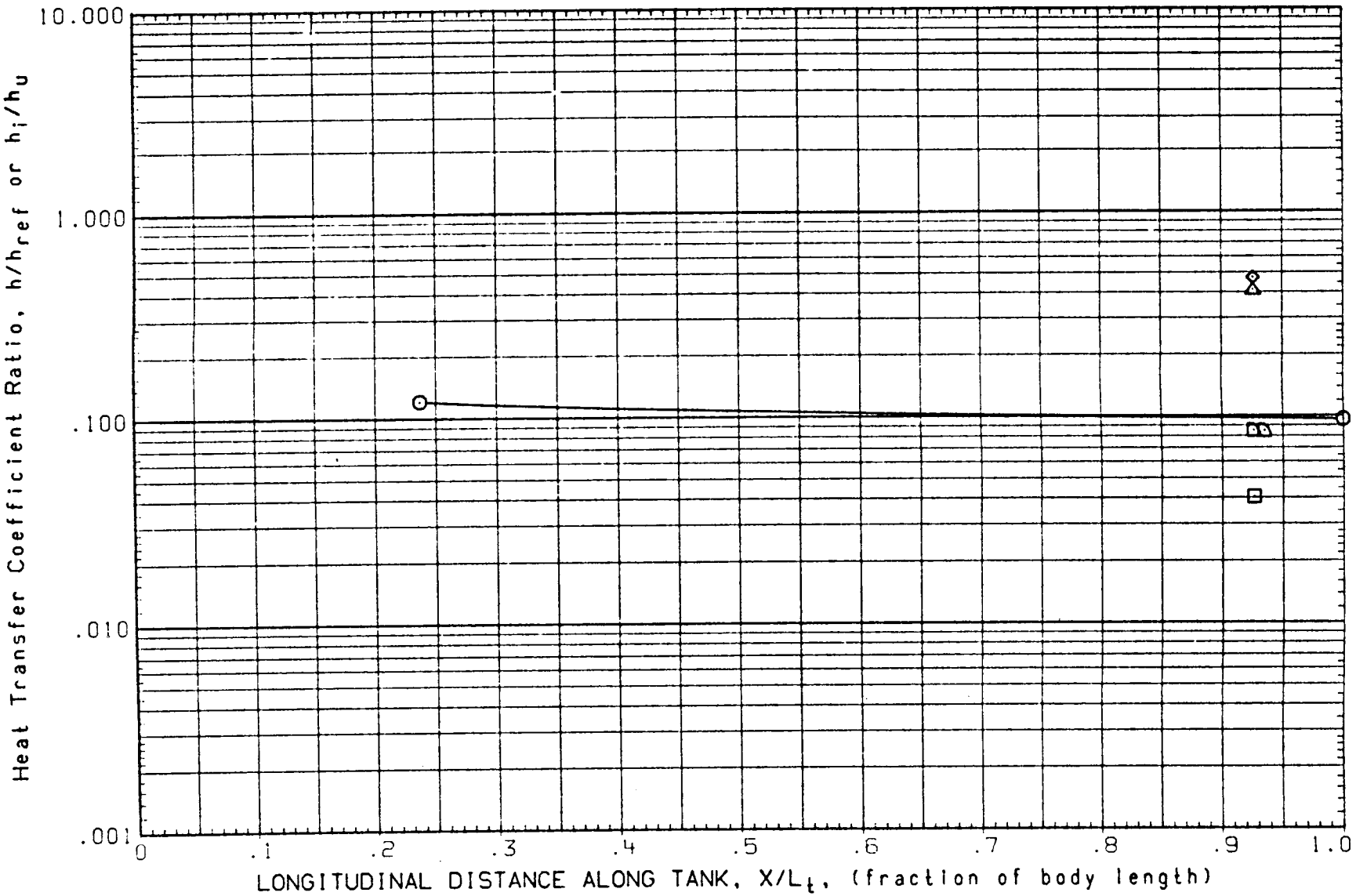

FIG. 4-21 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 334.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT13)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-3.000
(X4LT13)	◇	IH85 (W.L. TEST)	OT/ET = V4LT13/C9NT05= HI/HU	3.010	.000	-3.000
(Y4LT13)	△	IH85 (W.L. THEORY)	OT/ET = V4LT13/A9NT05= HI/HU	3.010	.000	-3.000

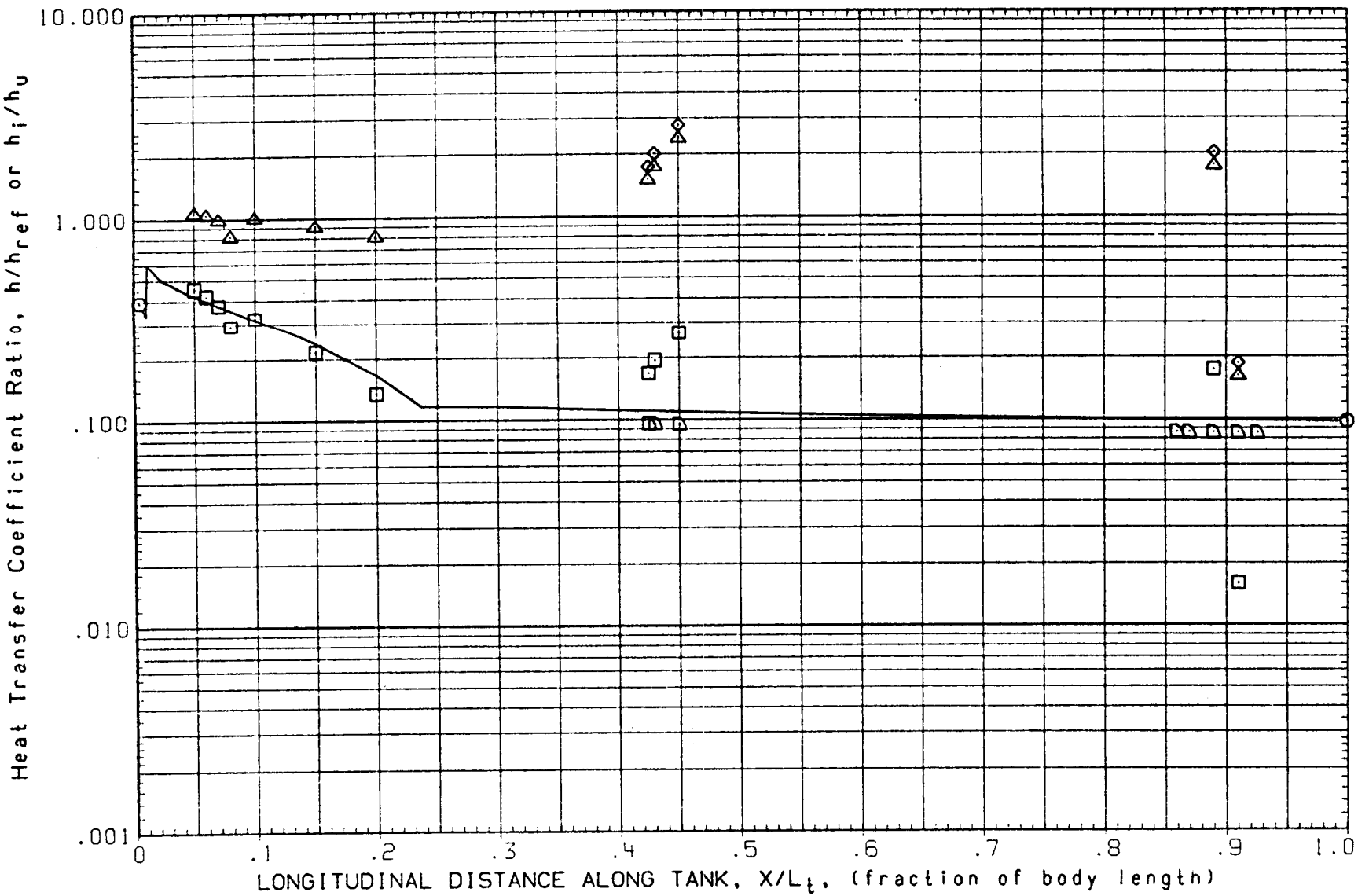

FIG. 4-21 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 337.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT13)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-3.000
(X4LT13)	◇	IH85 (W.L. TEST) OT/ET = V4LT13/C9NT05=	HI/HU	3.010	.000	-3.000
(Y4LT13)	△	IH85 (W.L. THEORY) OT/ET = V4LT13/A9NT05=	HI/HU	3.010	.000	-3.000

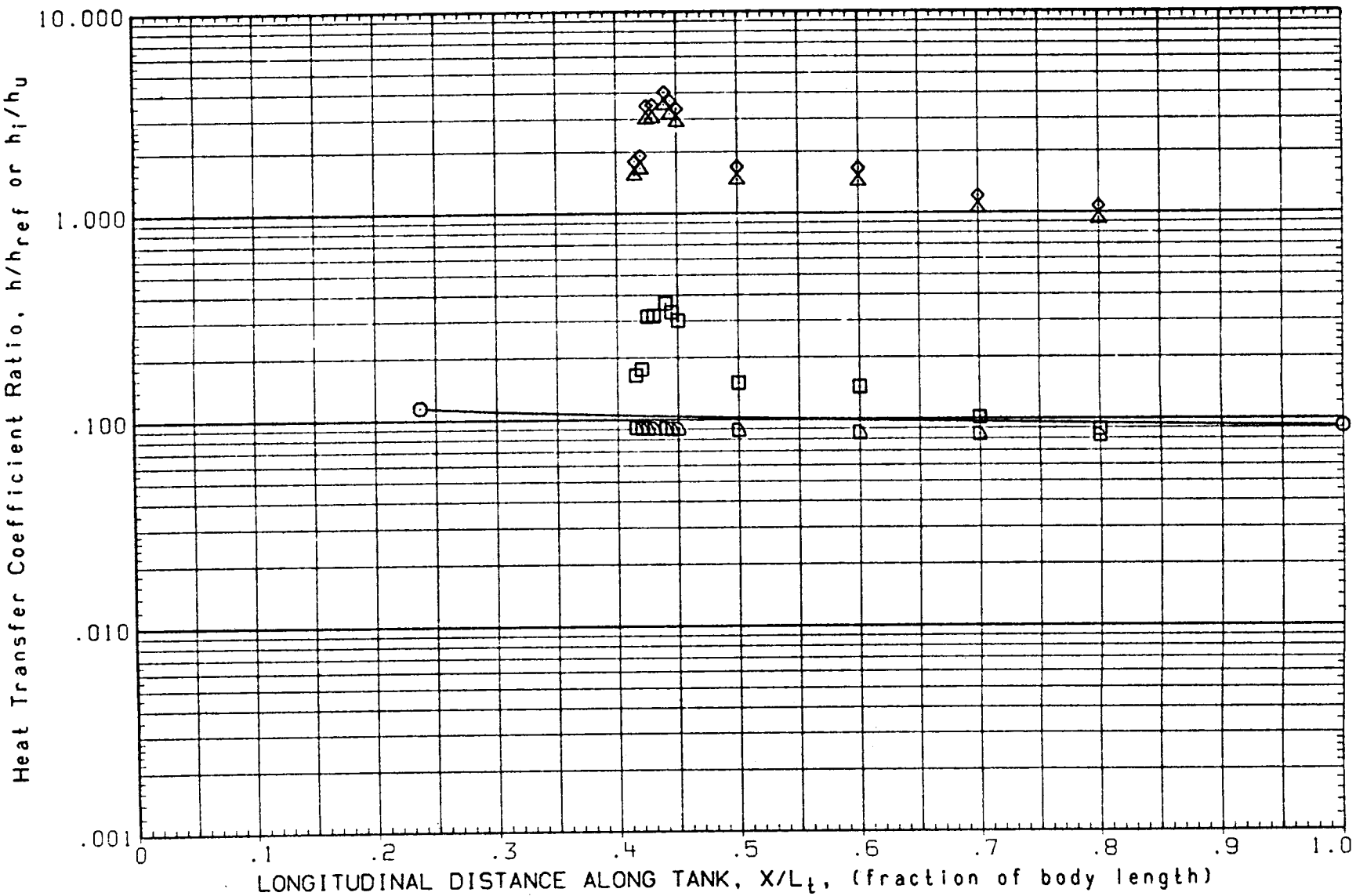

FIG. 4-21 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 343.120

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT13)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-3.000
(X4LT13)	◇	IH85 (W.L, TEST) OT/ET = V4LT13/C9NT05=	HI/HU	3.010	.000	-3.000
(Y4LT13)	△	IH85 (W.L, THEORY) OT/ET = V4LT13/A9NT05=	HI/HU	3.010	.000	-3.000

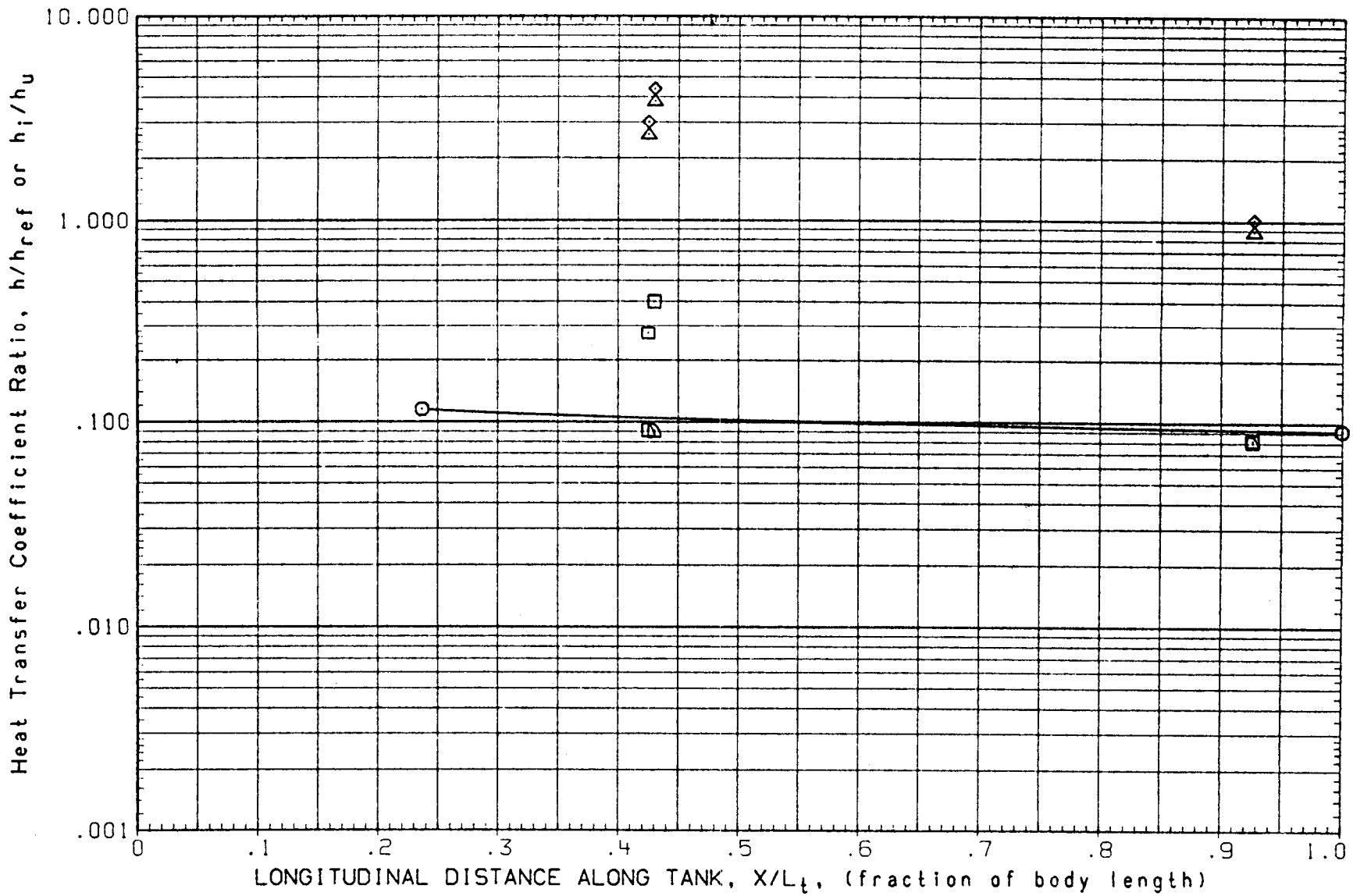

FIG. 4-21 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 345.560

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT13)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-3.000
(X4LT13)	◇	IH85 (W.L. TEST)	OT/ET = V4LT13/C9NT05= HI/HU	3.010	.000	-3.000
(Y4LT13)	△	IH85 (W.L. THEORY)	OT/ET = V4LT13/A9NT05= HI/HU	3.010	.000	-3.000

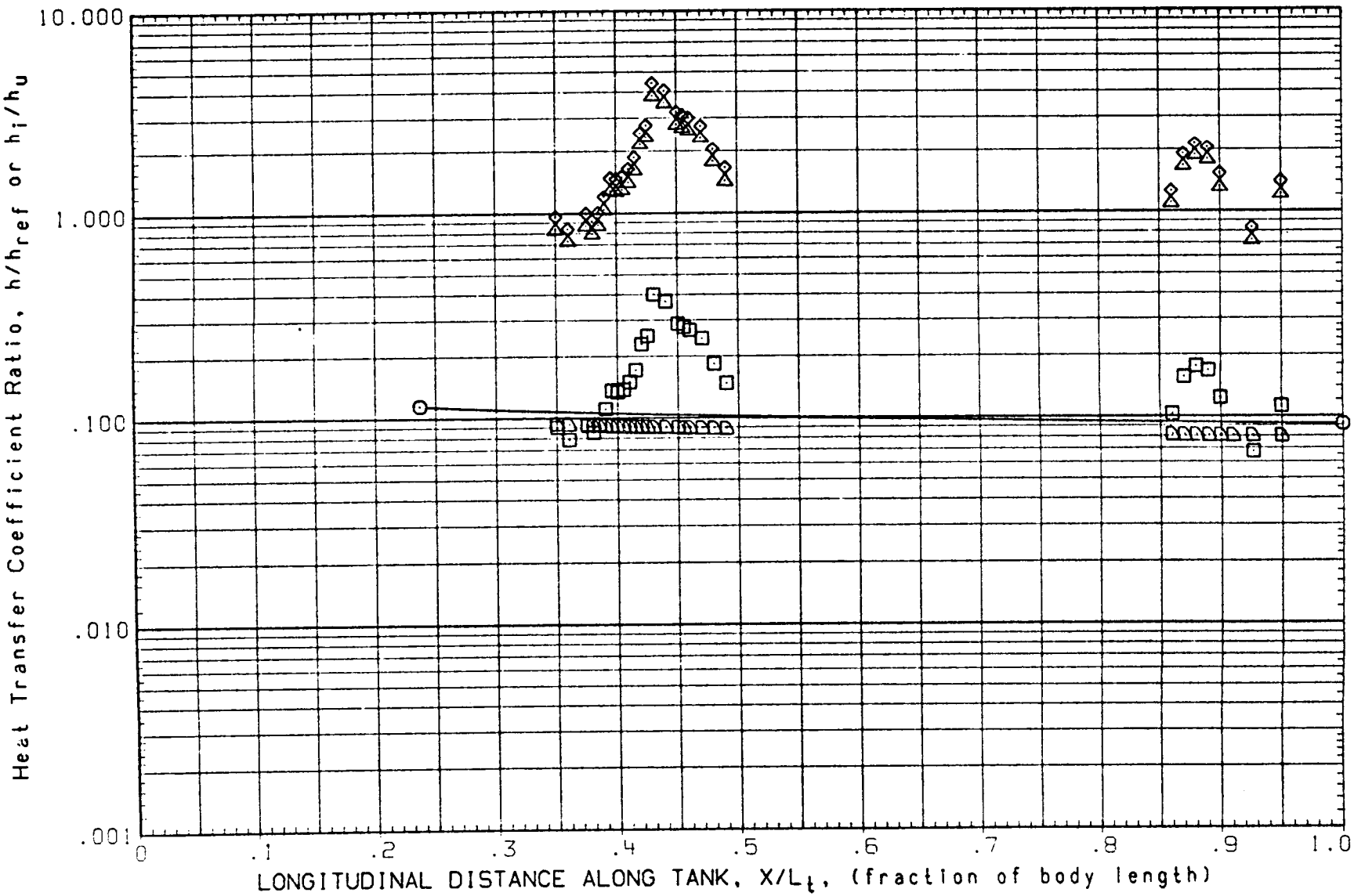

FIG. 4-21 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 348.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	3.010	.000	-3.000
(C9NT05)	⌂	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	3.010	.000	-3.000
(V4LT13)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)	3.010	.000	-3.000
(X4LT13)	◇	IH85 (W.L. TEST) OT/ET = V4LT13/C9NT05= HI/HU	3.010	.000	-3.000
(Y4LT13)	△	IH85 (W.L. THEORY) OT/ET = V4LT13/A9NT05= HI/HU	3.010	.000	-3.000

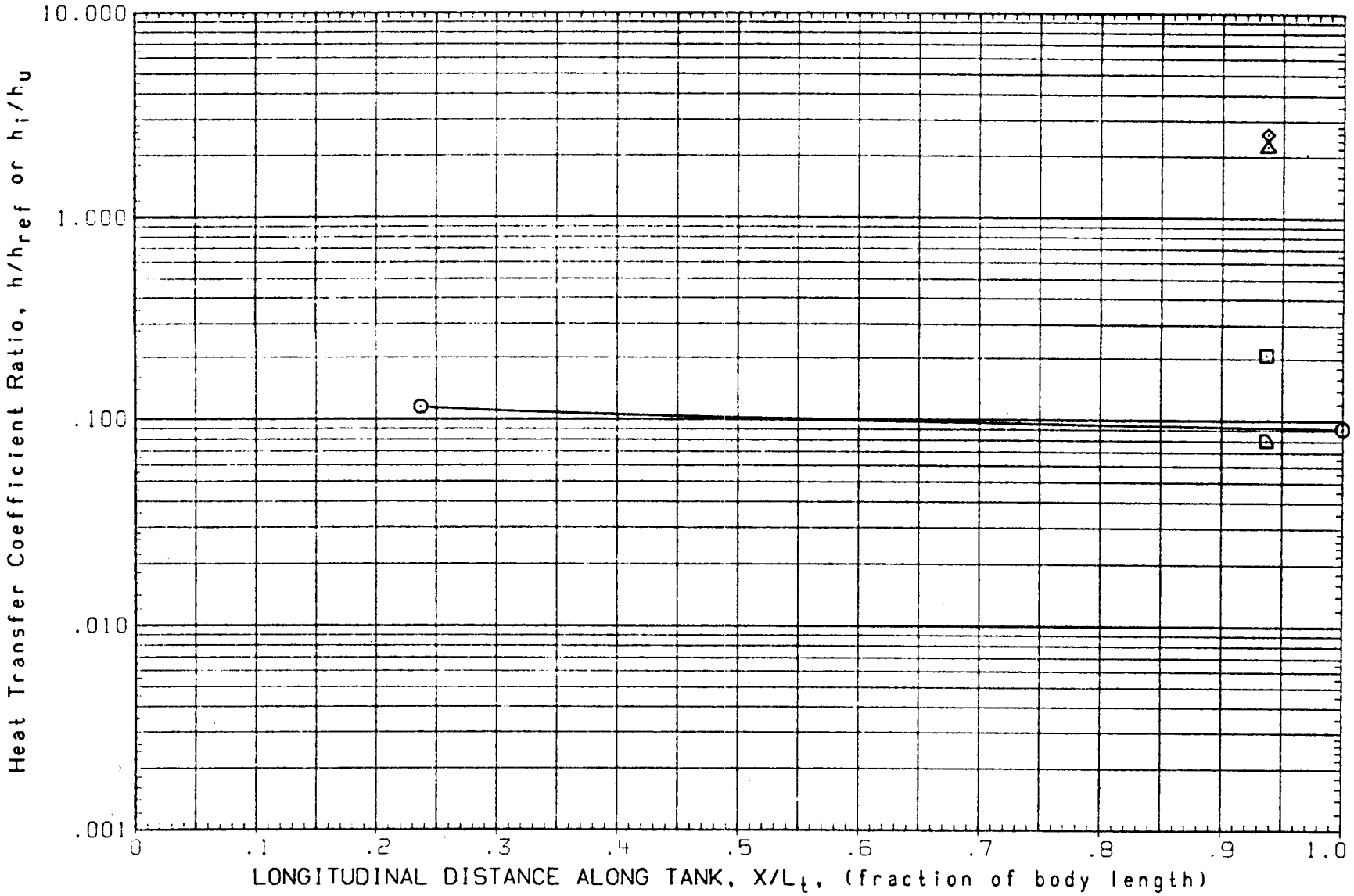

FIG. 4-21 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 352.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⊏⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	-3.000
(V4LT13)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	-3.000
(X4LT13)	◇	IH85 (W.L. TEST) OT/ET = V4LT13/C9NT05= HI/HU		3.010	.000	-3.000
(Y4LT13)	△	IH85 (W.L. THEORY) OT/ET = V4LT13/A9NT05= HI/HU		3.010	.000	-3.000

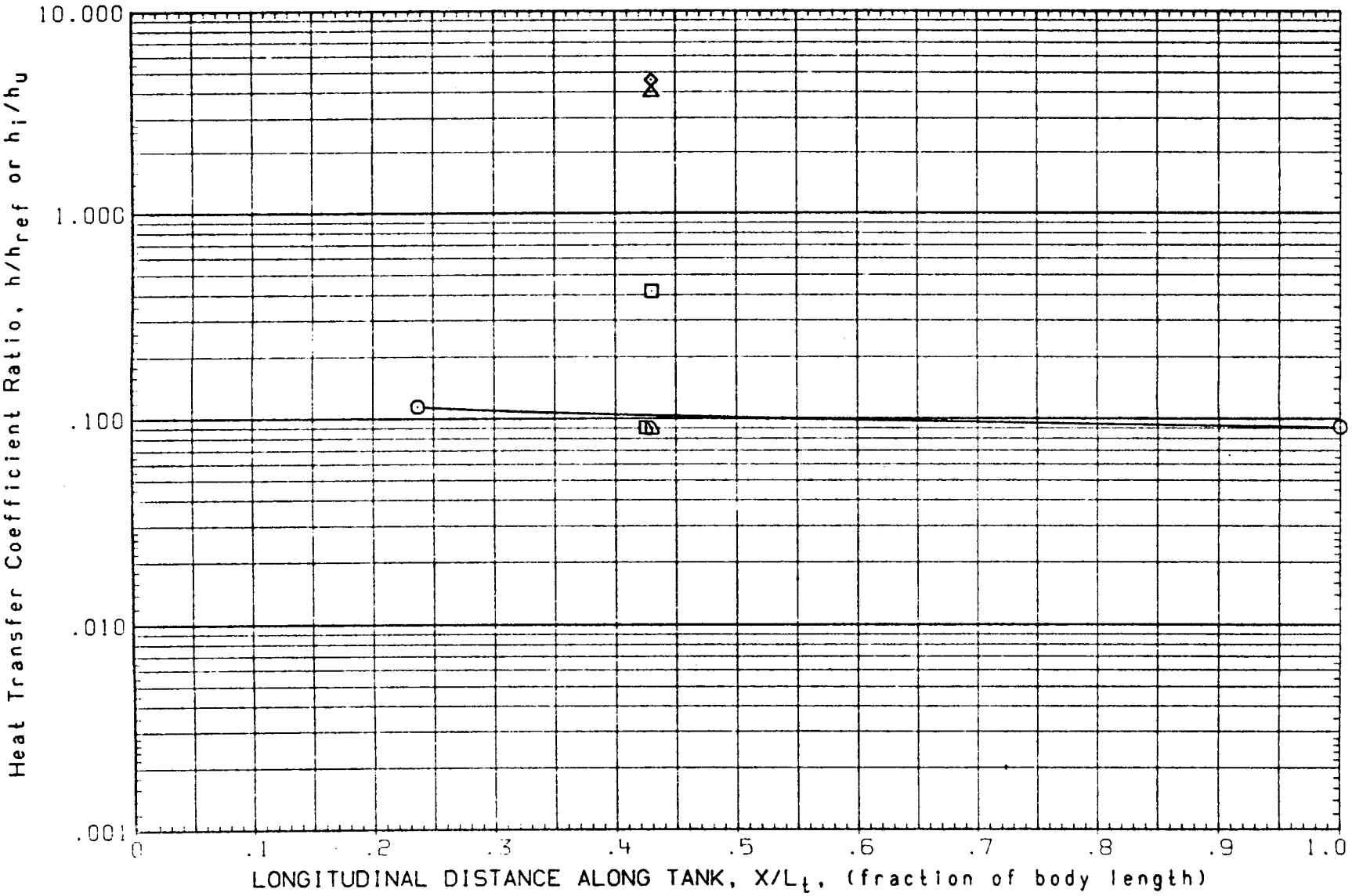

FIG. 4-21 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 354.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⬠	DATA NOT AVAILABLE		3.010	.000	-3.000
(V4LT13)	□	DATA NOT AVAILABLE		3.010	.000	-3.000
(X4LT13)	◇	DATA NOT AVAILABLE		3.010	.000	-3.000
(Y4LT13)	△	DATA NOT AVAILABLE		3.010	.000	-3.000

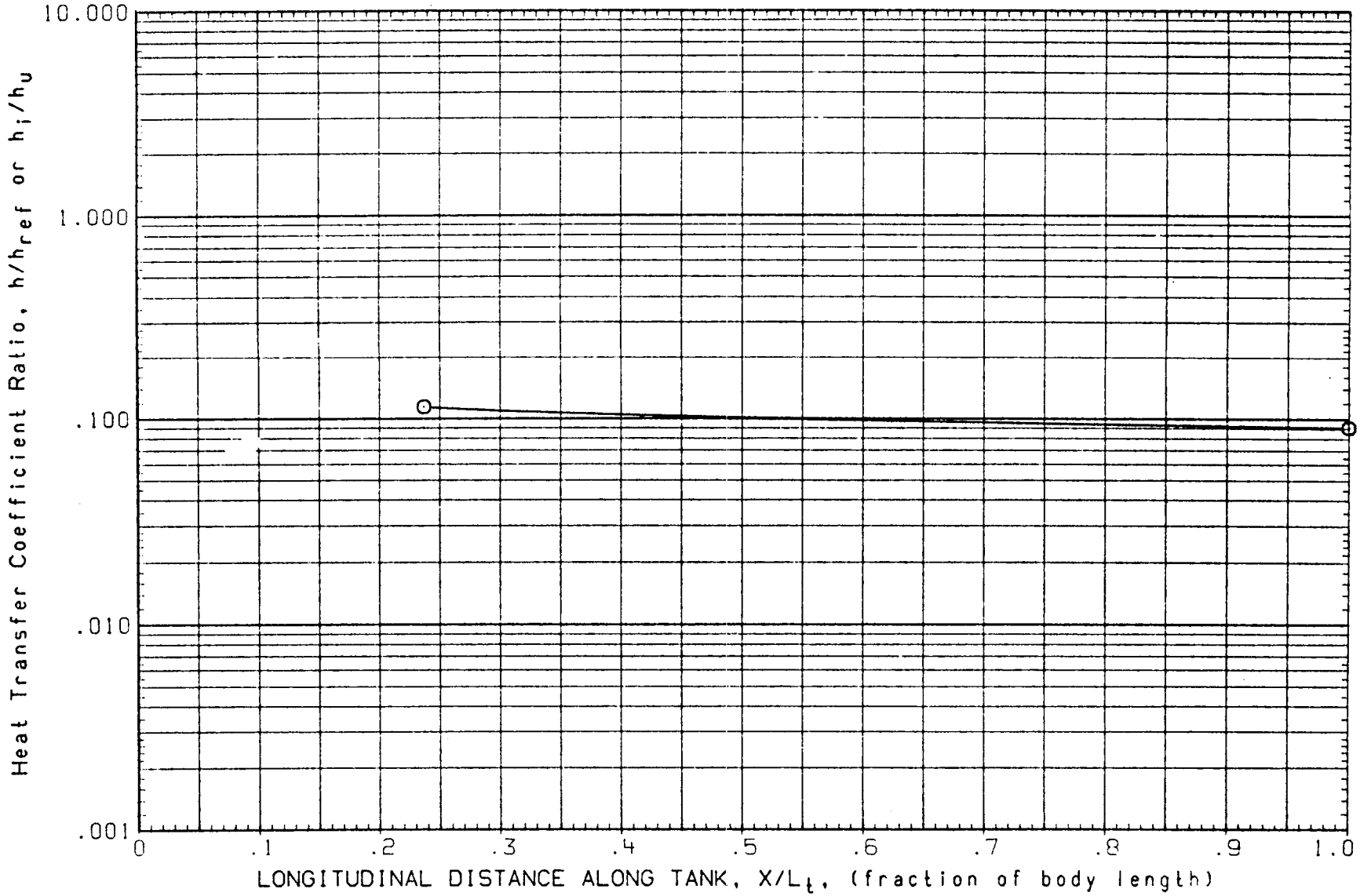

FIG. 4-21 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 355.160

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	-3.000
(C9NT05)	⬠	DATA NOT AVAILABLE		3.010	.000	-3.000
(Y4LT13)	□	DATA NOT AVAILABLE		3.010	.000	-3.000
(X4LT13)	◇	DATA NOT AVAILABLE		3.010	.000	-3.000
(Y4LT13)	△	DATA NOT AVAILABLE		3.010	.000	-3.000

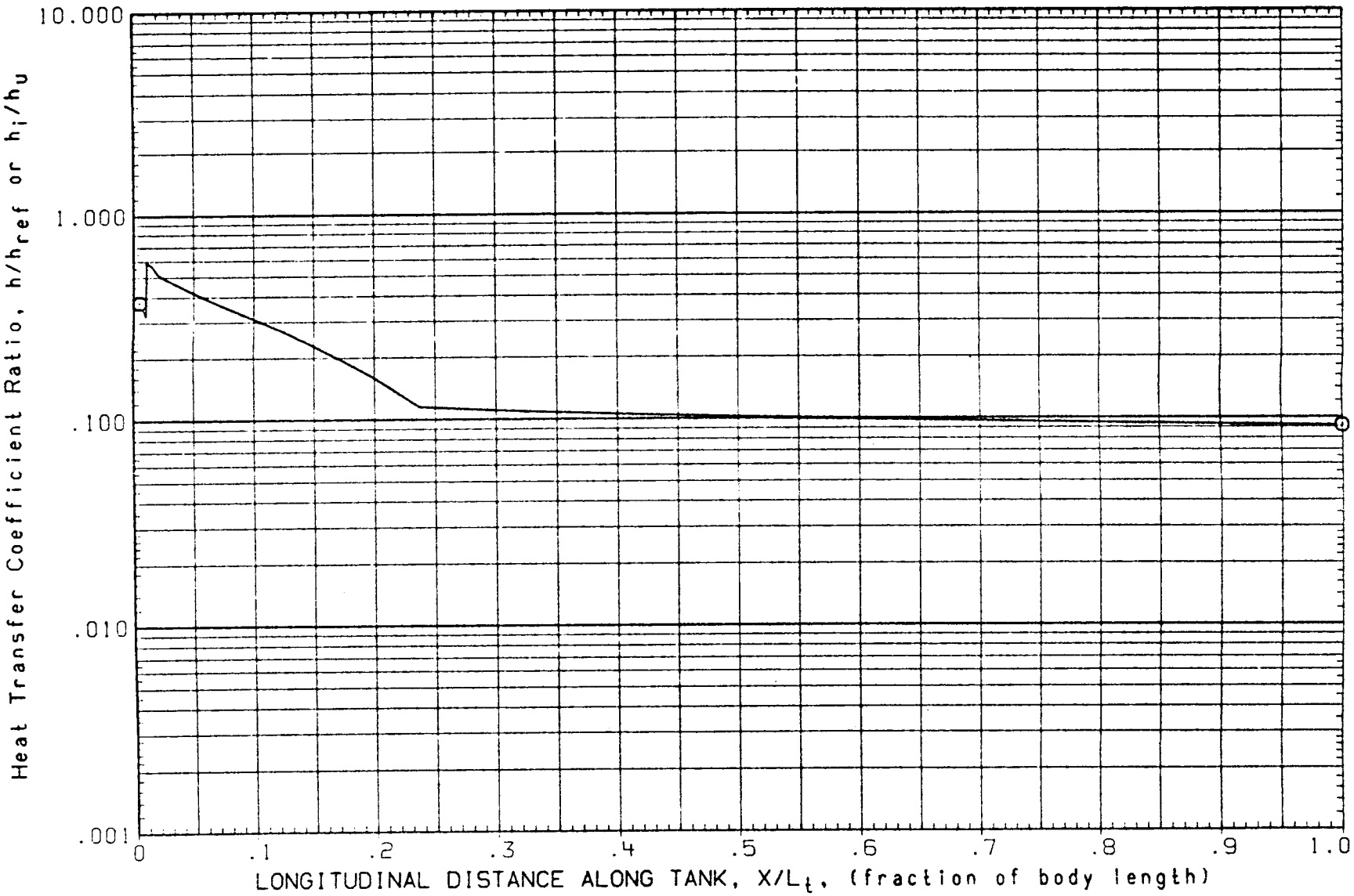

FIG. 4-21 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= -3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 360.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT14)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	.000
(X4LT14)	◇	IH85 (W.L. TEST)	OT/ET = V4LT14/C9NT06= HI/HU	3.010	.000	.000
(Y4LT14)	△	IH85 (W.L. THEORY)	OT/ET = V4LT14/A9NT06= HI/HU	3.010	.000	.000

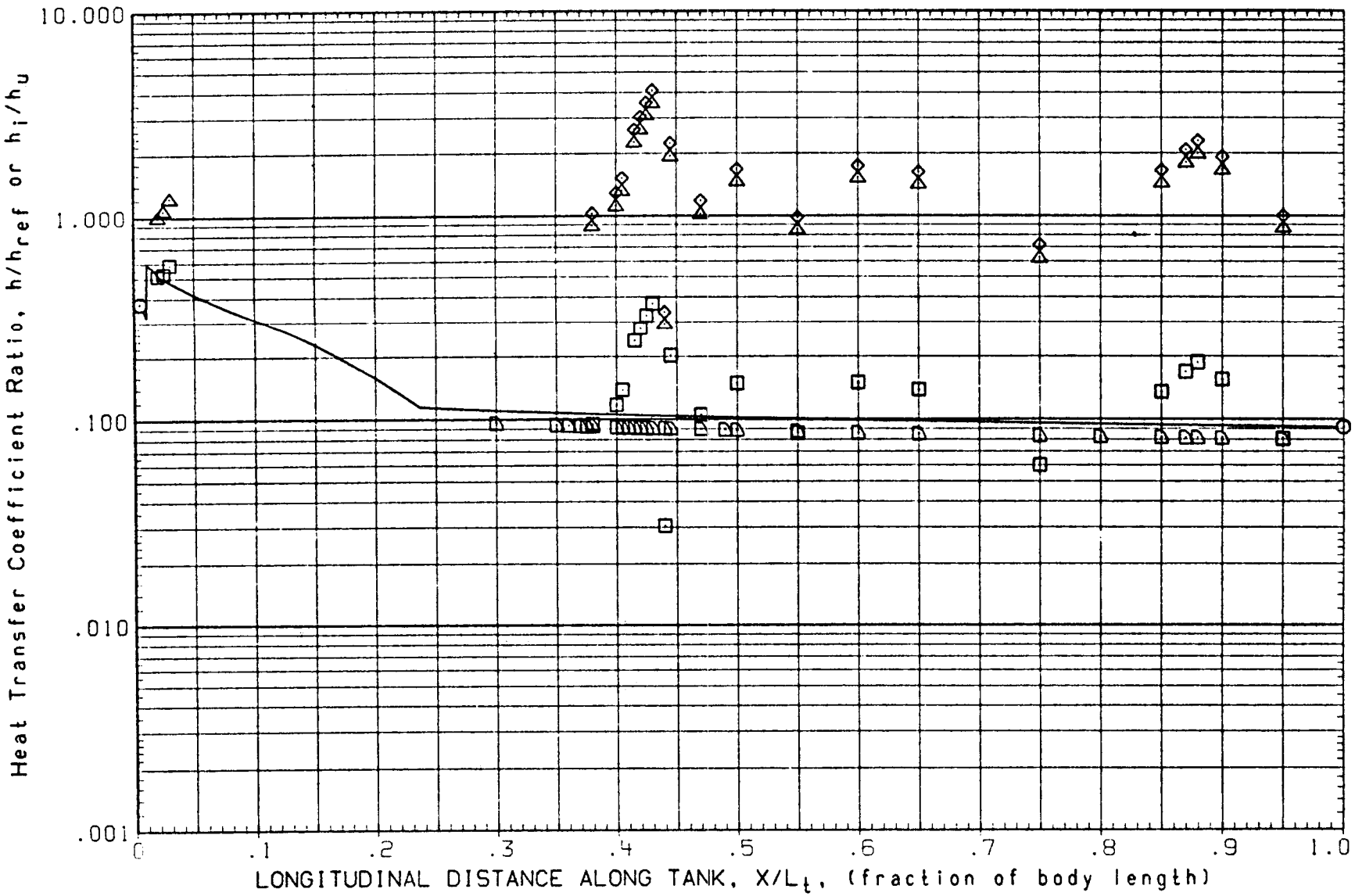

FIG. 4-22 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT06)	○	DATA NOT AVAILABLE	3.010	.000	.000
(C9NT06)	⌂	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	3.010	.000	.000
(V4LT14)	□	IH85, AEDC V4:A-W5, CONFIGURATION 0 (T)	3.010	.000	.000
(X4LT14)	◇	IH85 (W.L. TEST) OT/ET = V4LT14/C9NT06= HI/HU	3.010	.000	.000
(Y4LT14)	△	IH85 (W.L. THEORY) OT/ET = V4LT14/A9NT06= HI/HU	3.010	.000	.000

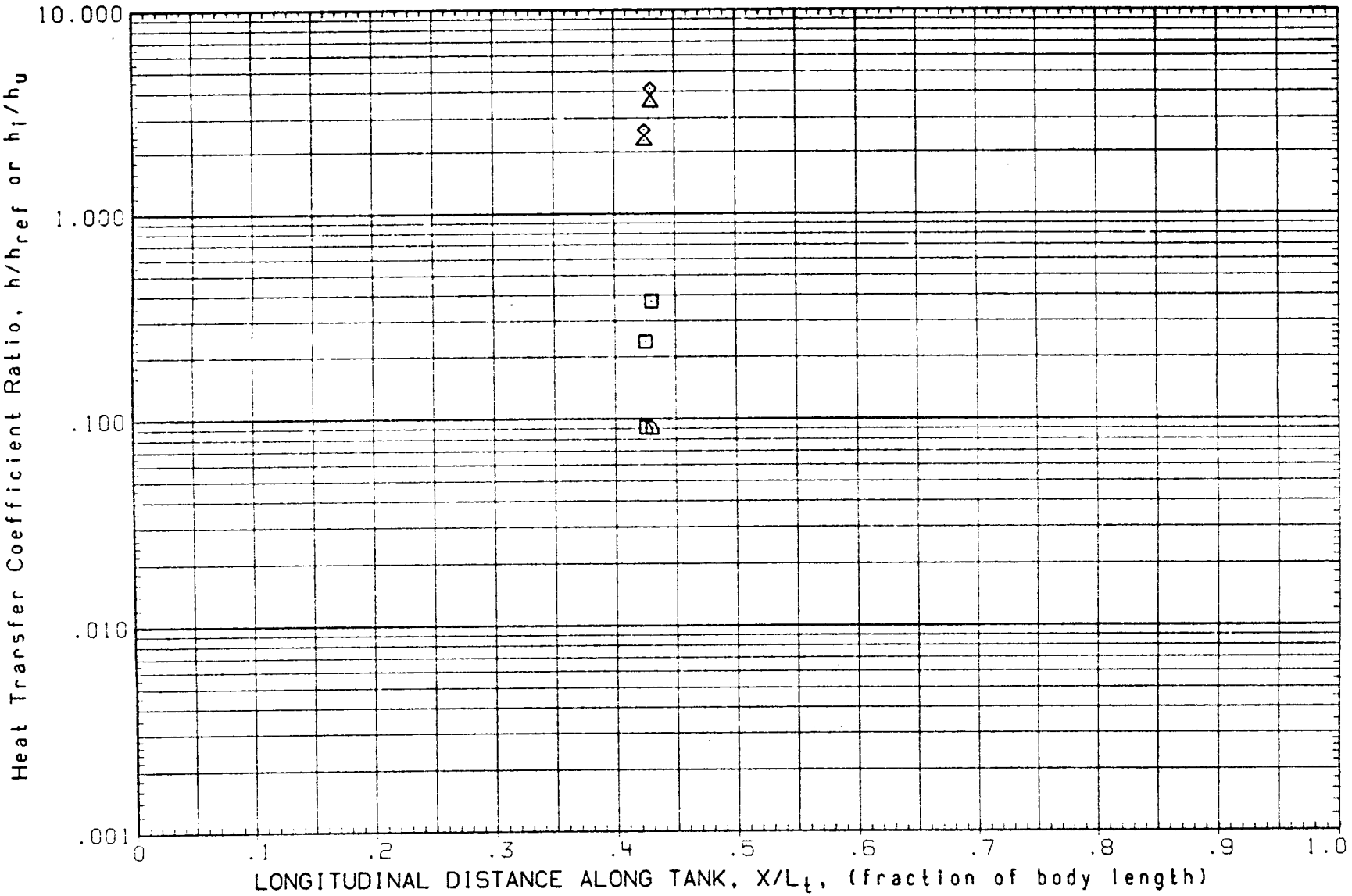

FIG. 4-22 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 5.625

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT05)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	◗	DATA NOT AVAILABLE		3.010	.000	.000
(V4LT14)	□	DATA NOT AVAILABLE		3.010	.000	.000
(X4LT14)	◇	DATA NOT AVAILABLE		3.010	.000	.000
(Y4LT14)	△	DATA NOT AVAILABLE		3.010	.000	.000

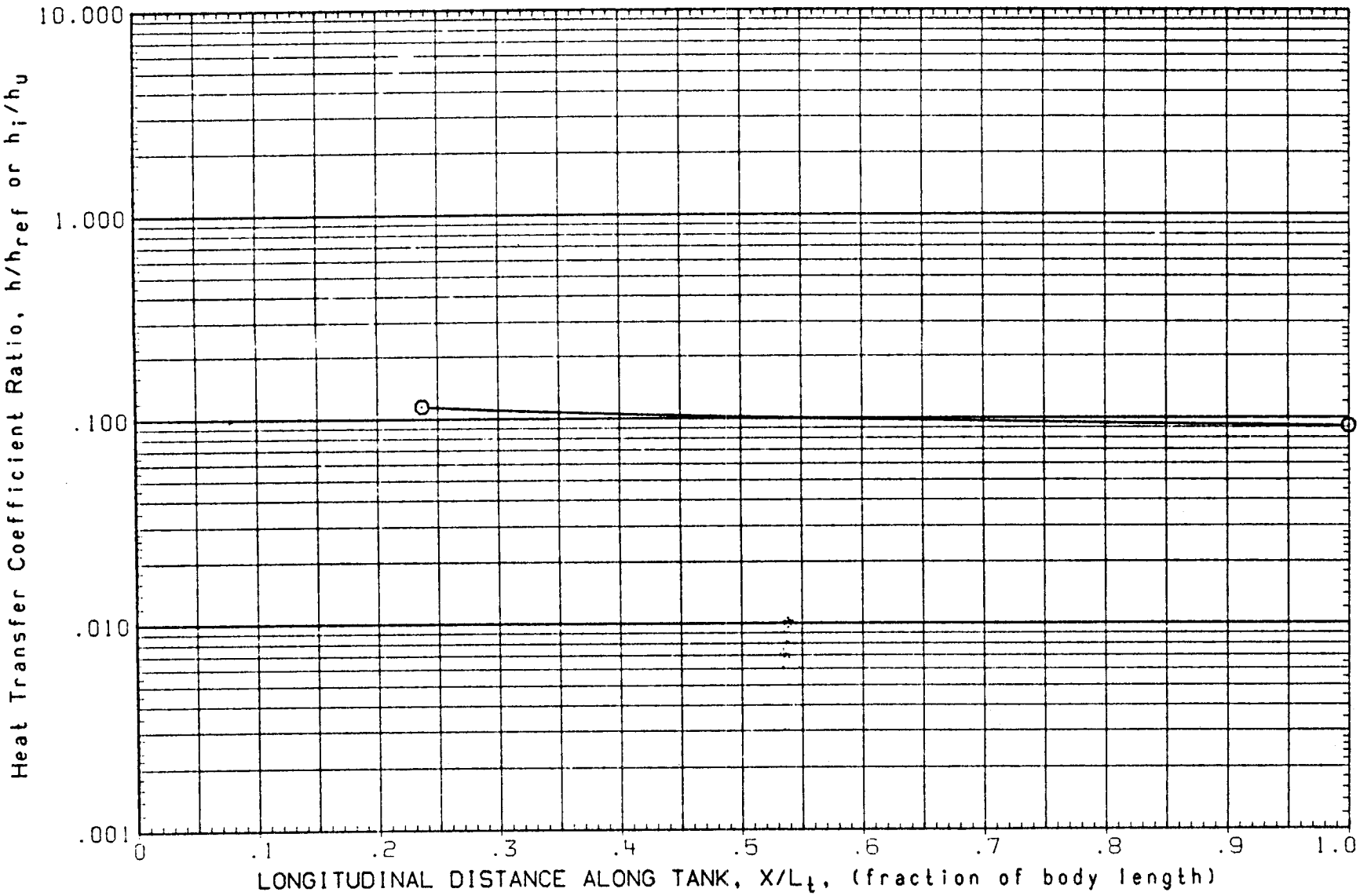

FIG. 4-22 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 5.630

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT14)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	.000
(X4LT14)	◇	IH85 (W.L. TEST) OT/ET = V4LT14/C9NT06=	HI/HU	3.010	.000	.000
(Y4LT14)	△	IH85 (W.L. THEORY) OT/ET = V4LT14/A9NT06=	HI/HU	3.010	.000	.000

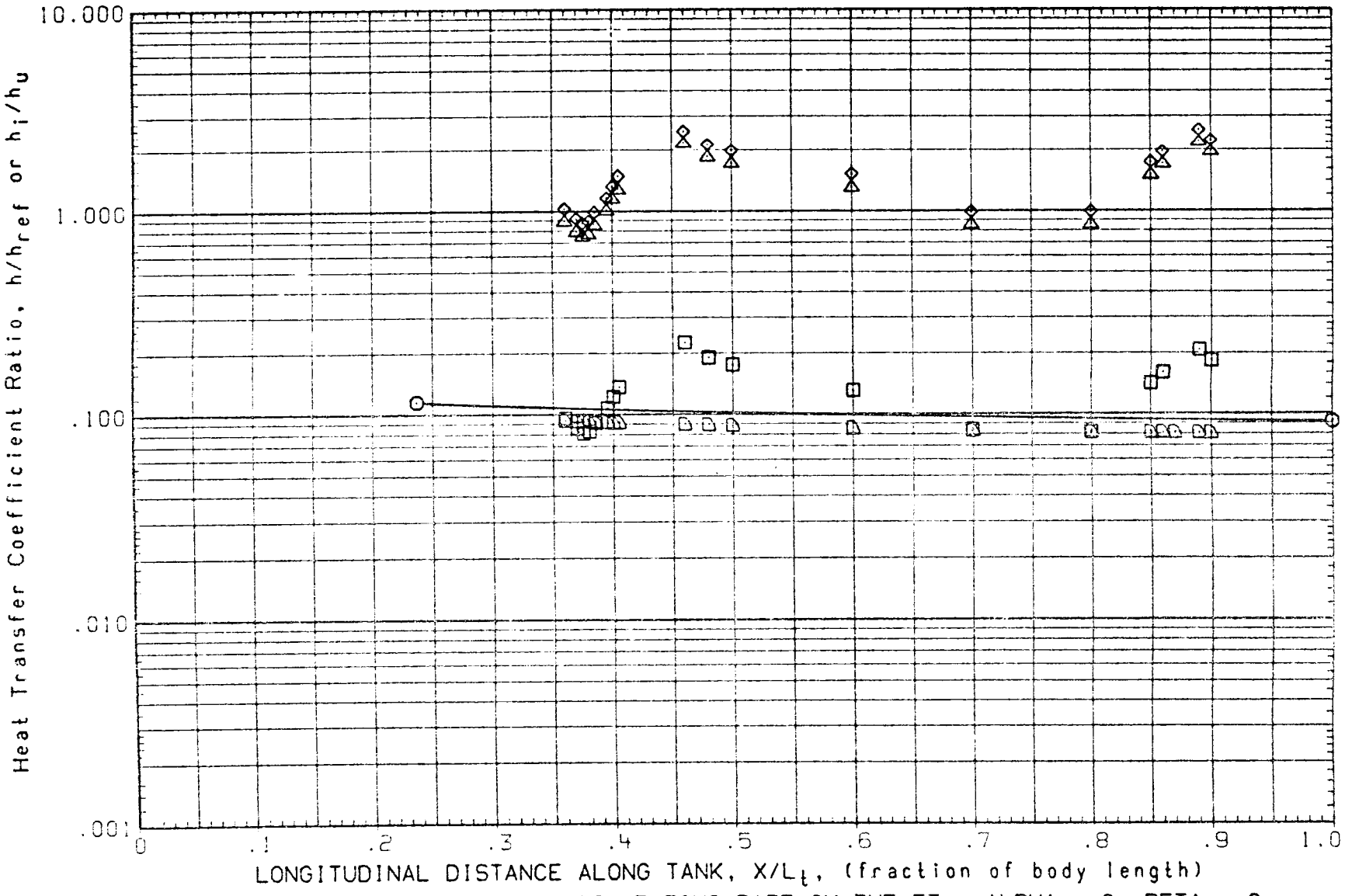

FIG. 4-22 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 11.250

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT14)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	.000
(X4LT14)	◇	IH85 (W.L. TEST)	OI/ET = V4LT14/C9NT06= HI/HU	3.010	.000	.000
(Y4LT14)	△	IH85 (W.L. THEORY)	OT/ET = V4LT14/A9NT06= HI/HU	3.010	.000	.000

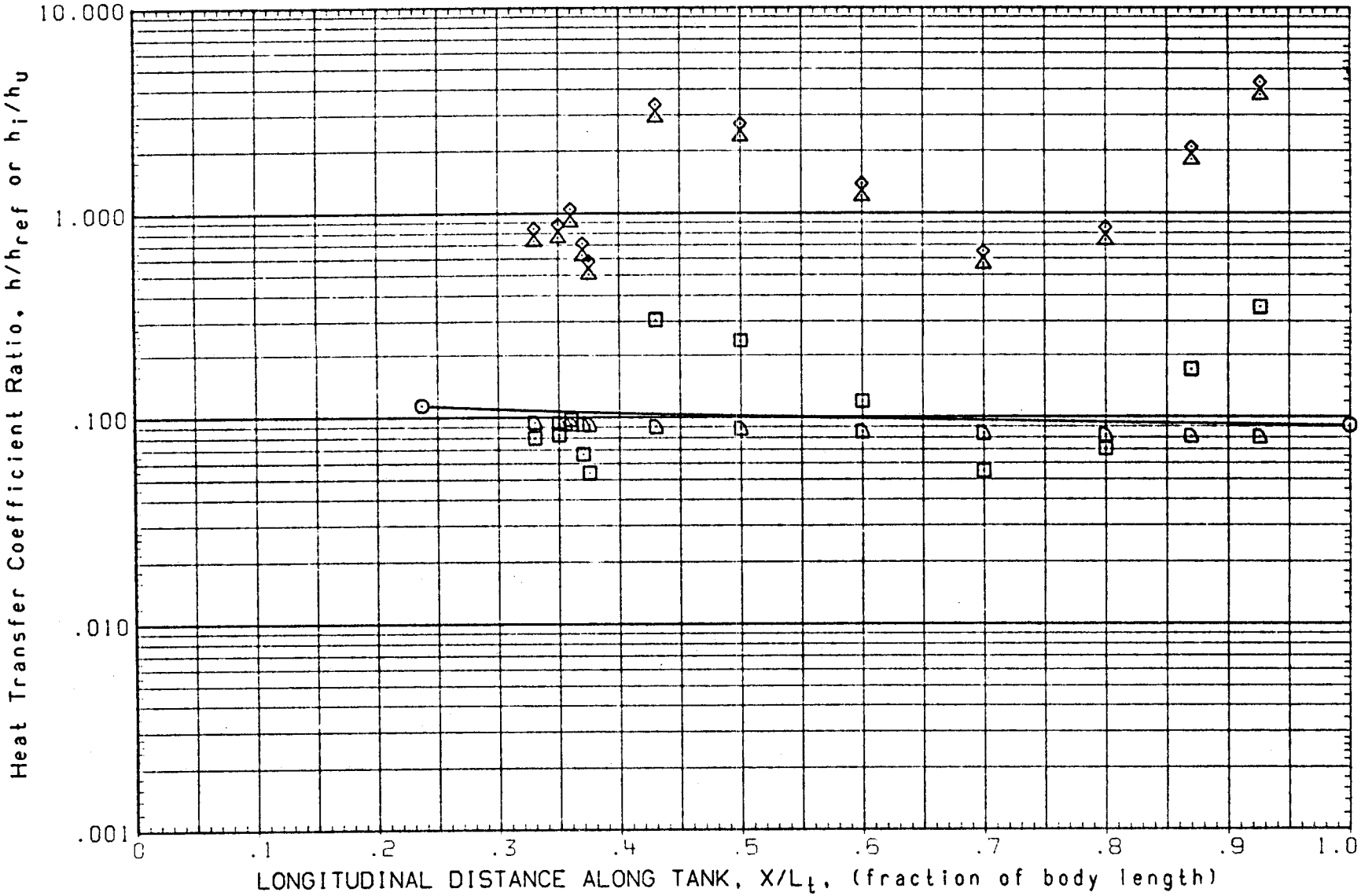

FIG. 4-22 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 17.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT14)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	.000
(X4LT14)	◇	IH85 (W.L. TEST) OT/ET = V4LT14/C9NT06=	HI/HU	3.010	.000	.000
(Y4LT14)	△	IH85 (W.L. THEORY) OT/ET = V4LT14/A9NT06=	HI/HU	3.010	.000	.000

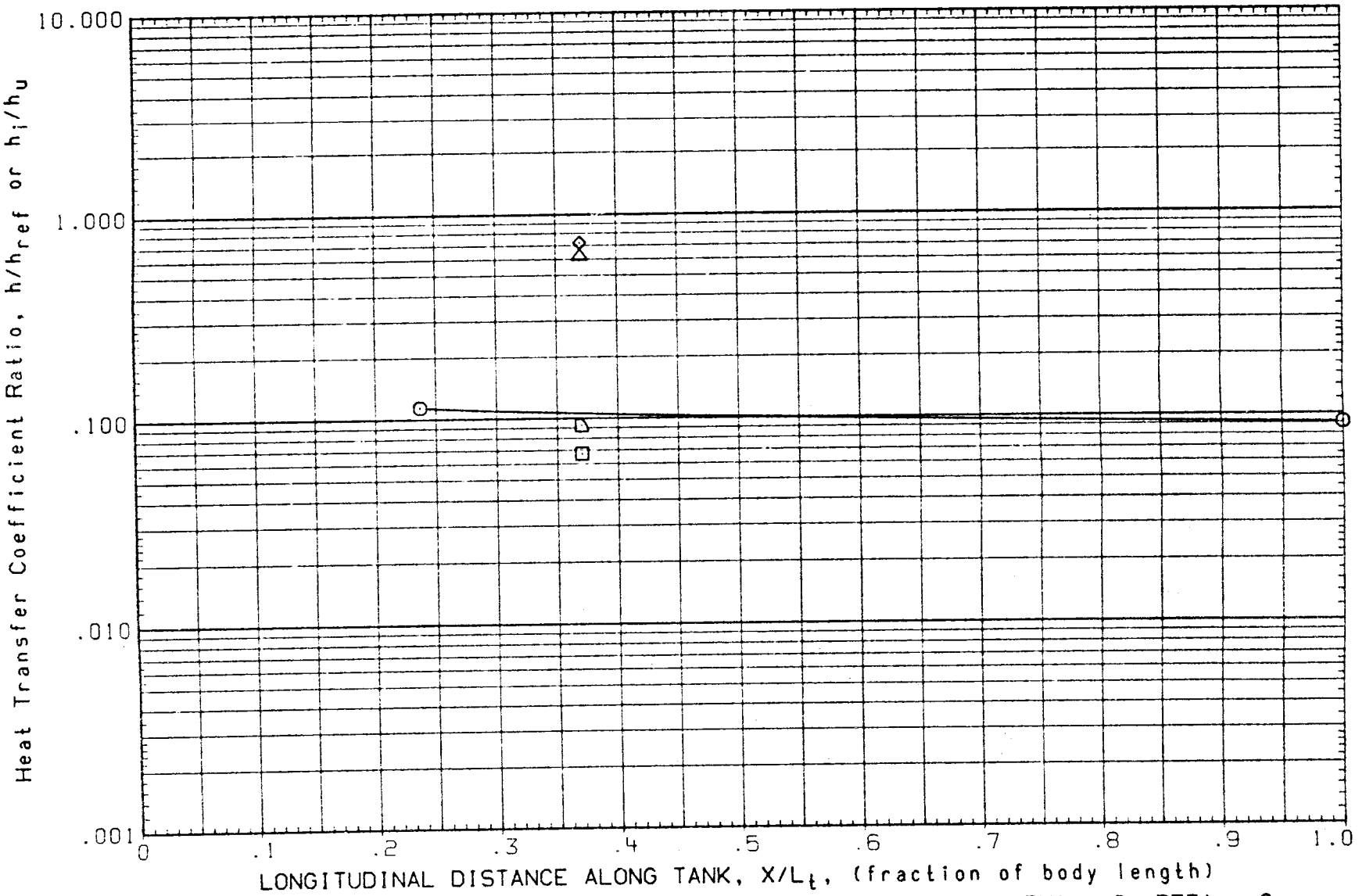

FIG. 4-22 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 20.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT14)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	.000
(X4LT14)	◇	IH85 (W.L. TEST)	OT/ET = V4LT14/C9NT06= HI/HU	3.010	.000	.000
(Y4LT14)	△	IH85 (W.L. THEORY)	OT/ET = V4LT14/A9NT06= HI/HU	3.010	.000	.000

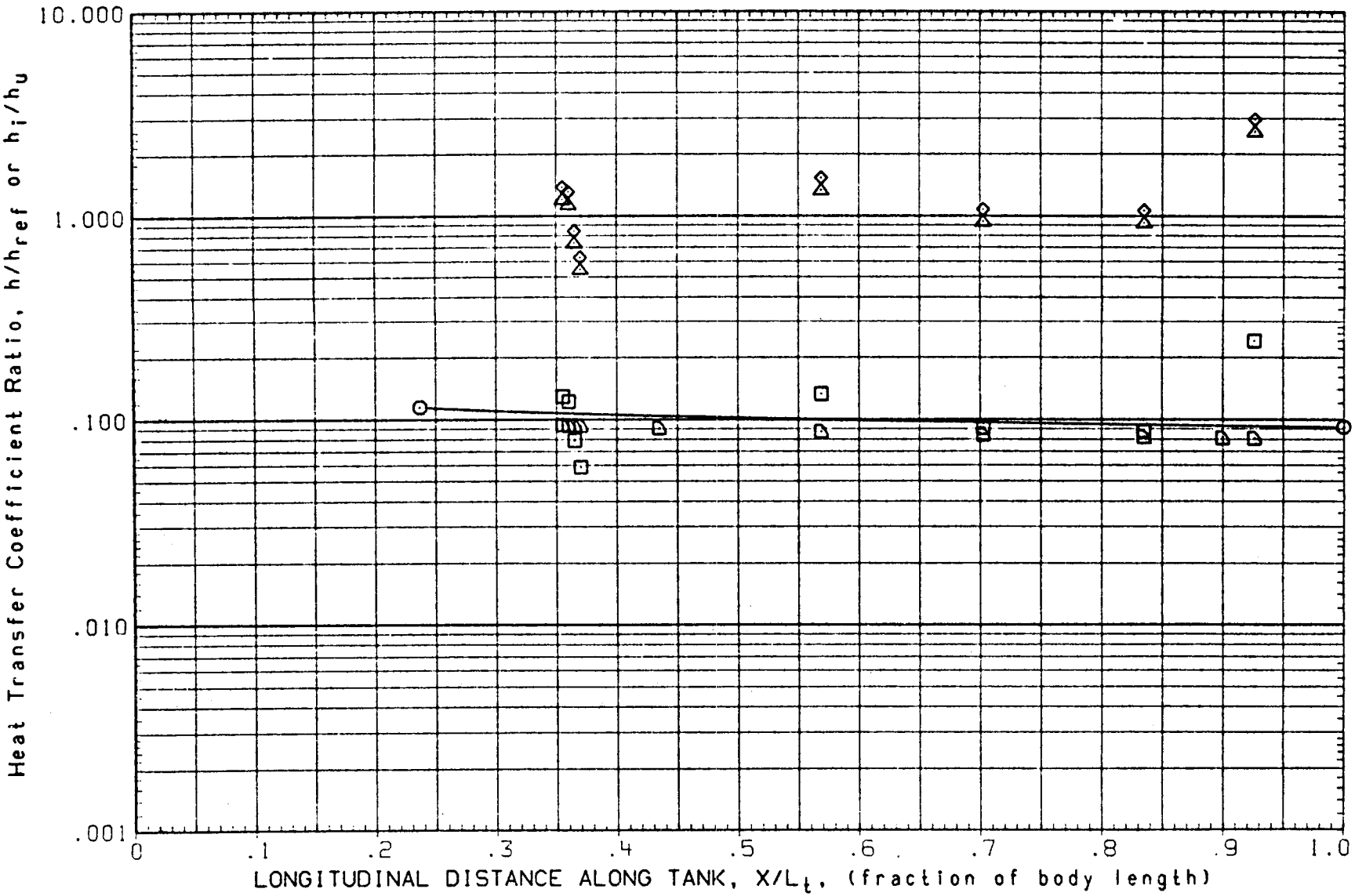

FIG. 4-22 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 23.070

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT14)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	.000
(X4LT14)	◇	IH85 (W.L. TEST) OT/ET = V4LT14/C9NT06=	HI/HU	3.010	.000	.000
(Y4LT14)	△	IH85 (W.L. THEORY) OT/ET = V4LT14/A9NT06=	HI/HU	3.010	.000	.000

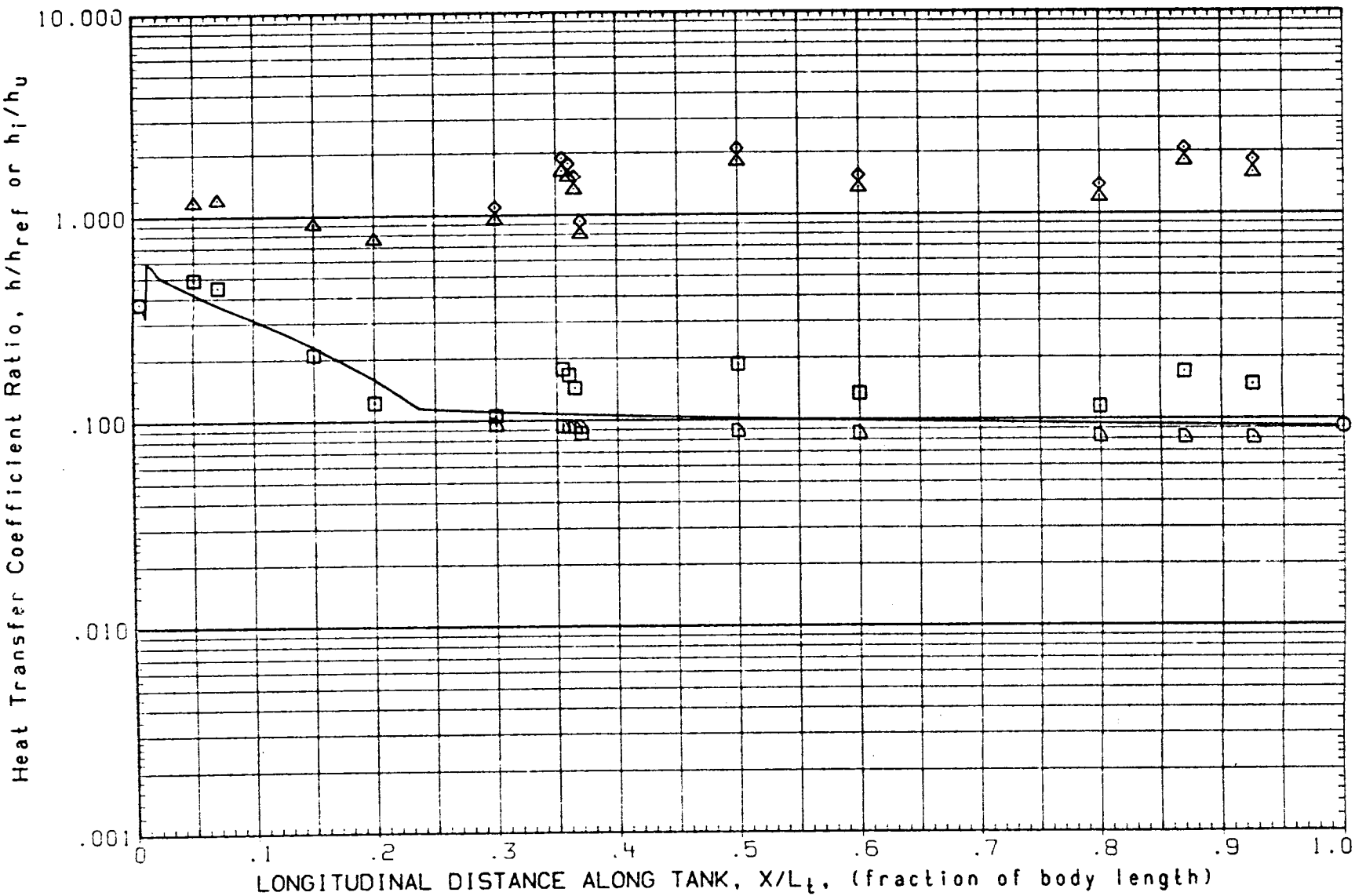

FIG. 4-22 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 29.800

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	△	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT14)	□	IH85, AEDC V4TA-W5, CONFIGURATION 0 (T)		3.010	.000	.000
(X4LT14)	◇	IH85 (W.L. TEST) OT/ET = V4LT14/C9NT06=	HI/HU	3.010	.000	.000
(Y4LT14)	△	IH85 (W.L. THEORY) OT/ET = V4LT14/A9NT06=	HI/HU	3.010	.000	.000

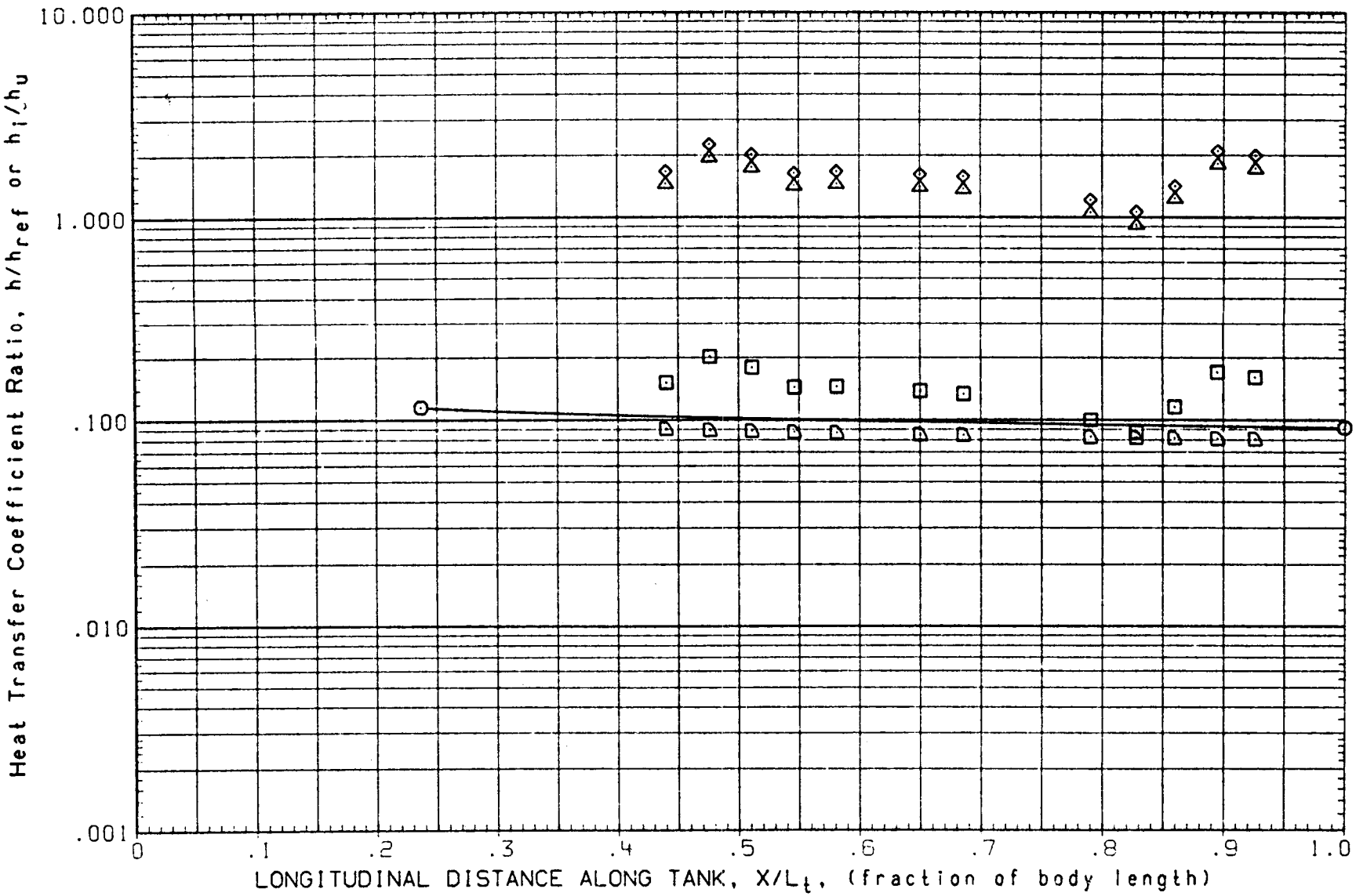

FIG. 4-22 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 31.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT14)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	.000
(X4LT14)	◇	IH85 (W.L. TEST)	OT/ET = V4LT14/C9NT06= HI/HU	3.010	.000	.000
(Y4LT14)	△	IH85 (W.L. THEORY)	OT/ET = V4LT14/A9NT06= HI/HU	3.010	.000	.000

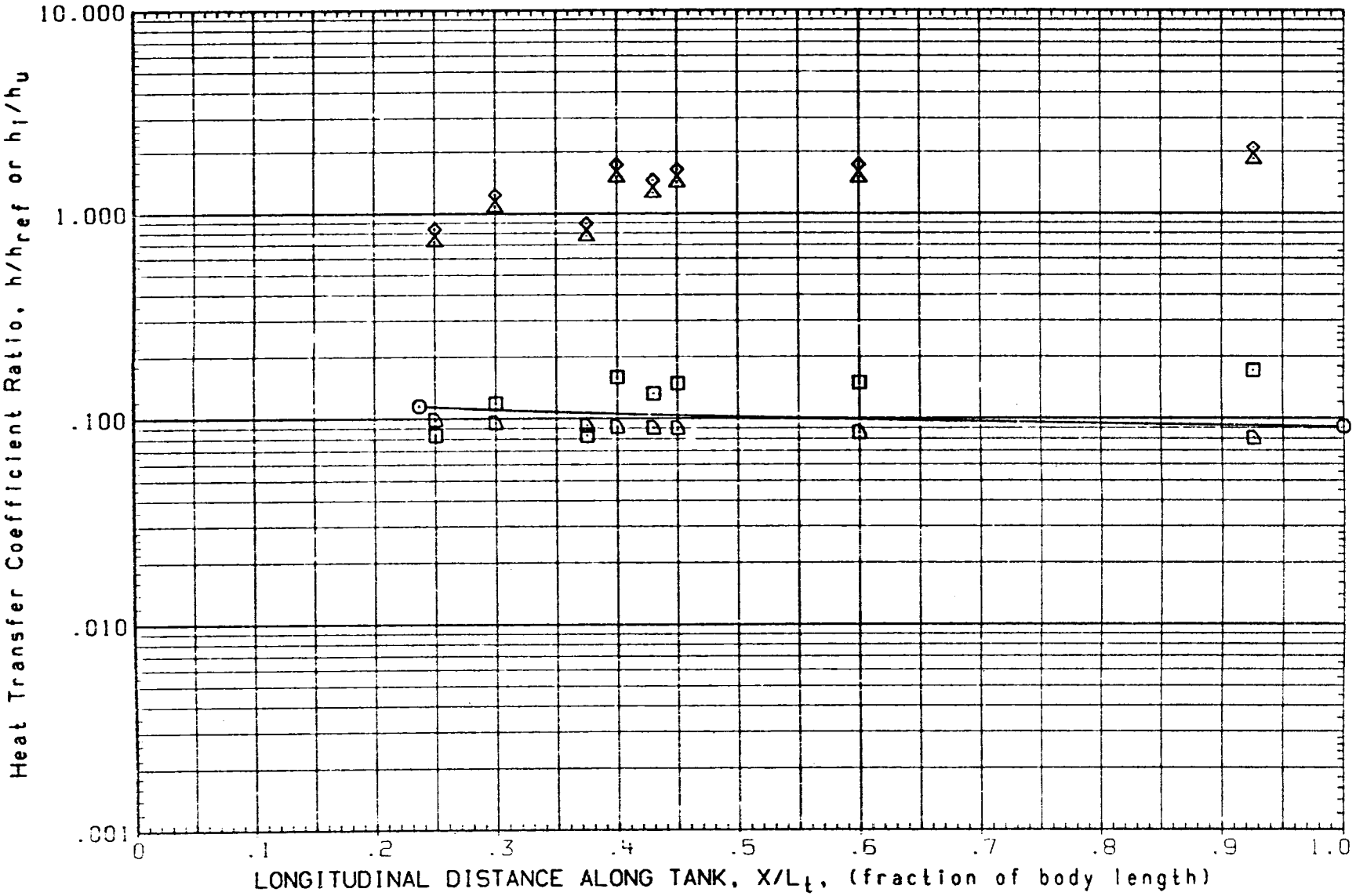

FIG. 4-22 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 33.750

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	3.010	.000	.000
(C9NT06)	⬠	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	3.010	.000	.000
(V4LT14)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)	3.010	.000	.000
(X4LT14)	◇	IH85 (W.L. TEST) OT/ET = V4LT14/C9NT06= HI/HU	3.010	.000	.000
(Y4LT14)	△	IH85 (W.L. THEORY) OT/ET = V4LT14/A9NT06= HI/HU	3.010	.000	.000

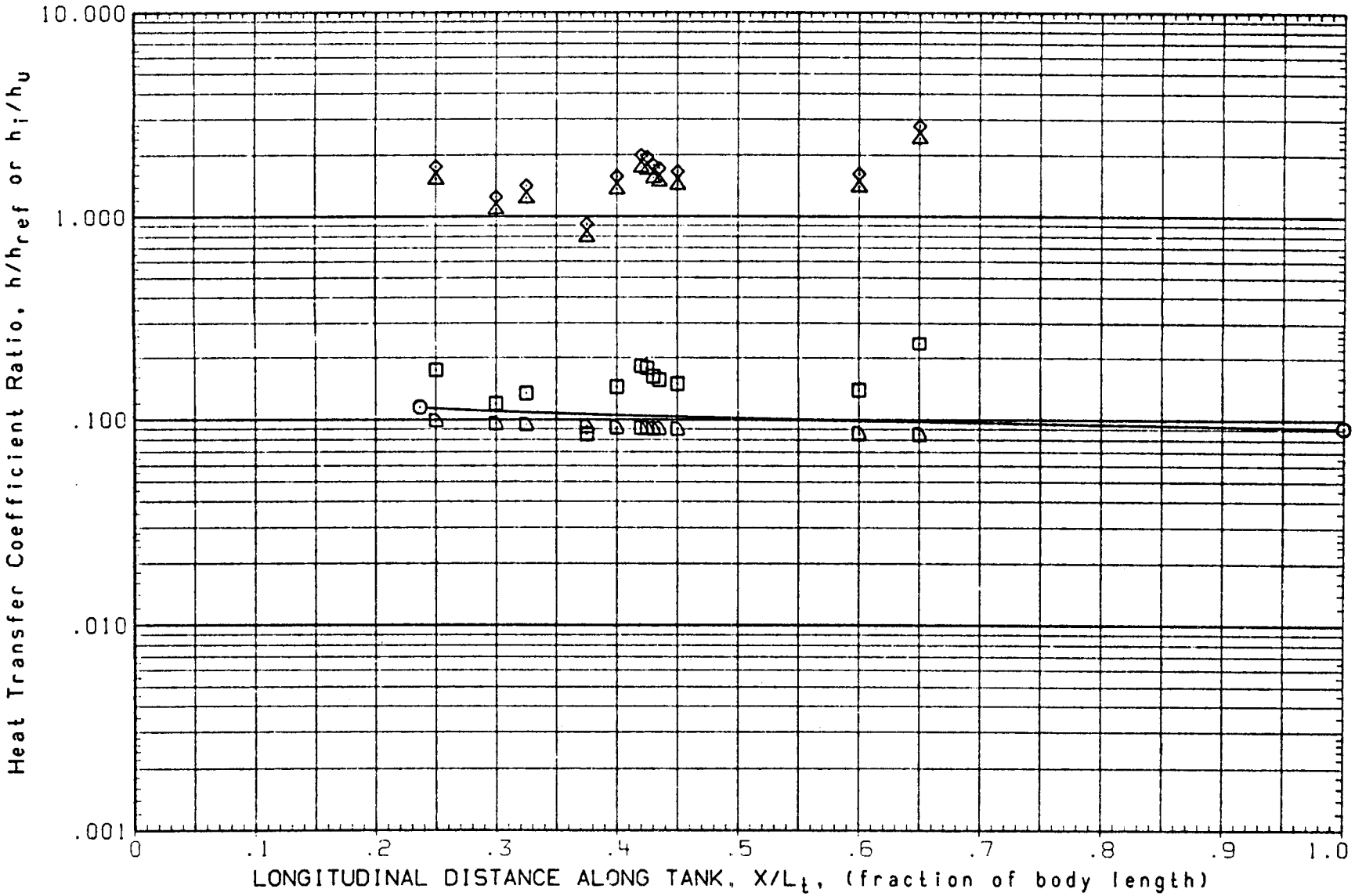

FIG. 4-22 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 36.320

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT14)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	.000
(X4LT14)	◇	IH85 (W.L. TEST) OT/ET = V4LT14/C9NT06=	HI/HU	3.010	.000	.000
(Y4LT14)	△	IH85 (W.L. THEORY) OT/ET = V4LT14/A9NT06=	HI/HU	3.010	.000	.000

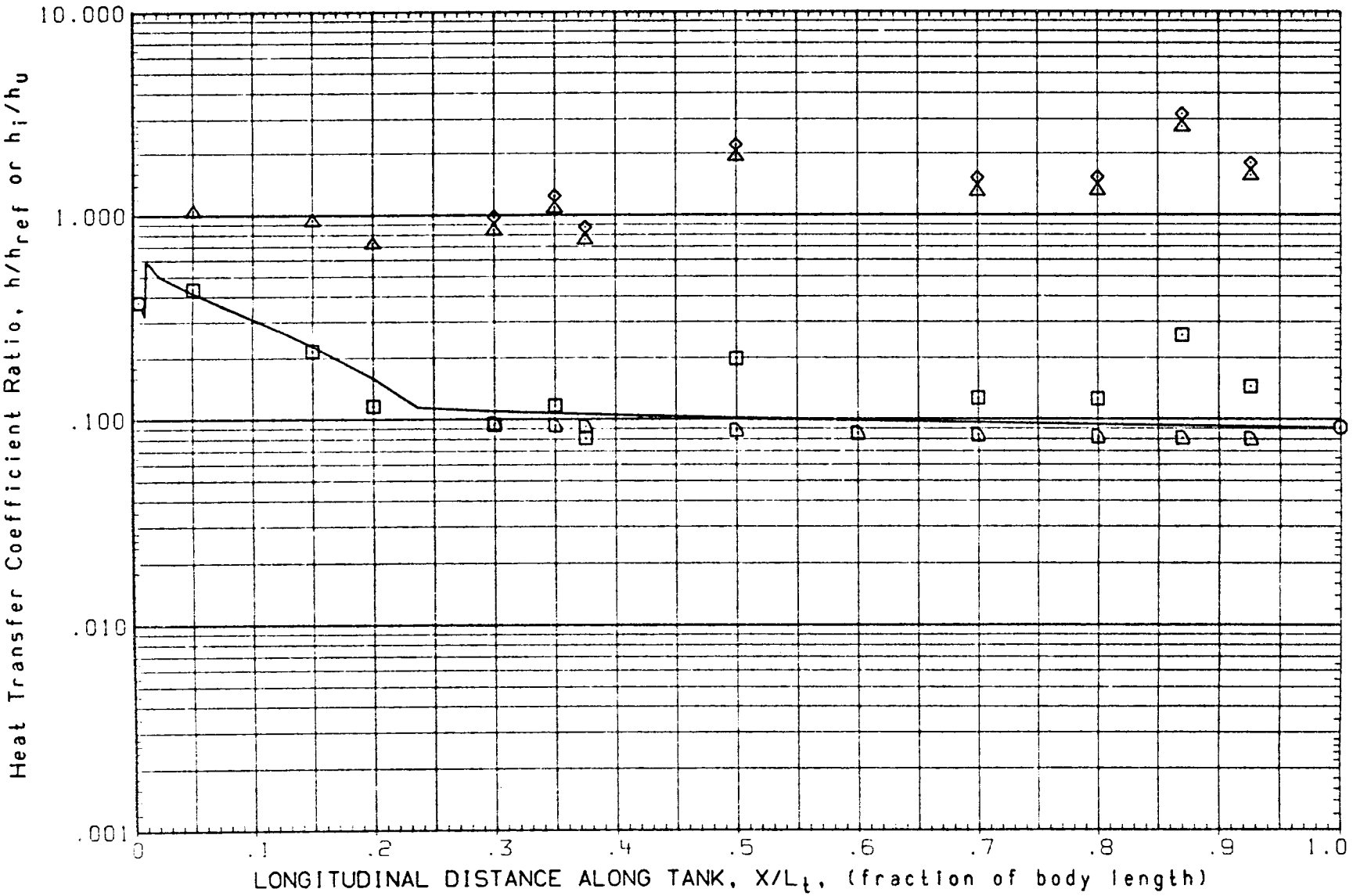

FIG. 4-22 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 37.700

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	D	DATA NOT AVAILABLE		3.010	.000	.000
(V4LT14)	□	DATA NOT AVAILABLE		3.010	.000	.000
(X4LT14)	◇	DATA NOT AVAILABLE		3.010	.000	.000
(Y4LT14)	△	DATA NOT AVAILABLE		3.010	.000	.000

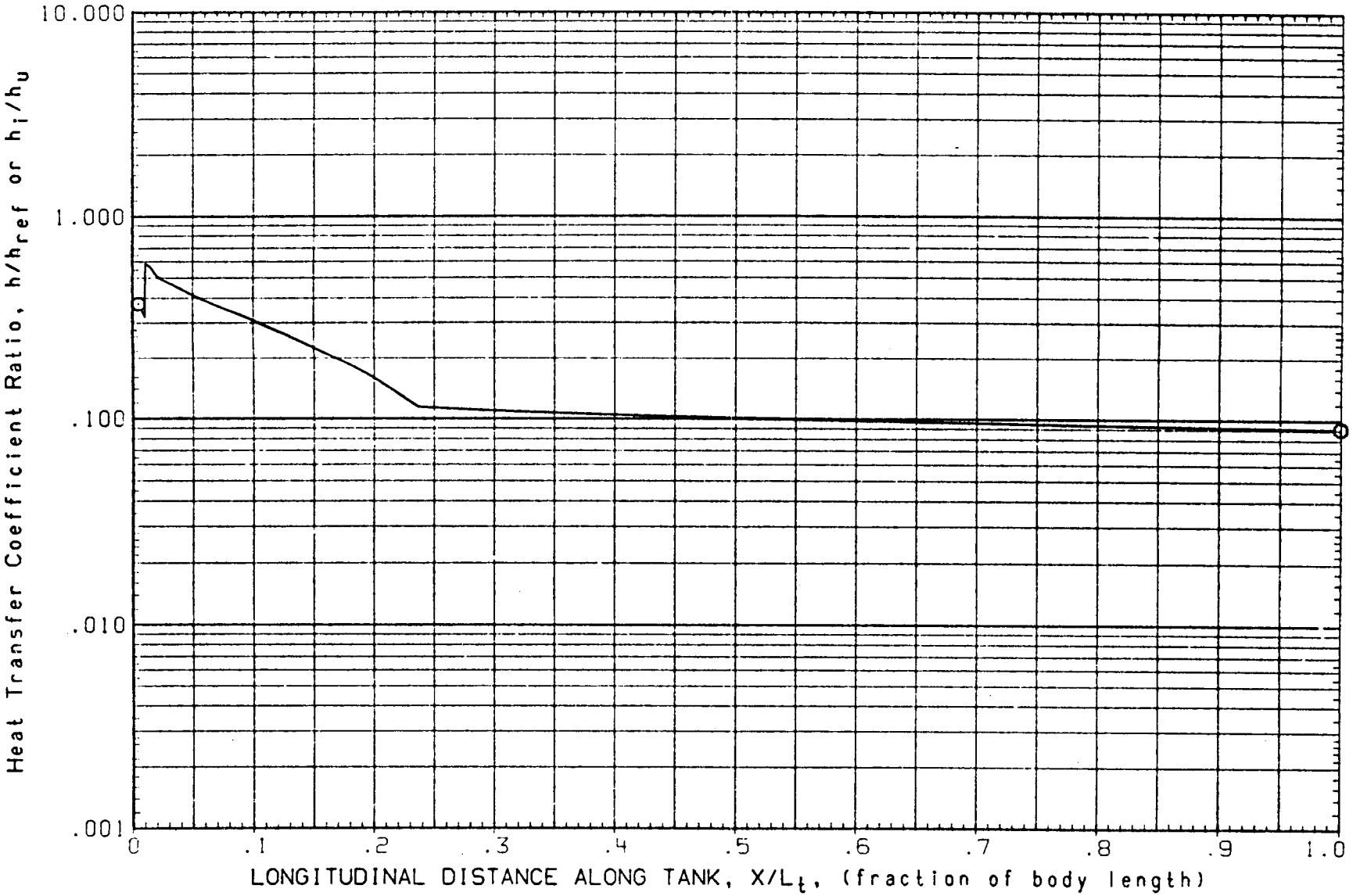

FIG. 4-22 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 39.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT14)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	.000
(X4LT14)	◇	IH85 (W.L. TEST)	OT/ET = V4LT14/C9NT06= HI/HU	3.010	.000	.000
(Y4LT14)	△	IH85 (W.L. THEORY)	OT/ET = V4LT14/A9NT06= HI/HU	3.010	.000	.000

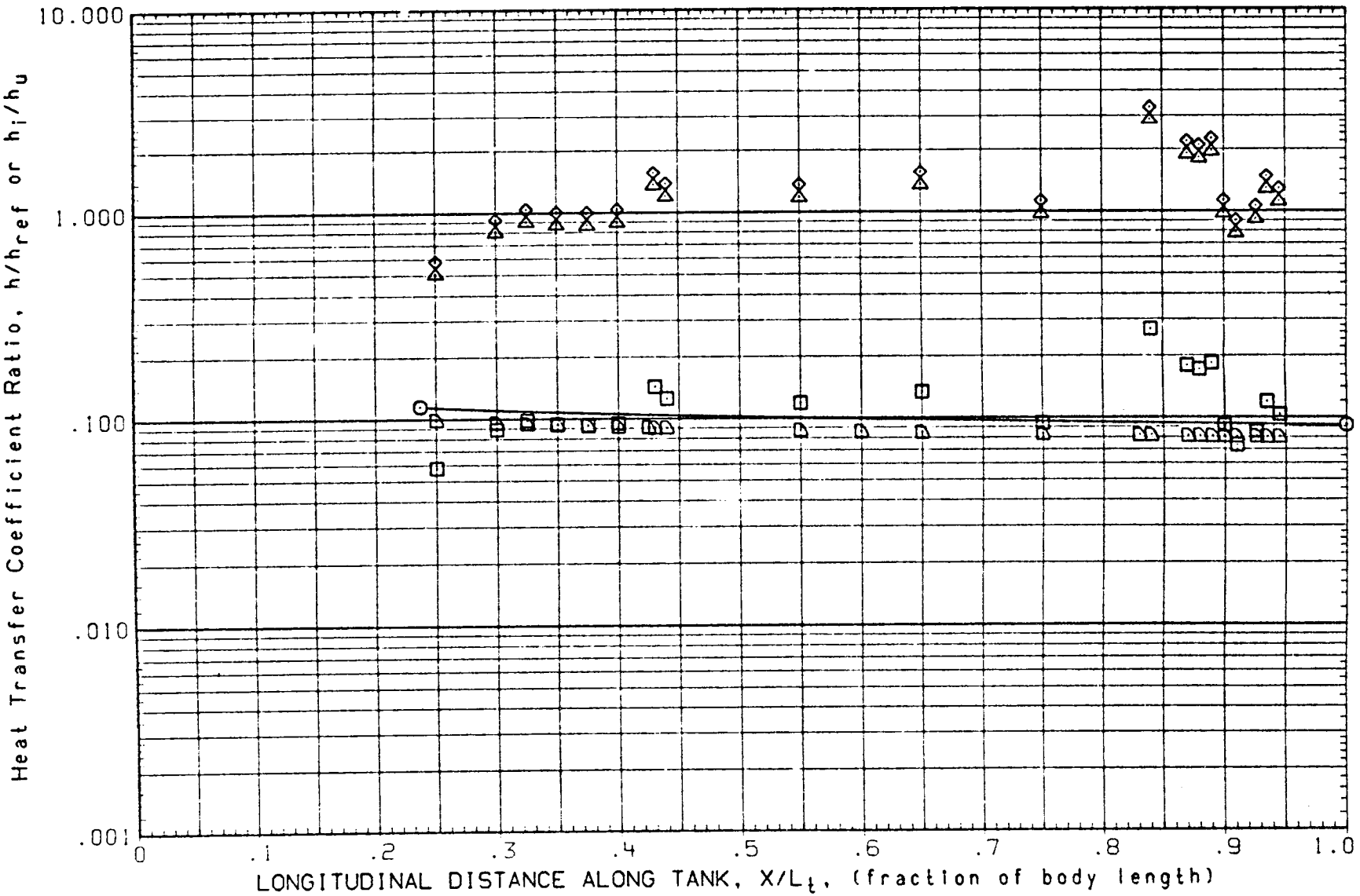

FIG. 4-22 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 45.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⬠	DATA NOT AVAILABLE		3.010	.000	.000
(V4LT14)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	.000
(X4LT14)	◇	DATA NOT AVAILABLE		3.010	.000	.000
(Y4LT14)	△	1485 (W.L. THEORY)	O*/ET = V4LT14/A9NT06= HI/HU	3.010	.000	.000

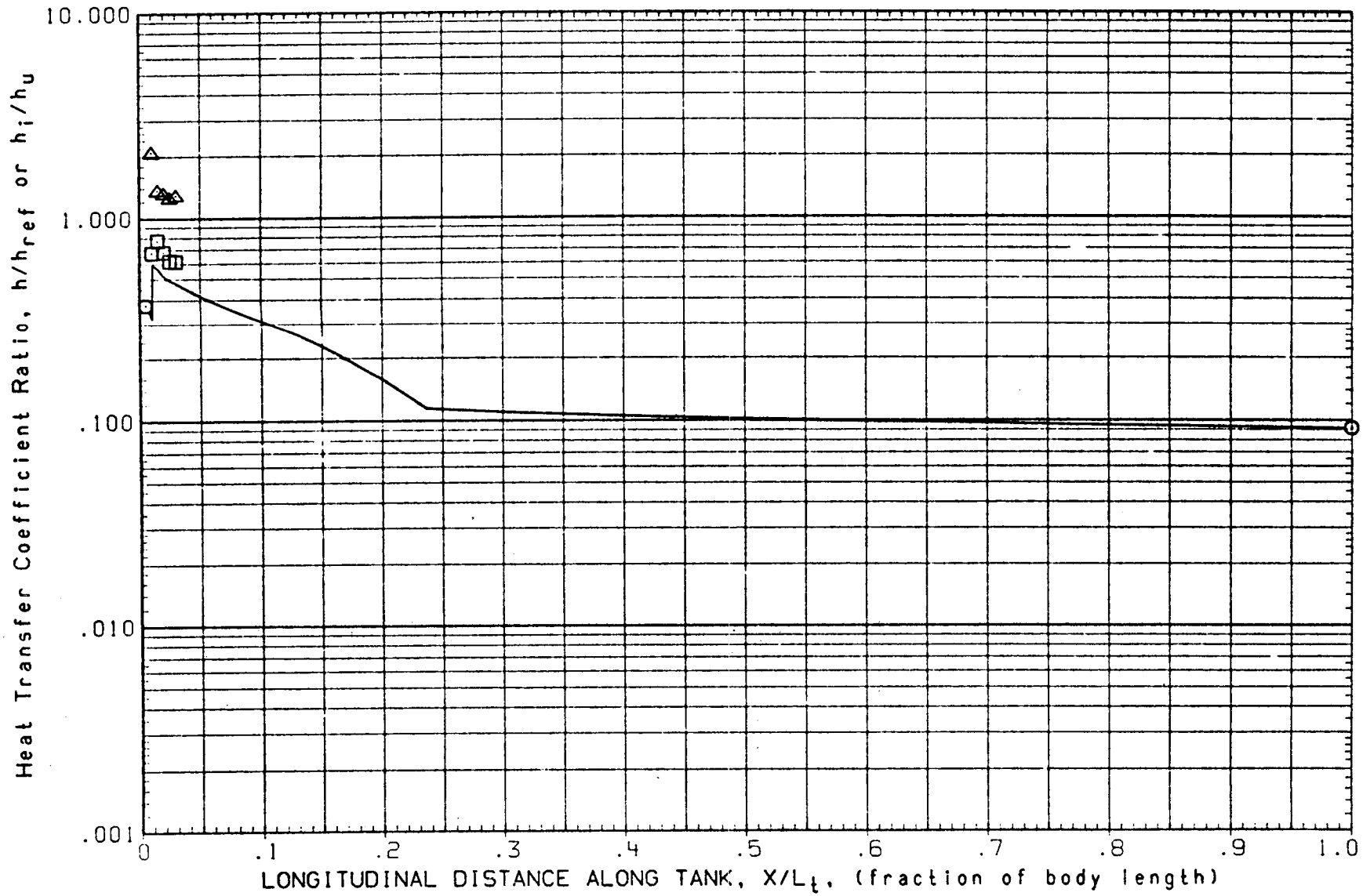

FIG. 4-22 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 180.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	◗	DATA NOT AVAILABLE		3.010	.000	.000
(Y4LT14)	□	DATA NOT AVAILABLE		3.010	.000	.000
(X4LT14)	◇	DATA NOT AVAILABLE		3.010	.000	.000
(Y4LT14)	△	DATA NOT AVAILABLE		3.010	.000	.000

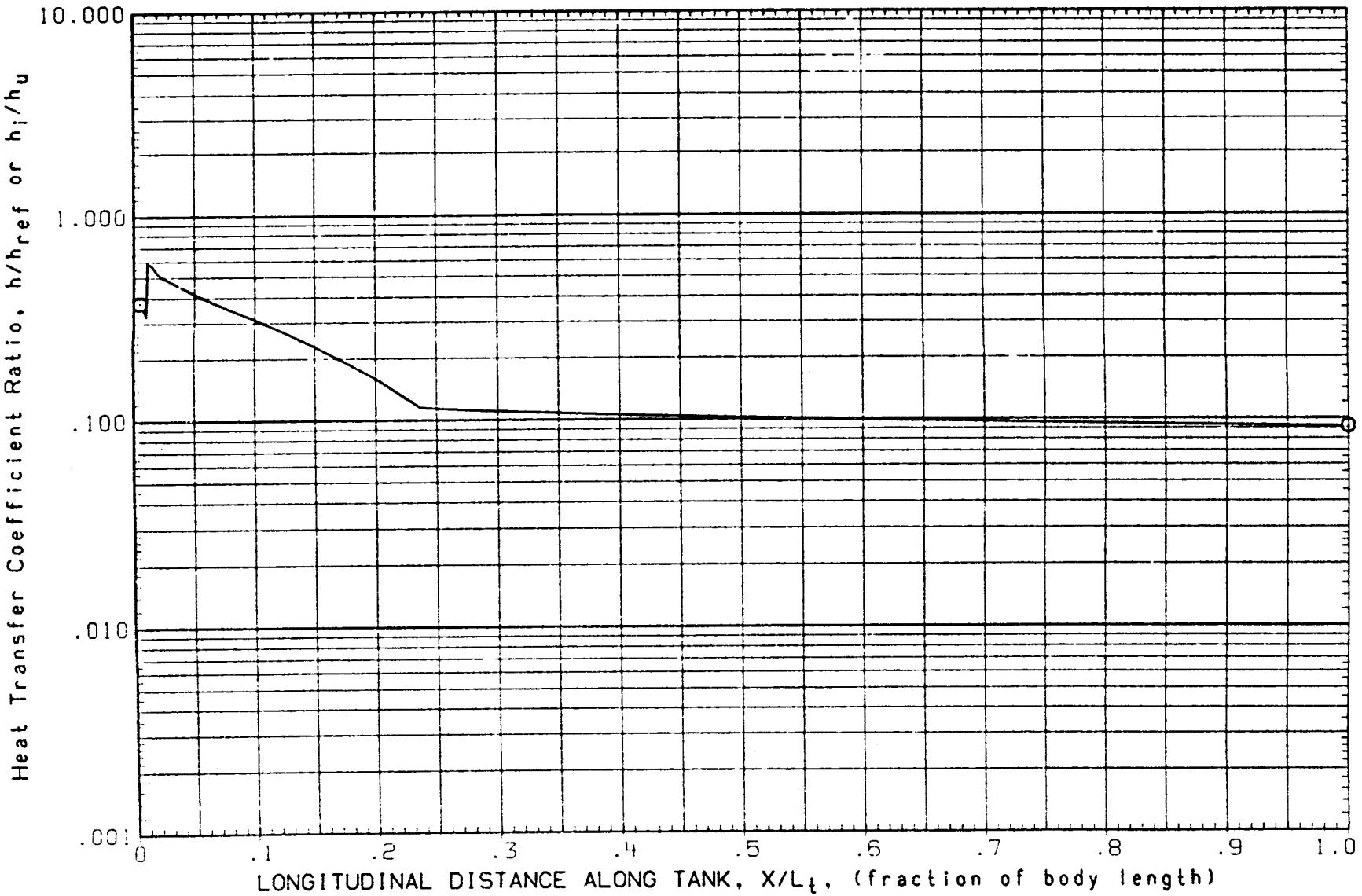

FIG. 4-22 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 235.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT14)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	.000
(X4LT14)	◇	IH85 (W.L. TEST)	OT/ET = V4LT14/C9NT06= HI/HU	3.010	.000	.000
(Y4LT14)	△	IH85 (W.L. THEORY)	OT/ET = V4LT14/A9NT06= HI/HU	3.010	.000	.000

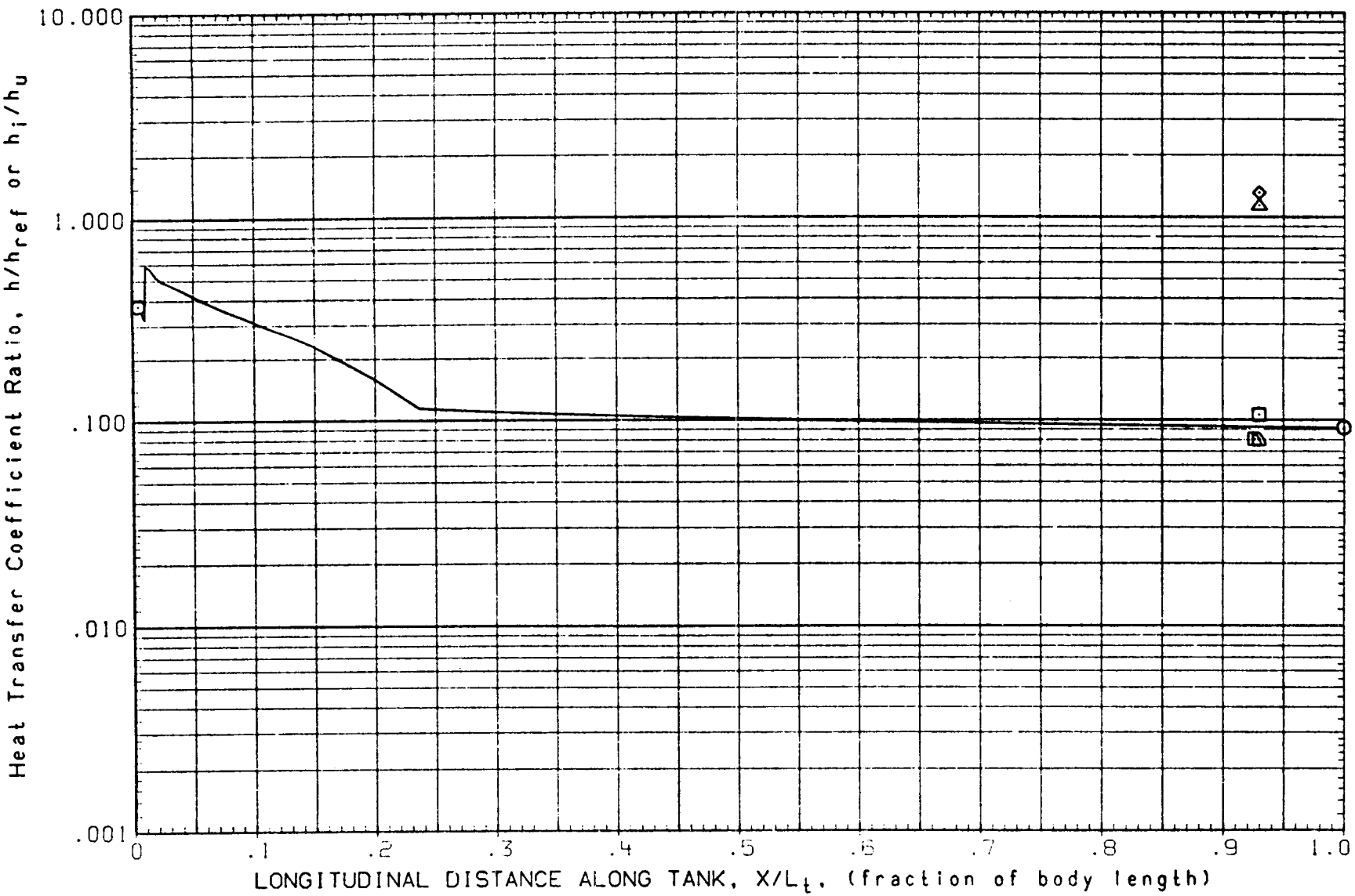

FIG. 4-22 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 297.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⬠	DATA NOT AVAILABLE		3.010	.000	.000
(V4LT14)	□	DATA NOT AVAILABLE		3.010	.000	.000
(X4LT14)	◇	DATA NOT AVAILABLE		3.010	.000	.000
(Y4LT14)	△	DATA NOT AVAILABLE		3.010	.000	.000

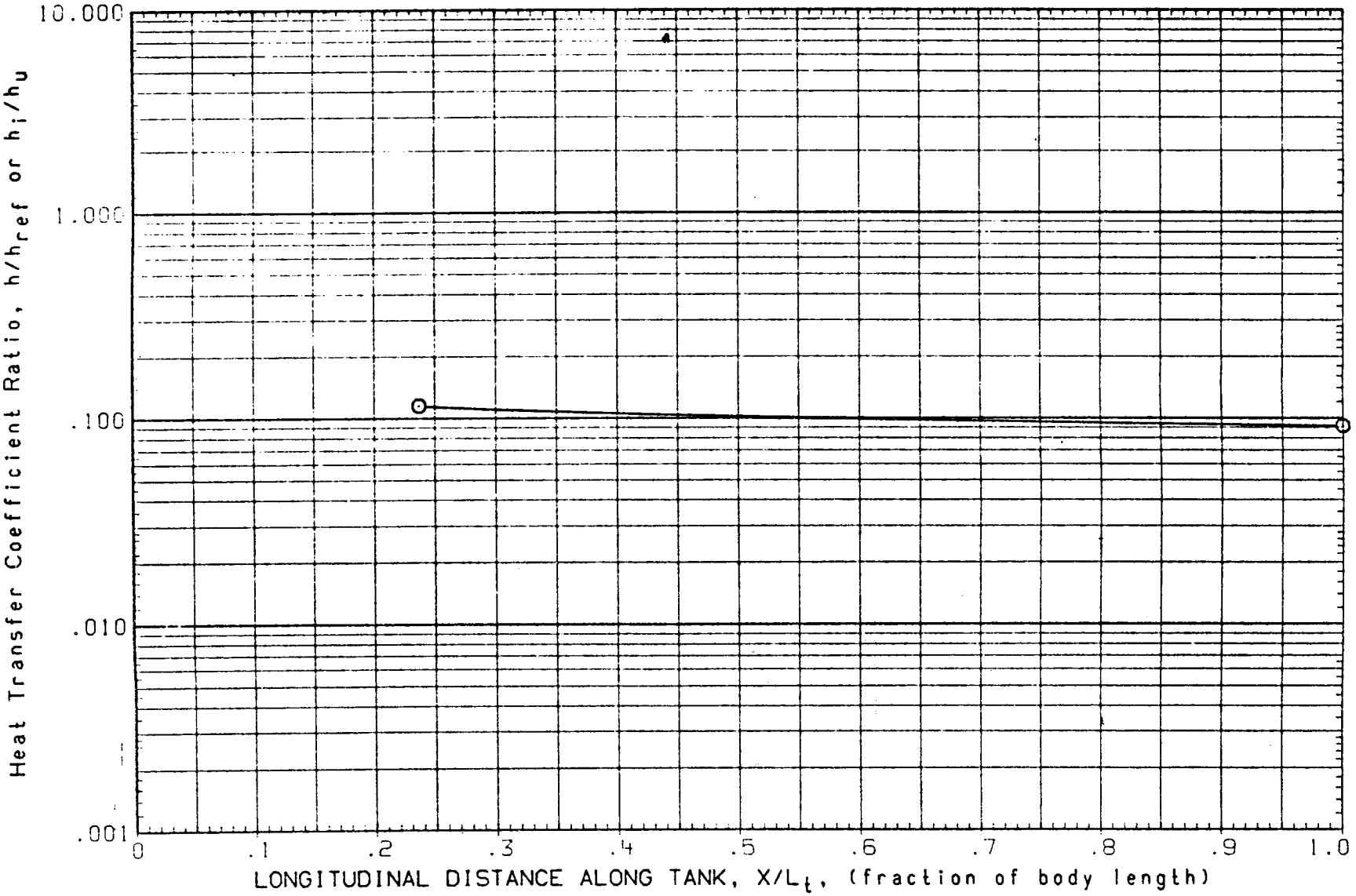

FIG. 4-22 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 247.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT14)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	.000
(X4LT14)	◇	IH85 (W.L. TEST)	OT/ET = V4LT14/C9NT06= HI/HU	3.010	.000	.000
(Y4LT14)	△	IH85 (W.L. THEORY)	OT/ET = V4LT14/A9NT06= HI/HU	3.010	.000	.000

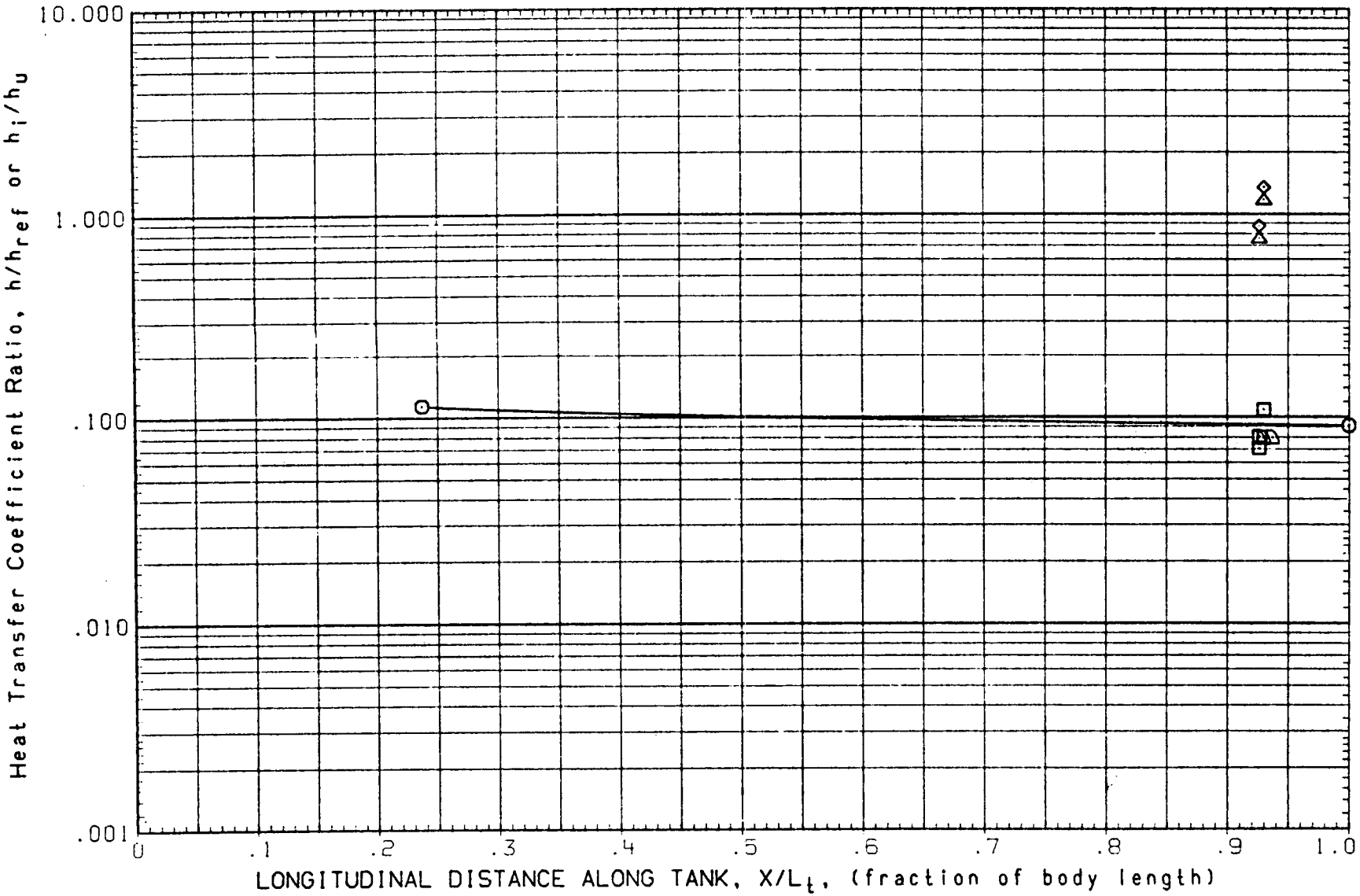

FIG. 4-22 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 250.570

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	△	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT14)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	.000
(X4LT14)	◇	IH85 (W.L. TEST) OT/ET = V4LT14/C9NT06= HI/HU		3.010	.000	.000
(Y4LT14)	△	IH85 (W.L. THEORY) OT/ET = V4LT14/A9NT06= HI/HU		3.010	.000	.000

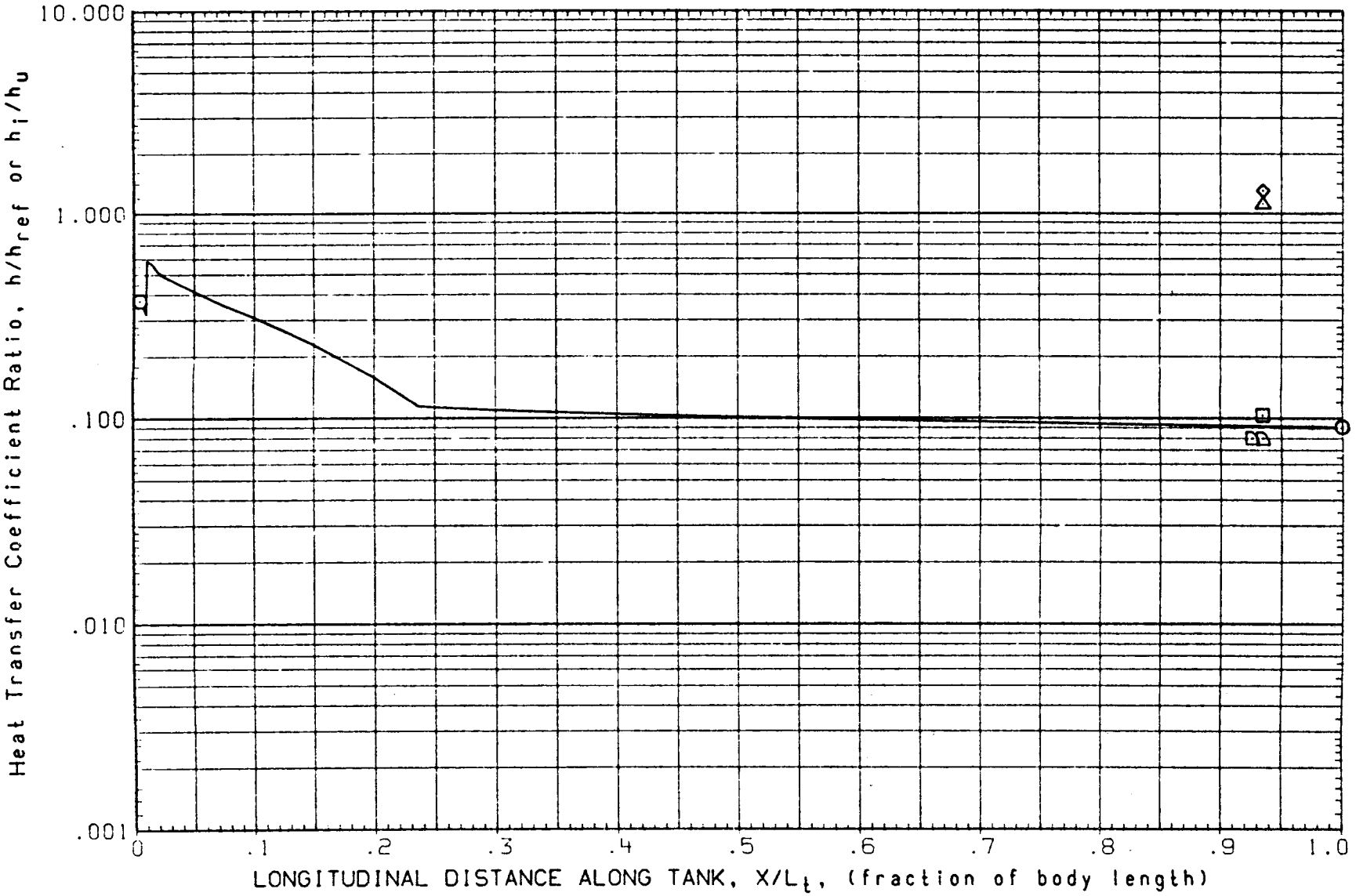

FIG. 4-22 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 258.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S., TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT14)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	.000
(X4LT14)	◇	IH85 (W.L. TEST)	OT/ET = V4LT14/C9NT06= HI/HU	3.010	.000	.000
(Y4LT14)	△	IH85 (W.L. THEORY)	OT/ET = V4LT14/A9NT06= HI/HU	3.010	.000	.000

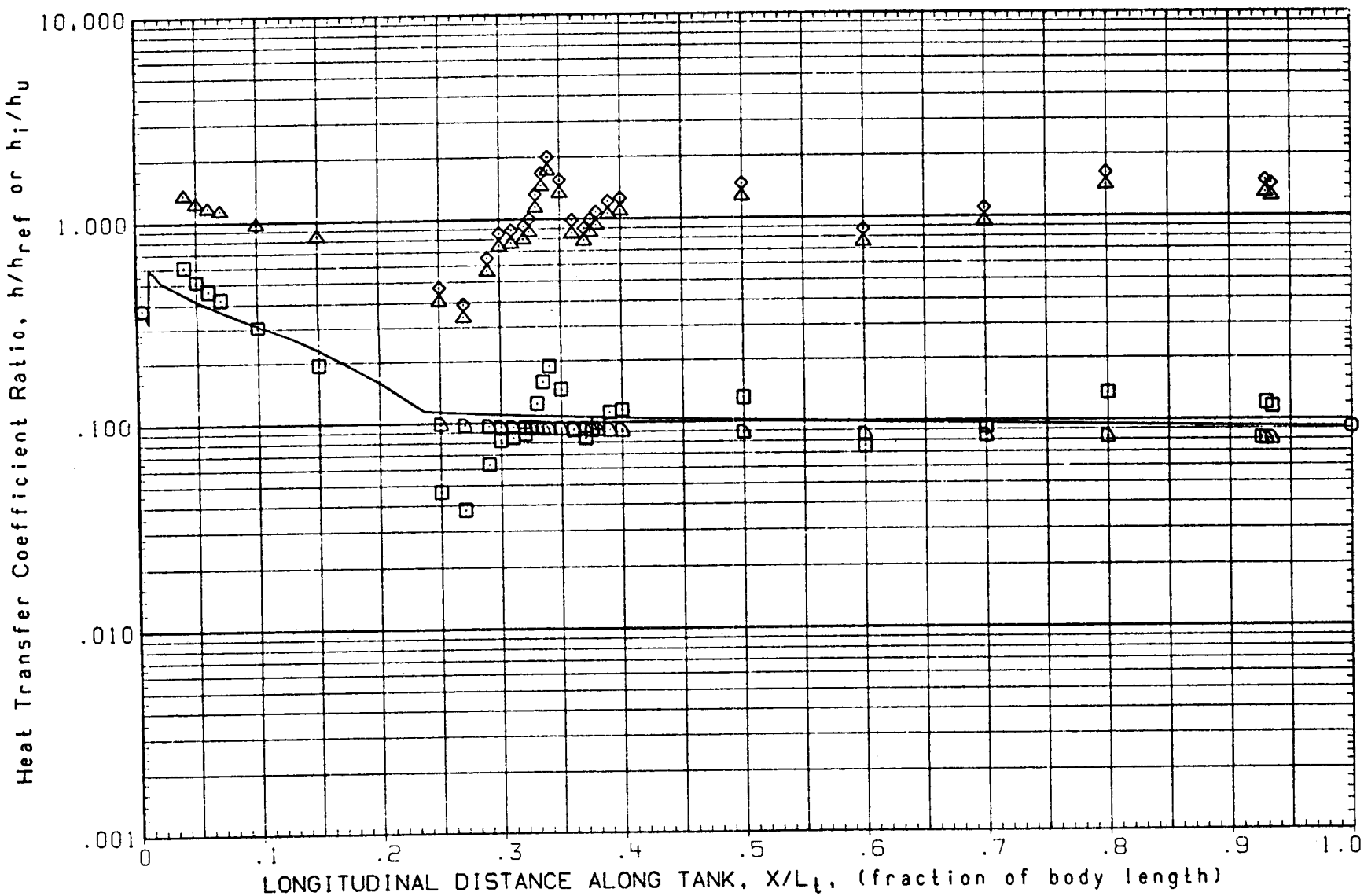

FIG. 4-22 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 270.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⊿	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT14)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	.000
(X4LT14)	◇	IH85 (W.L. TEST)	OT/ET = V4LT14/C9NT06= HI/HU	3.010	.000	.000
(Y4LT14)	△	IH85 (W.L. THEORY)	OT/ET = V4LT14/A9NT06= HI/HU	3.010	.000	.000

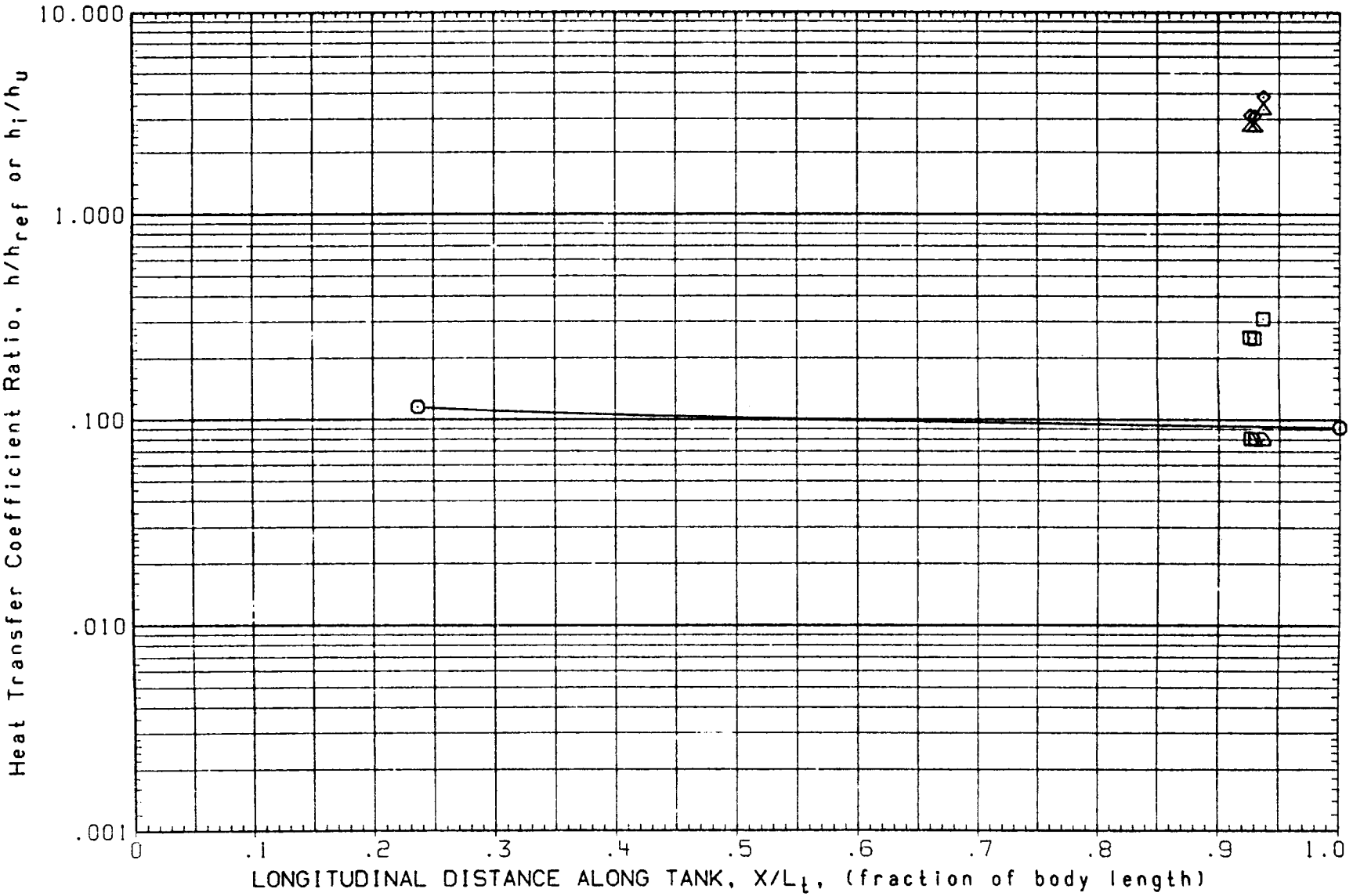

FIG. 4-22 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 289.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	◠	TANK ALONE CREATED DATA (.67 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT14)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	.000
(X4LT14)	◇	IH85 (W.L. TEST) OT/ET = V4LT14/C9NT06=	HI/HU	3.010	.000	.000
(Y4LT14)	△	IH85 (W.L. THEORY) OT/ET = V4LT14/A9NT06=	HI/HU	3.010	.000	.000

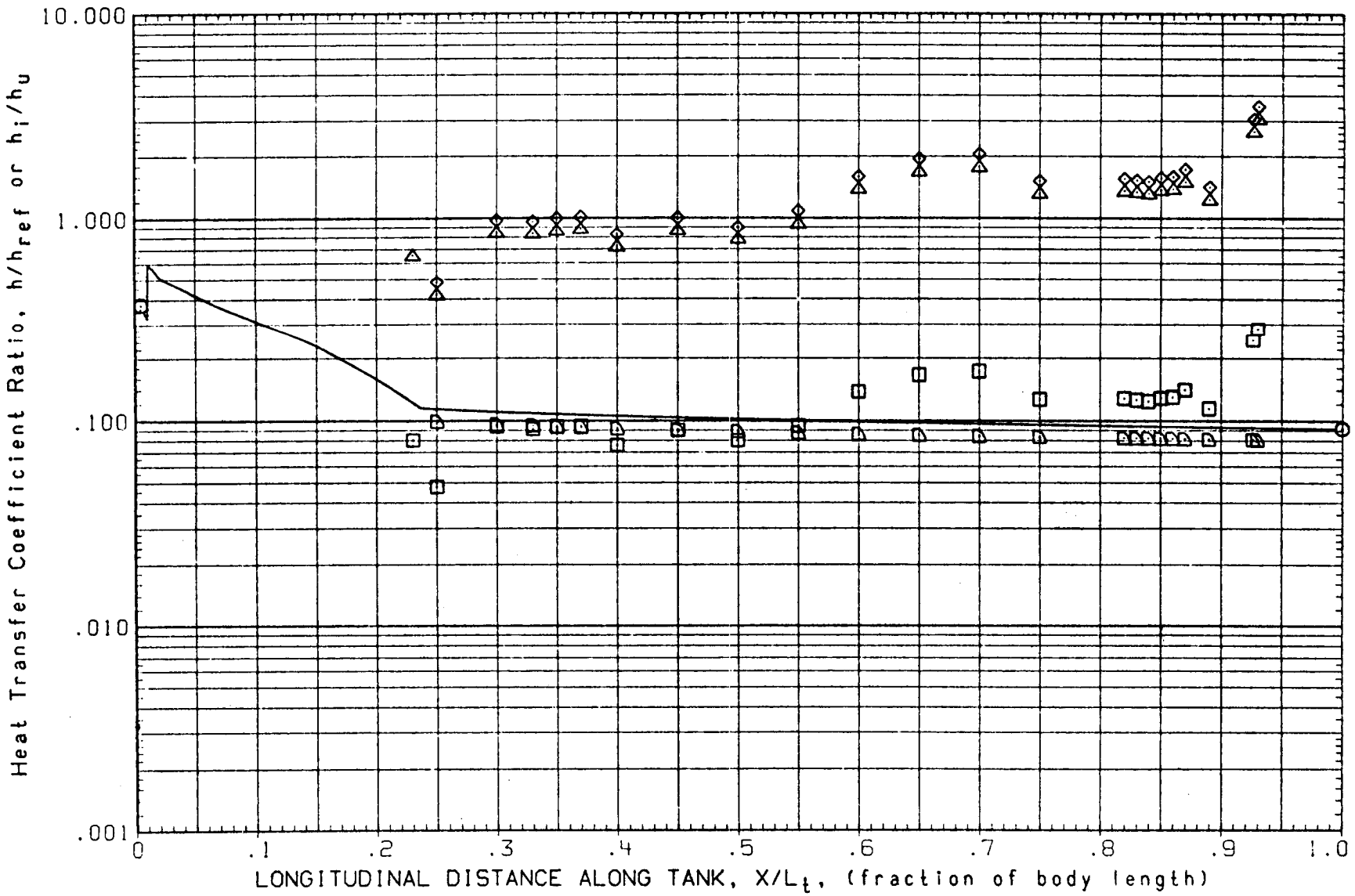

FIG. 4-22 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 292.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT14)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	.000
(X4LT14)	◇	IH85 (W.L. TEST)	OT/ET = V4LT14/C9NT06= HI/HU	3.010	.000	.000
(Y4LT14)	△	IH85 (W.L. THEORY)	OT/ET = V4LT14/A9NT06= HI/HU	3.010	.000	.000

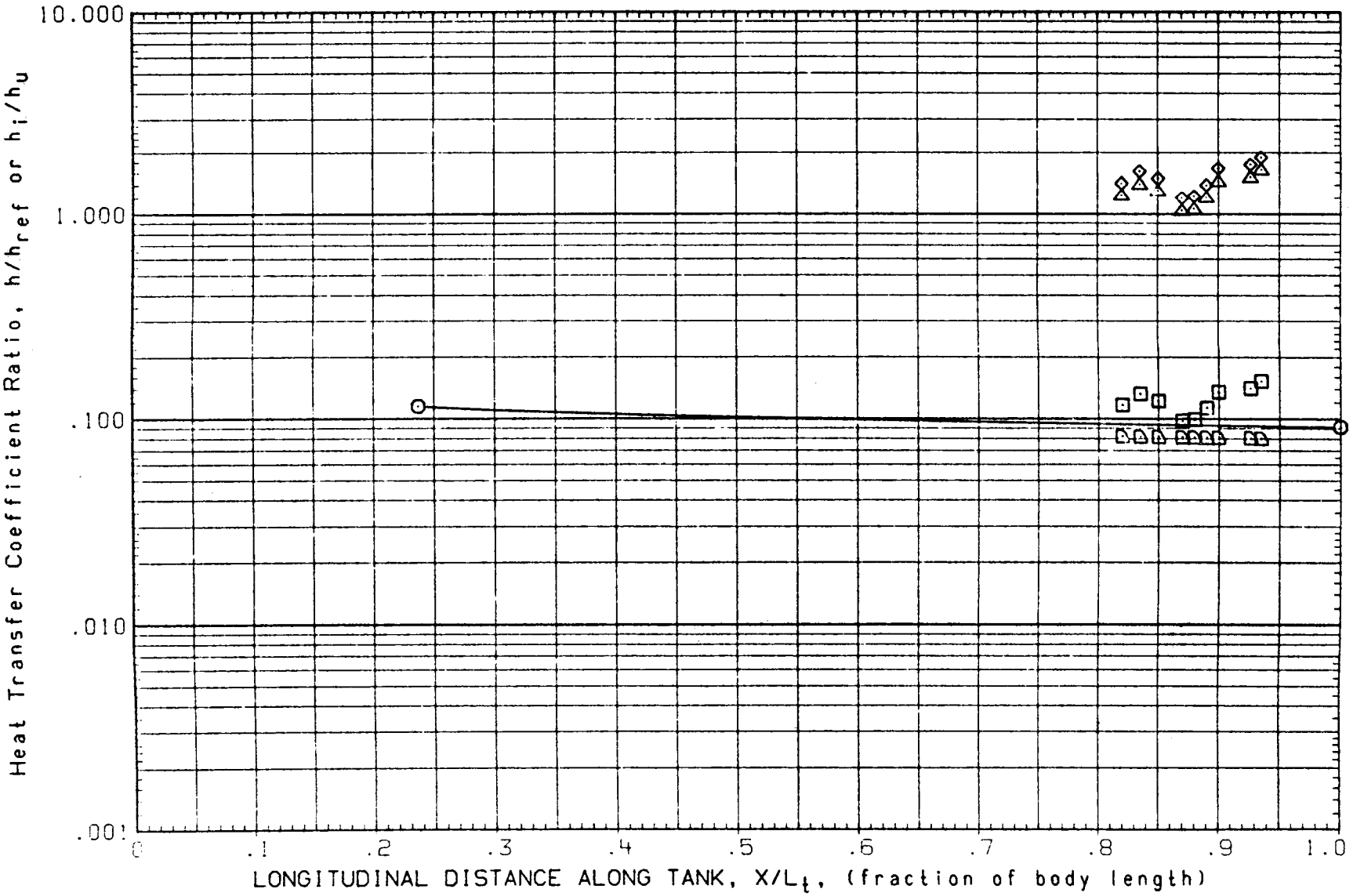

FIG. 4-22 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 301.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT05)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT14)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	.000
(X4LT14)	◇	IH85 (W.L. TEST) OT/ET = V4LT14/C9NT06= HI/HU		3.010	.000	.000
(Y4LT14)	△	IH85 (W.L. THEORY) OT/ET = V4LT14/A9NT06= HI/HU		3.010	.000	.000

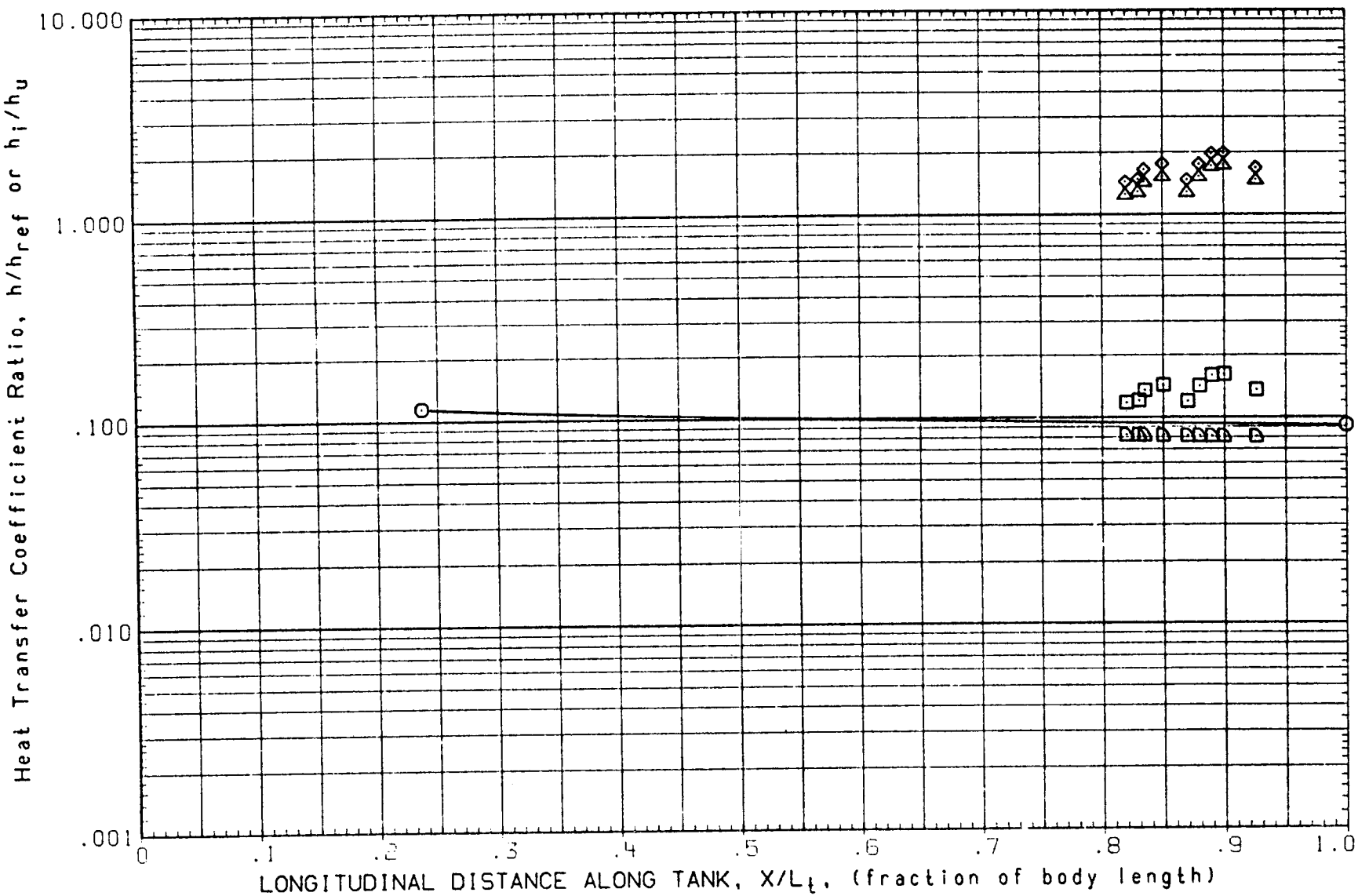

FIG. 4-22 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 305.400

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT14)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	.000
(X4LT14)	◇	IH85 (W.L. TEST) OT/ET = V4LT14/C9NT06=	HI/HU	3.010	.000	.000
(Y4LT14)	△	IH85 (W.L. THEORY) OT/ET = V4LT14/A9NT06=	HI/HU	3.010	.000	.000

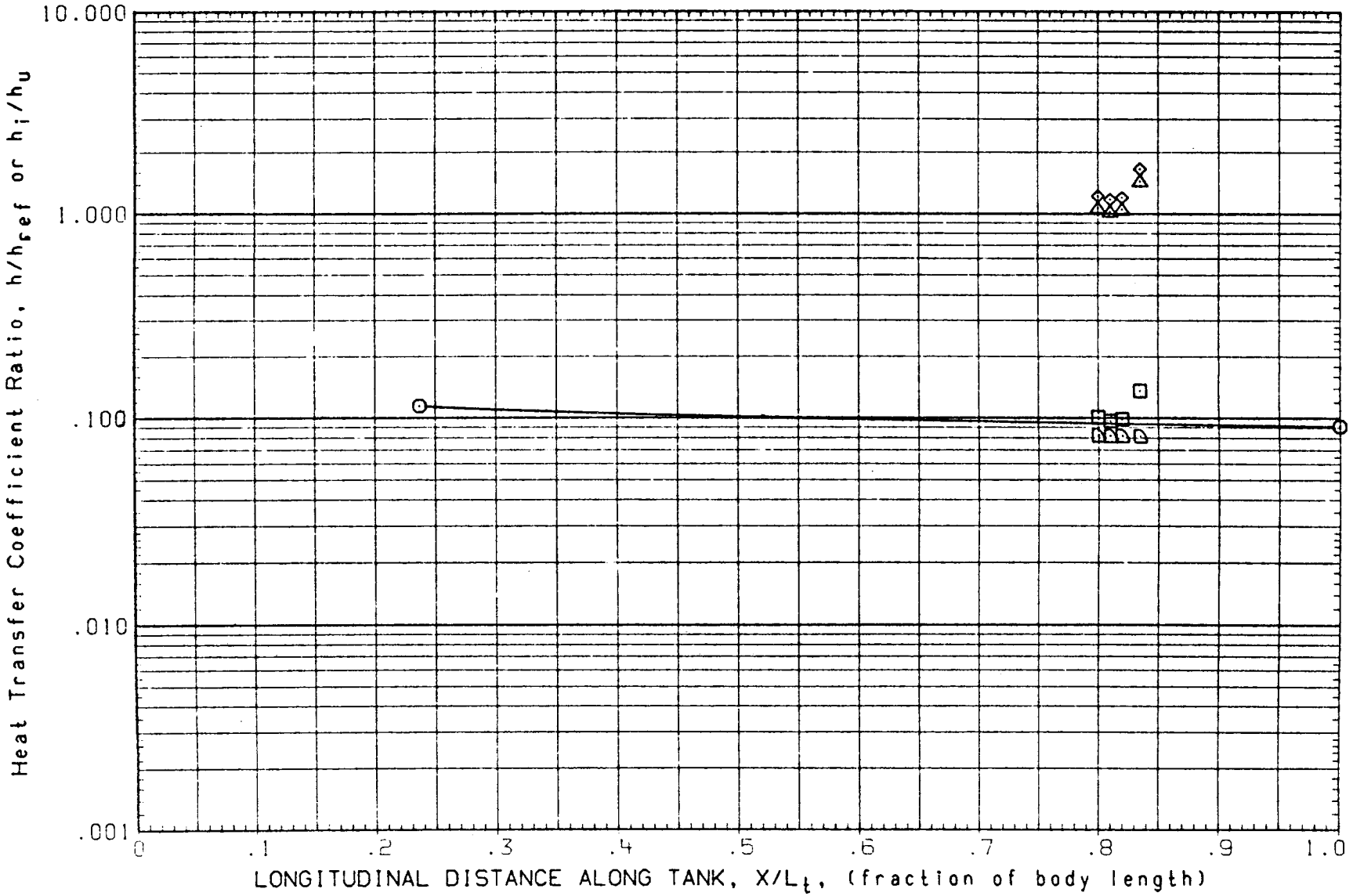

FIG. 4-22 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 309.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	3.010	.000	.000
(C9NT06)	⊡	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	3.010	.000	.000
(V4LT14)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)	3.010	.000	.000
(X4LT14)	◇	IH85 (W.L. TEST) OT/ET = V4LT14/C9NT06= HI/HU	3.010	.000	.000
(Y4LT14)	△	IH85 (W.L. THEORY) OT/ET = V4LT14/A9NT06= HI/HU	3.010	.000	.000

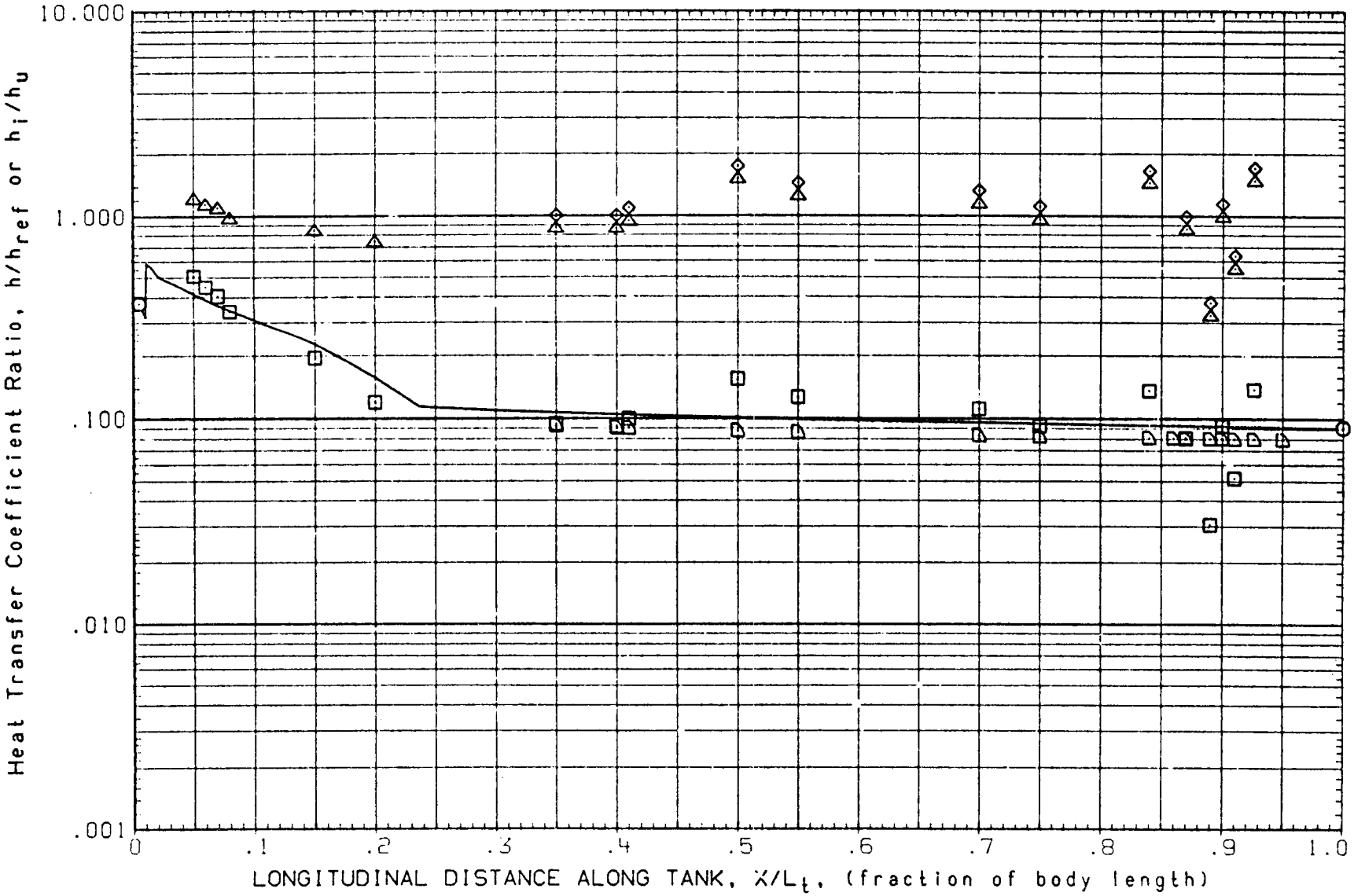

FIG. 4-22 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 315.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	3.010	.000	.000
(C9NT06)	◺	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	3.010	.000	.000
(V4LT14)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)	3.010	.000	.000
(X4LT14)	◇	IH95 (W.L. TEST) OT/ET = V4LT14/C9NT06= HI/HU	3.010	.000	.000
(Y4LT14)	△	IH85 (W.L. THEORY) OT/ET = V4LT14/A9NT06= HI/HU	3.010	.000	.000

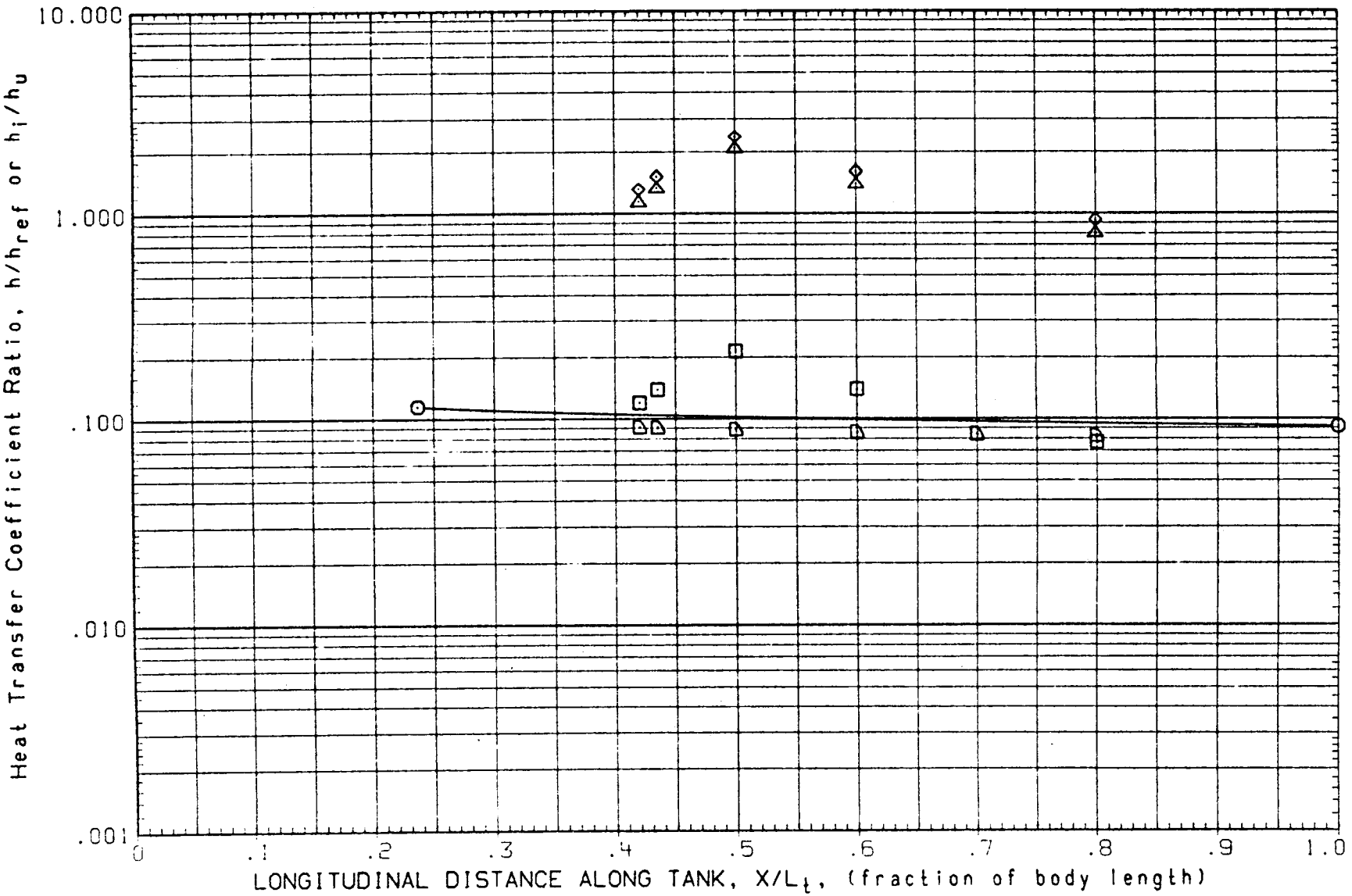

FIG. 4-22 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 322.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT14)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	.000
(X4LT14)	◇	IH85 (W.L. TEST) OT/ET = V4LT14/C9NT06= HI/HU		3.010	.000	.000
(Y4LT14)	△	IH85 (W.L. THEORY) OT/ET = V4LT14/A9NT06= HI/HU		3.010	.000	.000

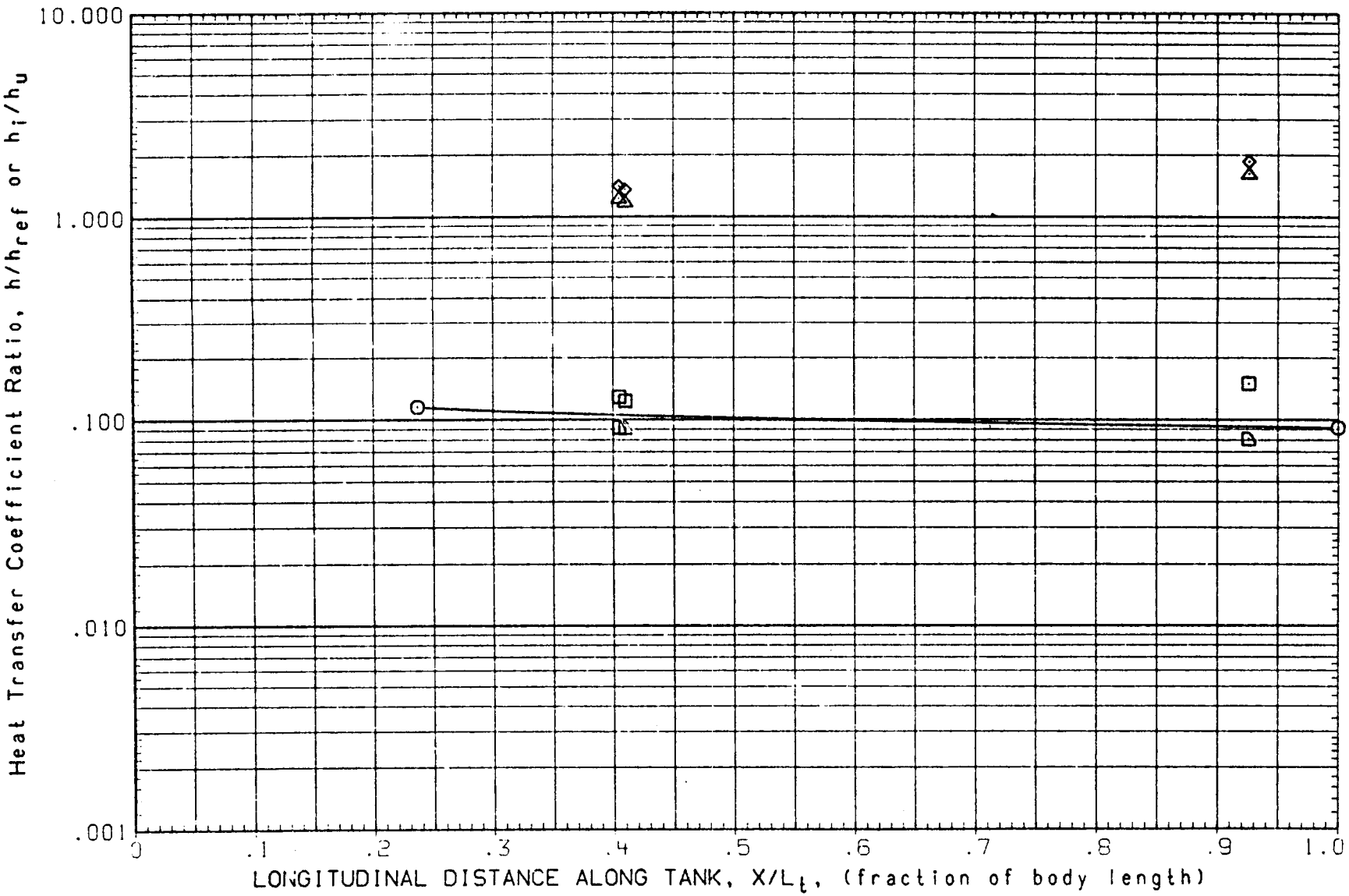

FIG. 4-22 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 324.450

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT14)	□	IH85, AEDC V41A-N5, CONFIGURATION 0 (T)		3.010	.000	.000
(X4LT14)	◇	IH85 (W.L. TEST)	OT/ET = V4LT14/C9NT06= HI/HU	3.010	.000	.000
(Y4LT14)	△	IH85 (W.L. THEORY)	OT/ET = V4LT14/A9NT06= HI/HU	3.010	.000	.000

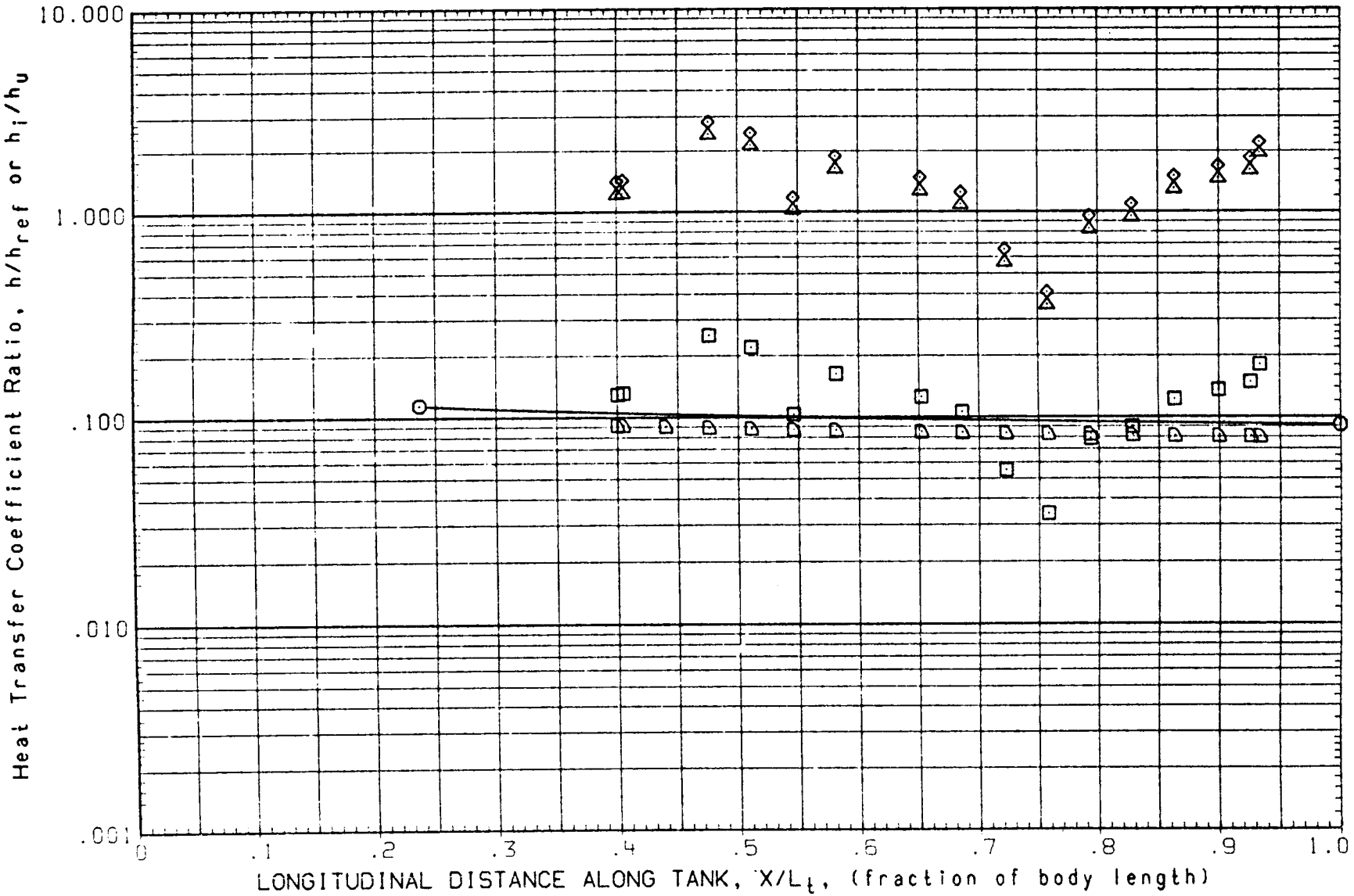

FIG. 4-22 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 326.850

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT05)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT14)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	.000
(X4LT14)	◇	IH85 (W.L. TEST) OT/ET = V4LT14/C9NT06=	HI/HU	3.010	.000	.000
(Y4LT14)	△	IH85 (W.L. THEORY) OT/ET = V4LT14/A9NT06=	HI/HU	3.010	.000	.000

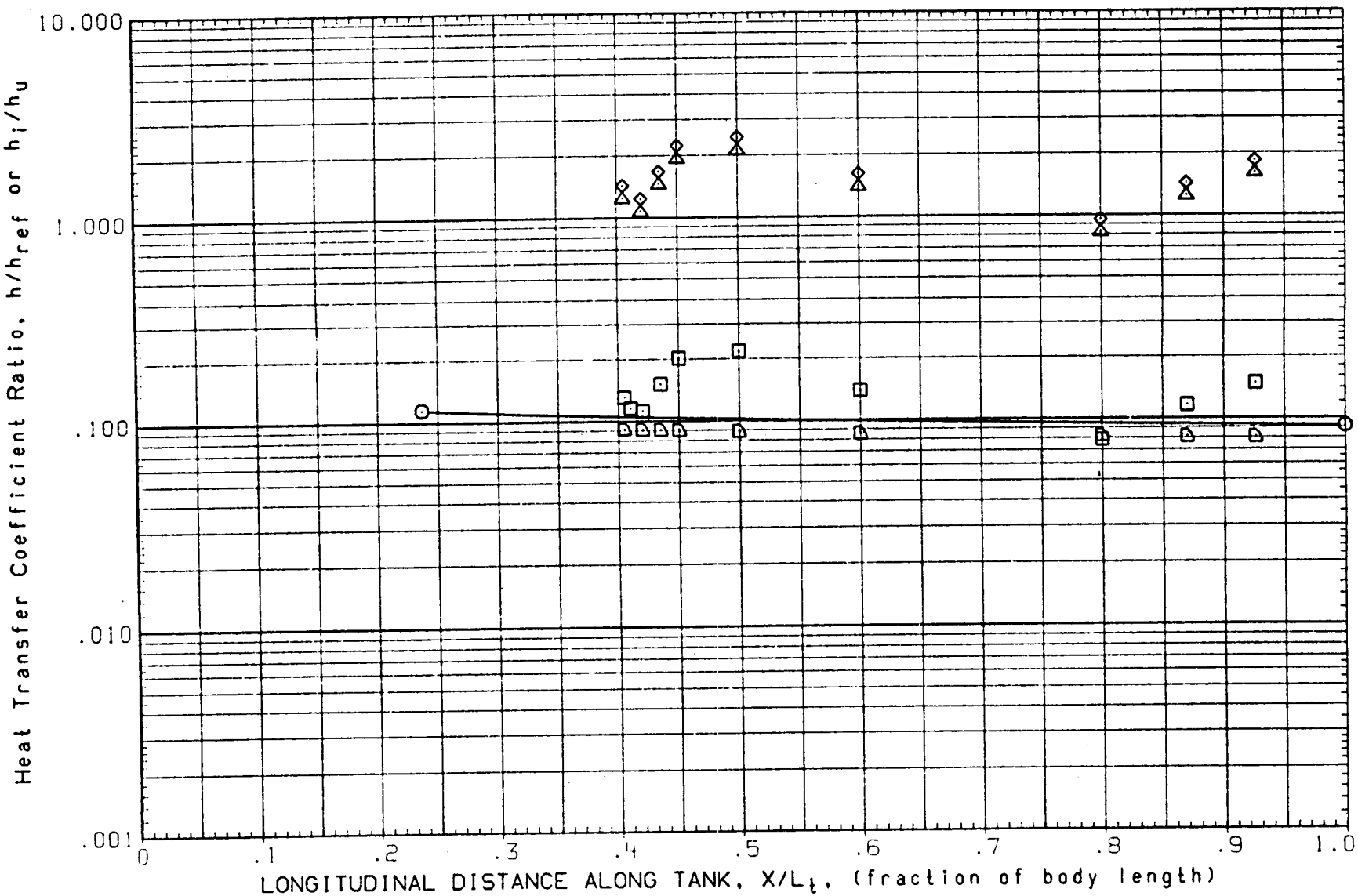

FIG. 4-22 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 330.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT14)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	.000
(X4LT14)	◇	IH85 (W.L. TEST) OT/ET = V4LT14/C9NT06= HI/HU		3.010	.000	.000
(Y4LT14)	△	IH85 (W.L. THEORY) OT/ET = V4LT14/A9NT06= HI/HU		3.010	.000	.000

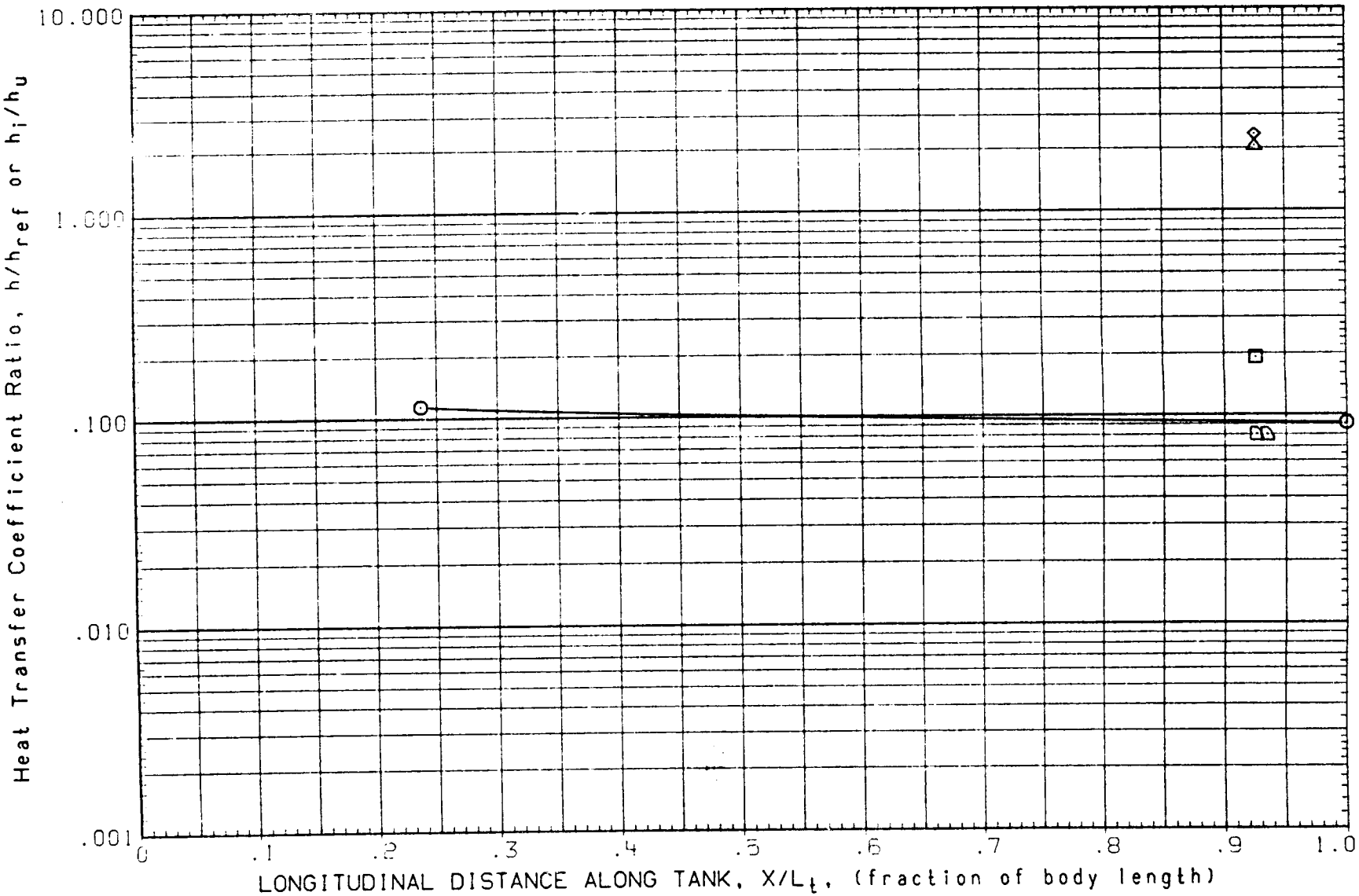

FIG. 4-22 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 334.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⊿	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT14)	□	IH85, AEDC V4IA-N5, CONFIGURATION 0 (T)		3.010	.000	.000
(X4LT14)	◇	IH85 (W.L. TEST) OT/ET = V4LT14/C9NT06=	HI/HU	3.010	.000	.000
(Y4LT14)	△	IH85 (W.L. THEORY) OT/ET = V4LT14/A9NT06=	HI/HU	3.010	.000	.000

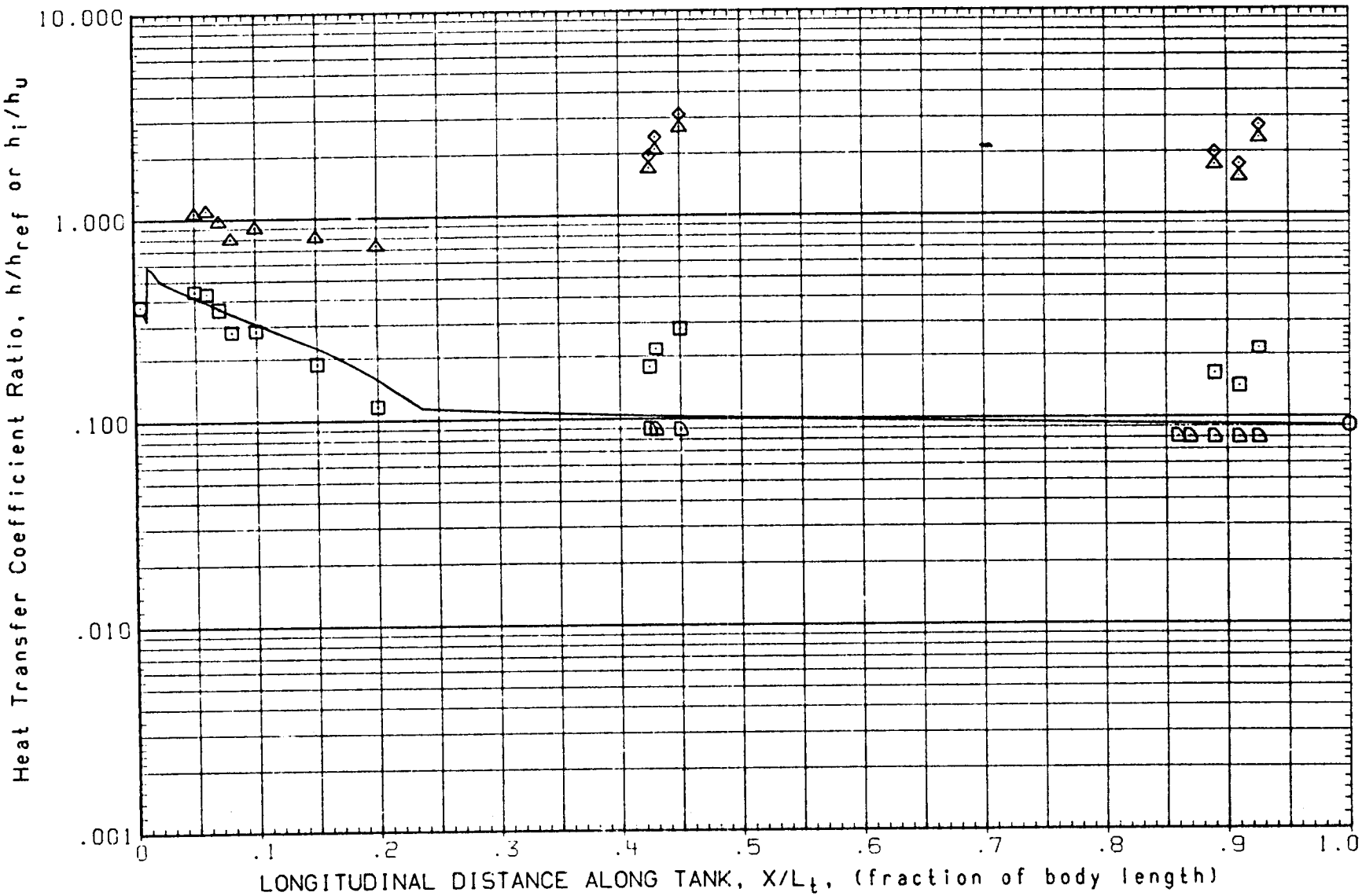

FIG. 4-22 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 337.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT14)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	.000
(X4LT14)	◇	IH85 (W.L. TEST)	OT/ET = V4LT14/C9NT06= HI/HU	3.010	.000	.000
(Y4LT14)	△	IH85 (W.L. THEORY)	OT/ET = V4LT14/A9NT06= HI/HU	3.010	.000	.000

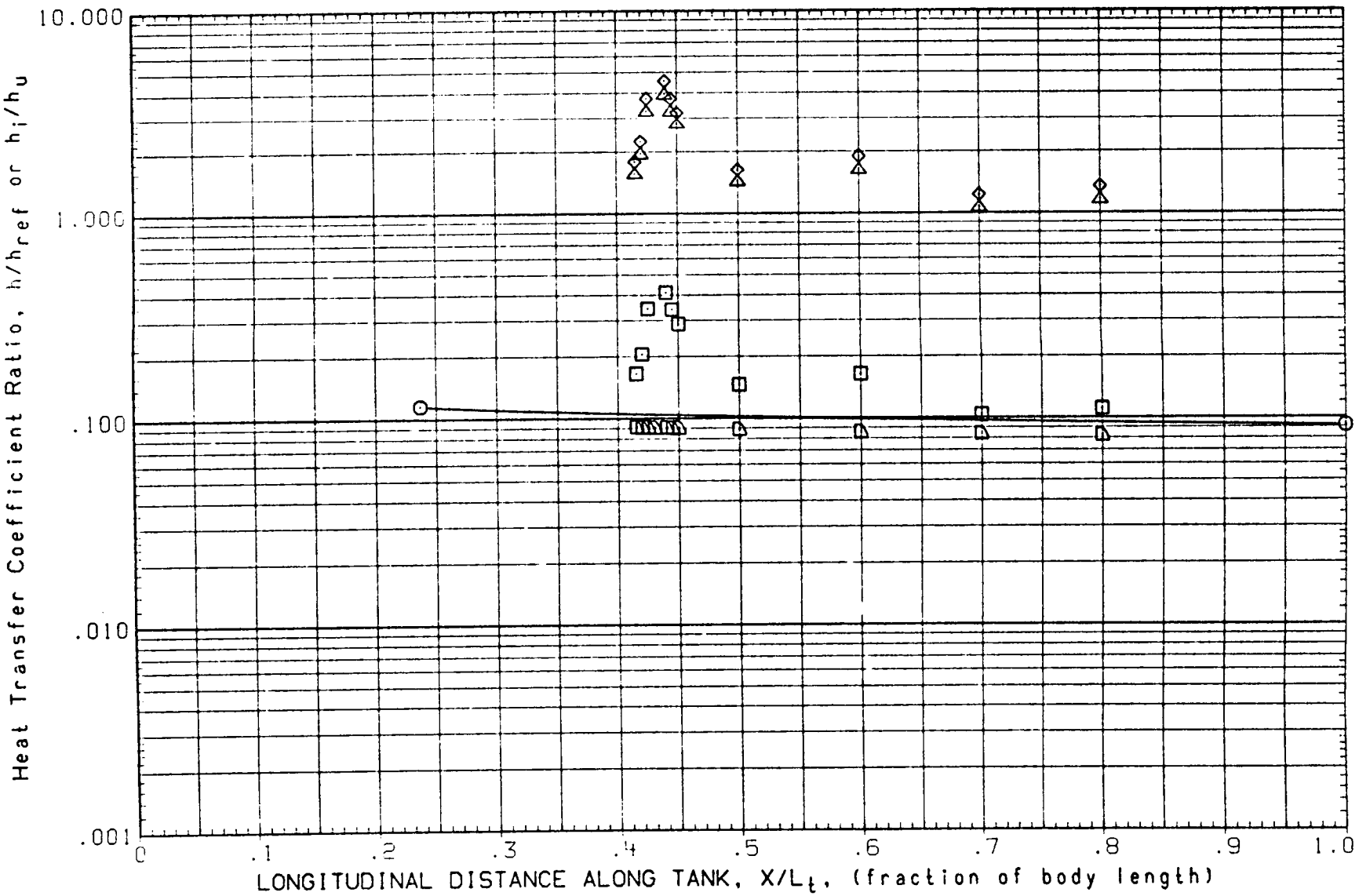

FIG. 4-22 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 343.120

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT14)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	.000
(X4LT14)	◇	IH85 (W.L. TEST)	OT/ET = V4LT14/C9NT06= HI/HU	3.010	.000	.000
(Y4LT14)	△	IH85 (W.L. THEORY)	OT/ET = V4LT14/A9NT06= HI/HU	3.010	.000	.000

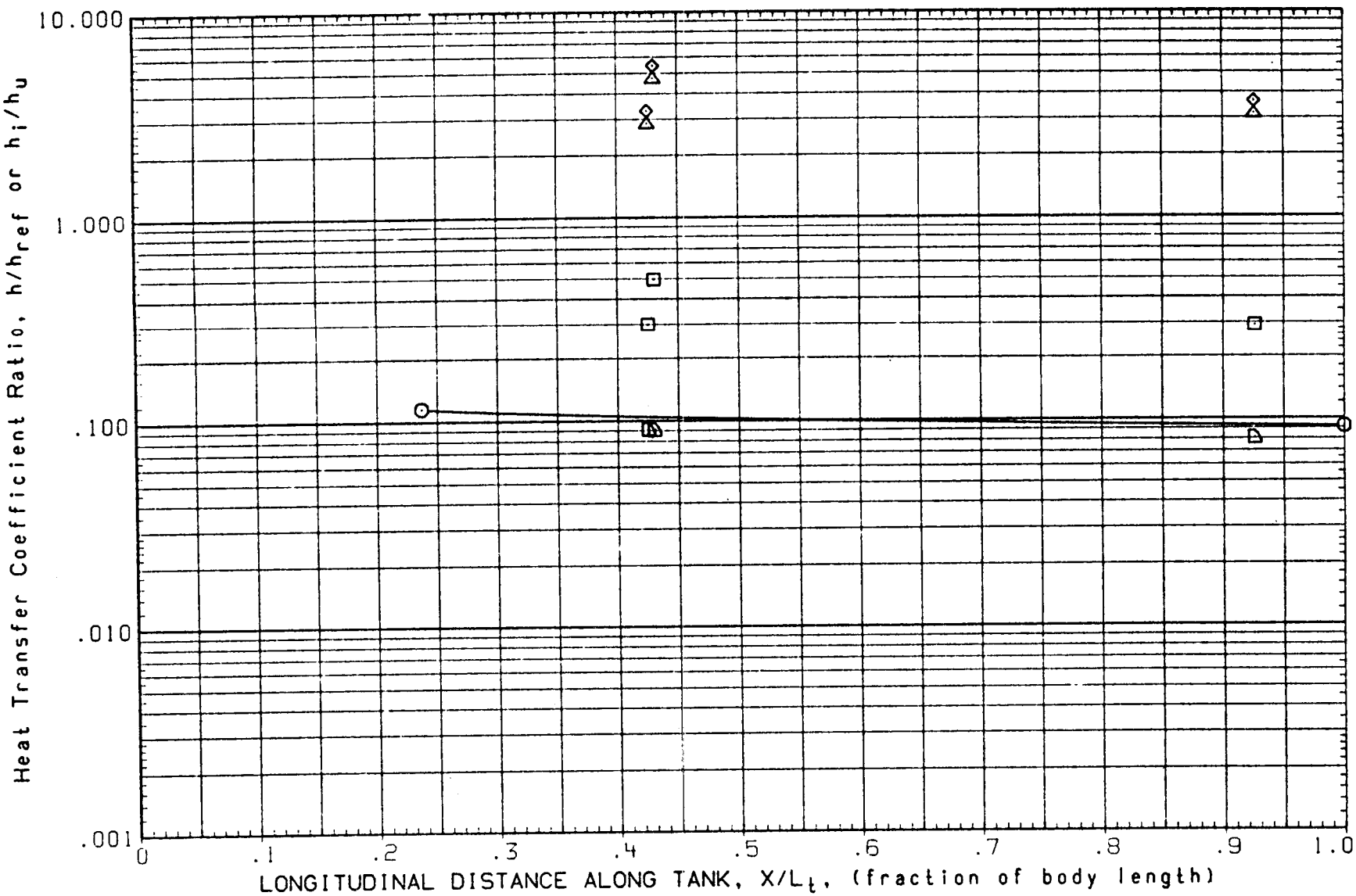

FIG. 4-22 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 345.560

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	▷	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT14)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	.000
(X4LT14)	◇	IH85 (W.L. TEST)	OT/ET = V4LT14/C9NT06= HI/HU	3.010	.000	.000
(Y4LT14)	△	IH85 (W.L. THEORY)	OT/ET = V4LT14/A9NT06= HI/HU	3.010	.000	.000

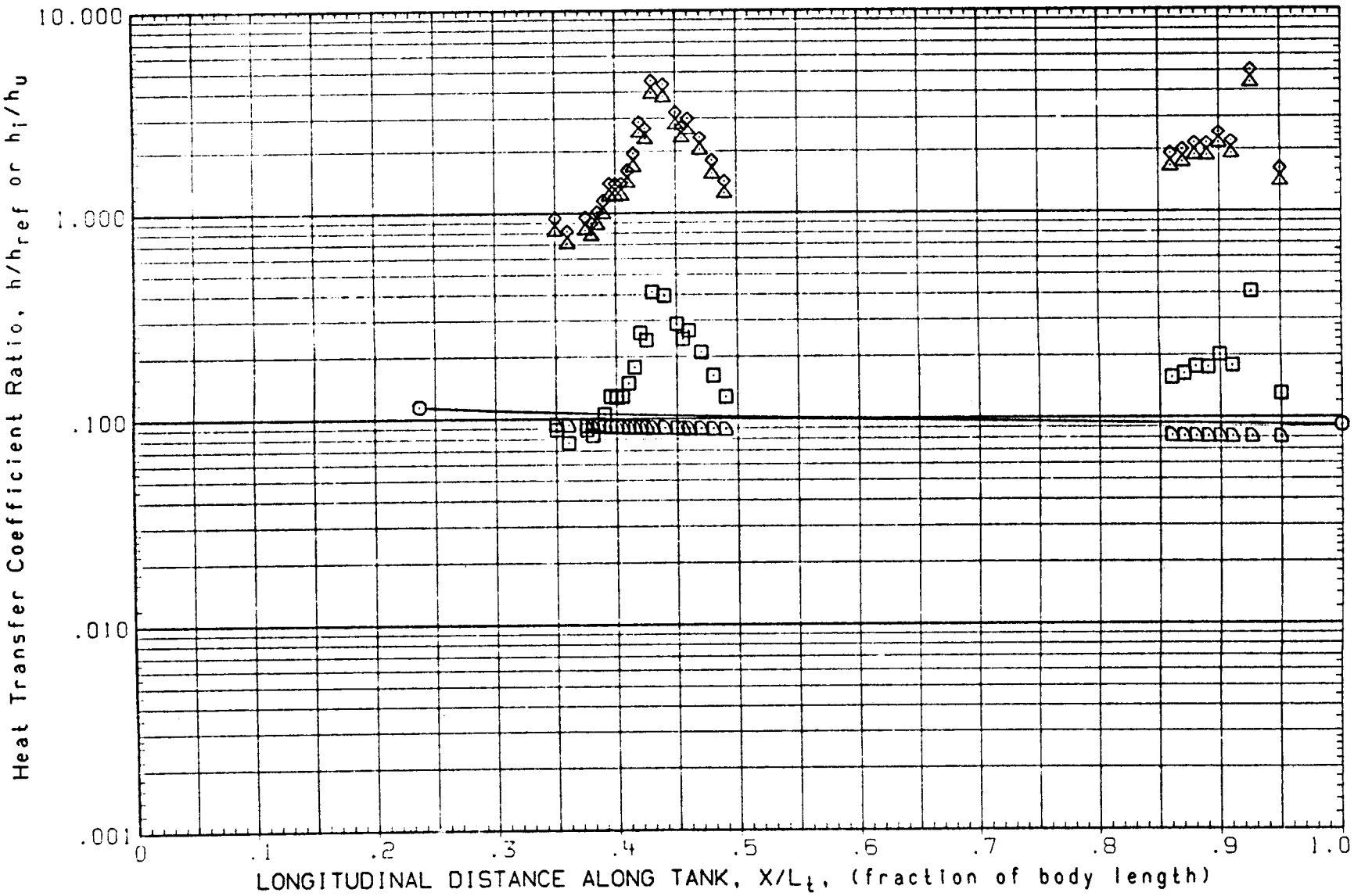

FIG. 4-22 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 348.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT14)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	.000
(X4LT14)	◇	IH85 (W.L. TEST)	OT/ET = V4LT14/C9NT06= HI/HU	3.010	.000	.000
(Y4LT14)	△	IH85 (W.L. THEORY)	OT/ET = V4LT14/A9NT06= HI/HU	3.010	.000	.000

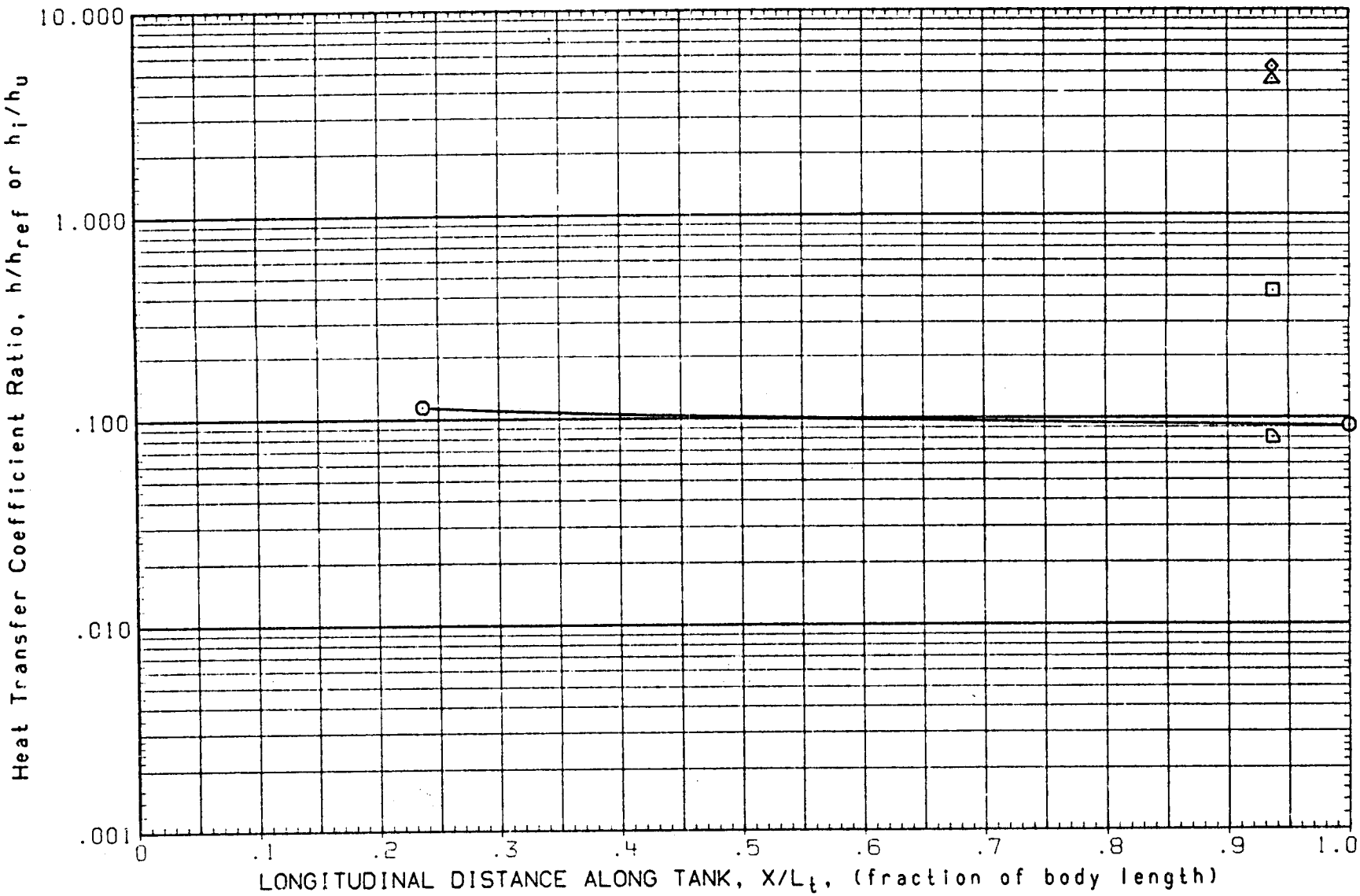

FIG. 4-22 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 352.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	.000
(V4LT14)	□	IH85, AEDC V4TA-WS, CONFIGURATION 0 (T)		3.010	.000	.000
(X4LT14)	◇	IH85 (W.L. TEST) OT/ET = V4LT14/C9NT06=	HI/HU	3.010	.000	.000
(Y4LT14)	△	IH85 (W.L. THEORY) OT/ET = V4LT14/A9NT06=	HI/HU	3.010	.000	.000

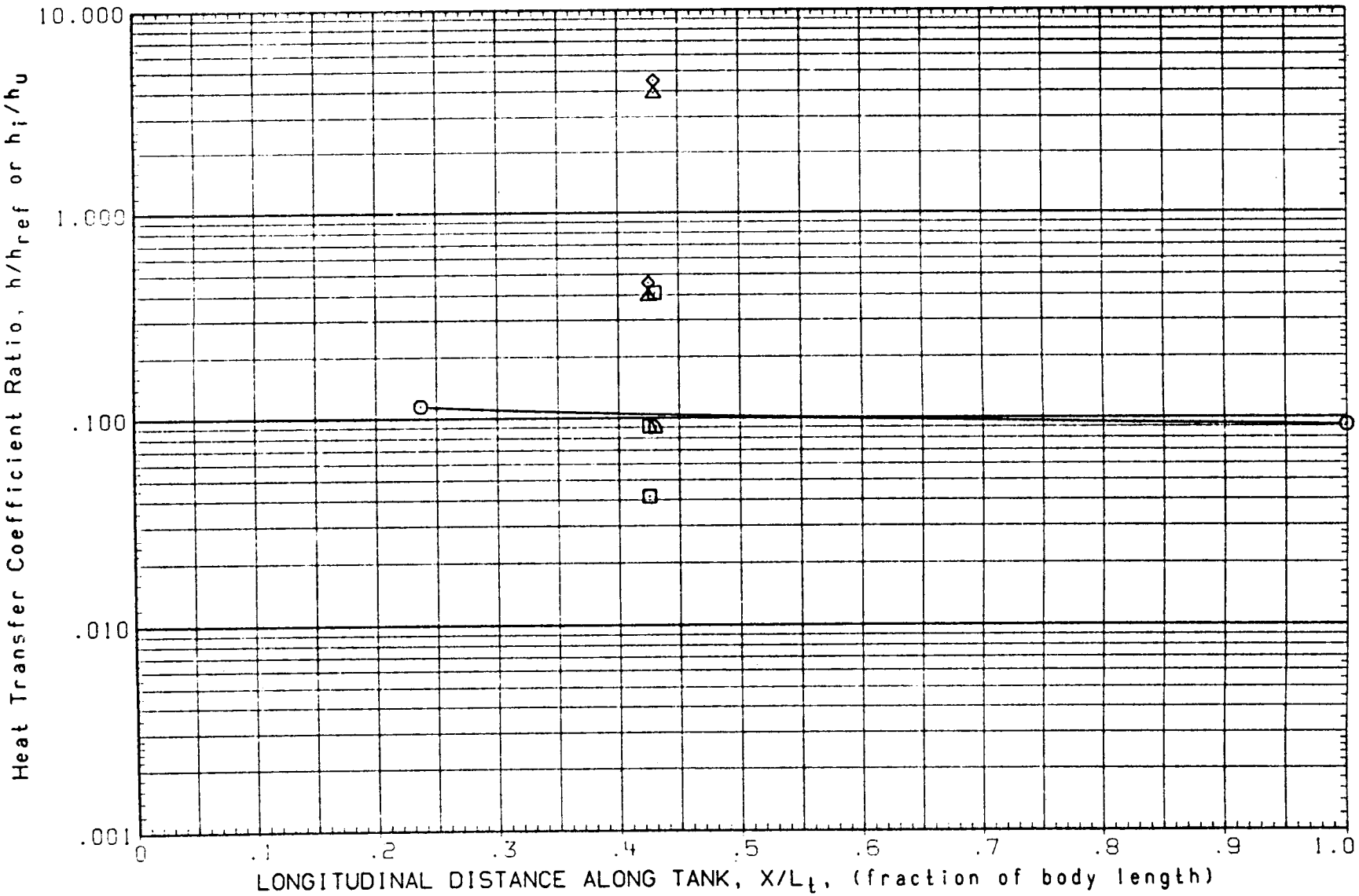

FIG. 4-22 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 354.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	⬠	DATA NOT AVAILABLE		3.010	.000	.000
(V4LT14)	□	DATA NOT AVAILABLE		3.010	.000	.000
(X4LT14)	◇	DATA NOT AVAILABLE		3.010	.000	.000
(Y4LT14)	△	DATA NOT AVAILABLE		3.010	.000	.000

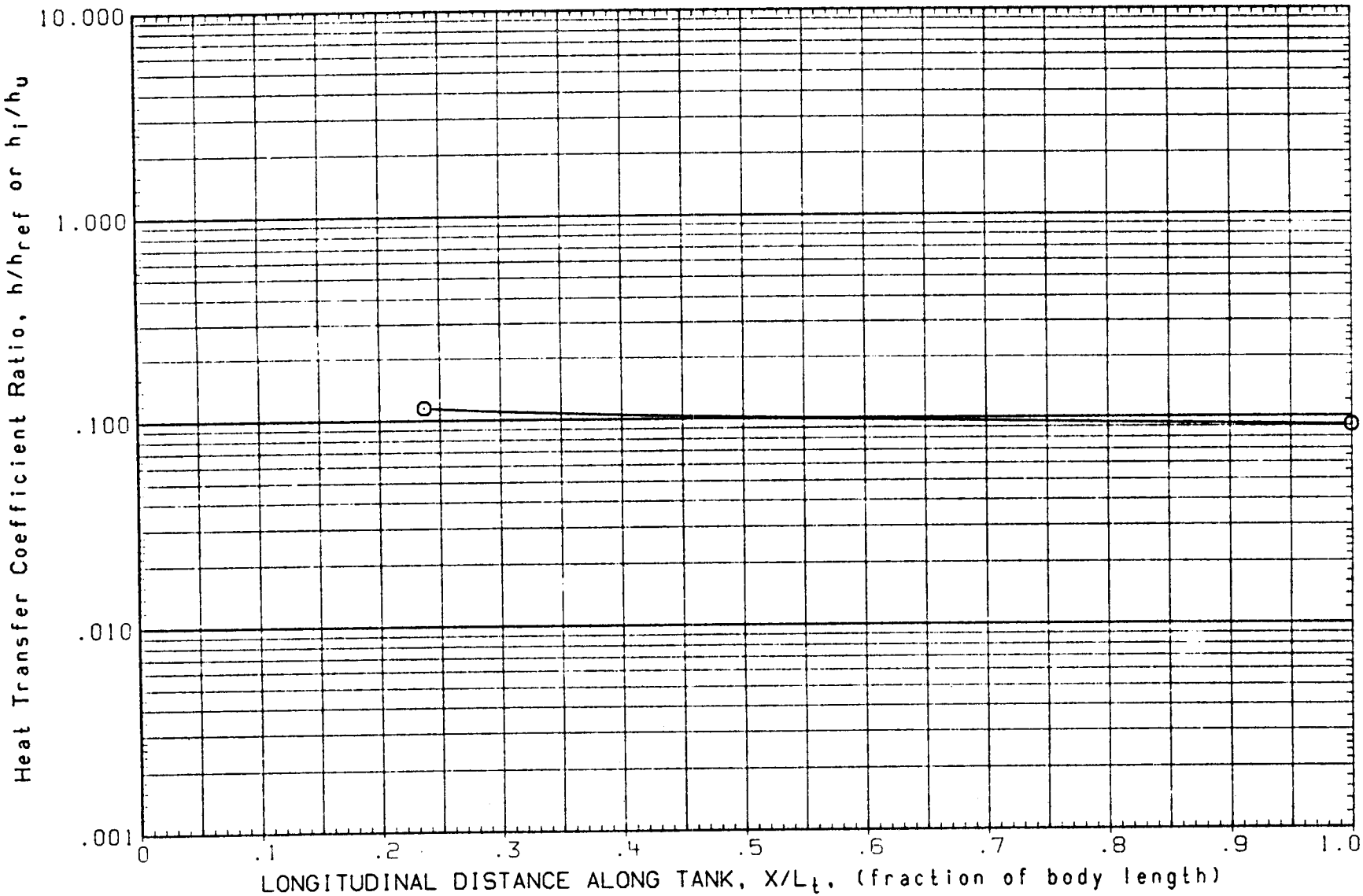

FIG. 4-22 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 355.160

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT06)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	.000
(C9NT06)	▷	DATA NOT AVAILABLE		3.010	.000	.000
(Y4LT14)	□	DATA NOT AVAILABLE		3.010	.000	.000
(X4LT14)	◇	DATA NOT AVAILABLE		3.010	.000	.000
(Y4LT14)	△	DATA NOT AVAILABLE		3.010	.000	.000

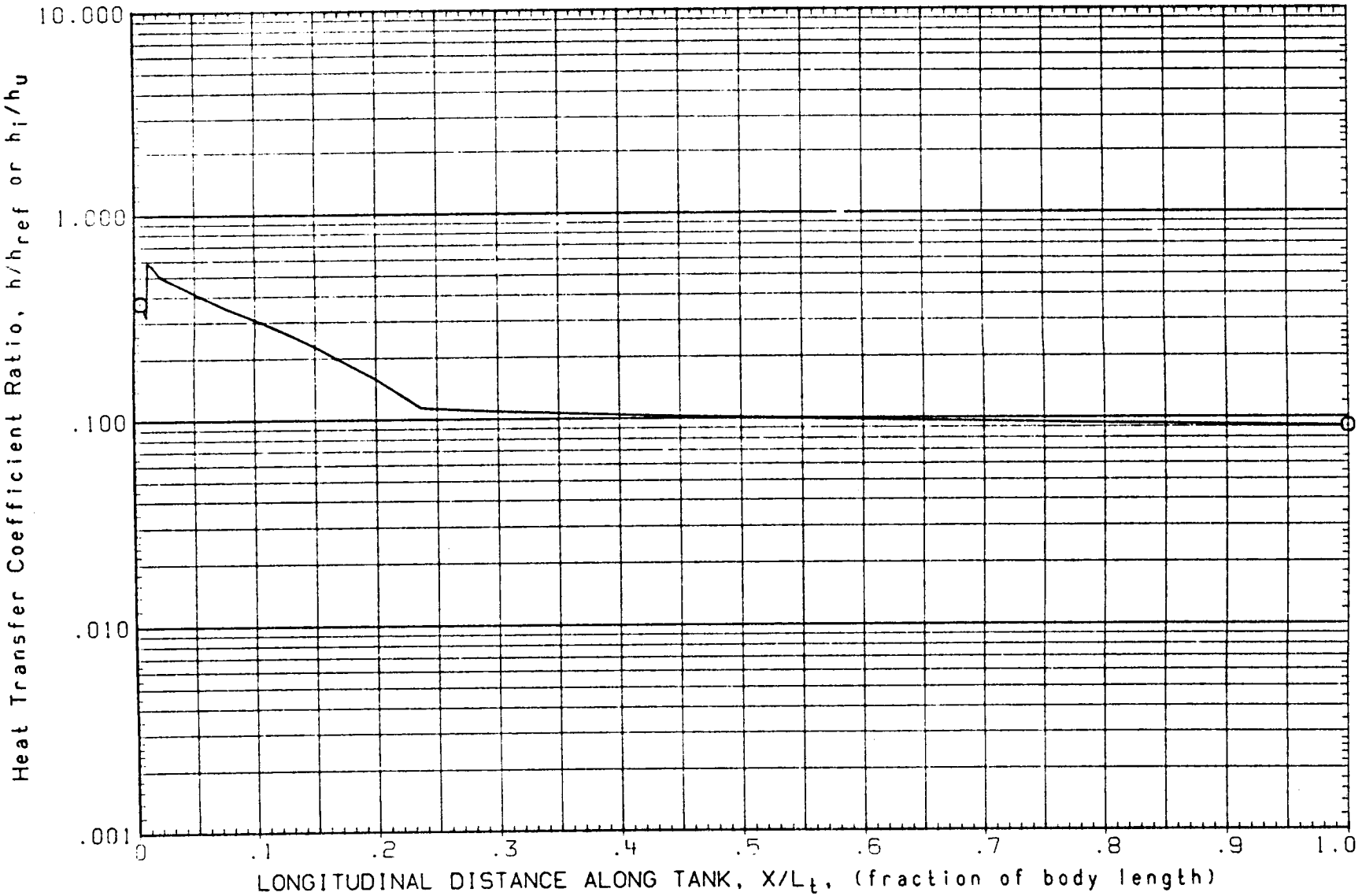

FIG. 4-22 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 0
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 360.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	▷	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT15)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	3.000
(X4LT15)	◇	IH85 (W.L. TEST)	OT/ET = V4LT15/C9NT07= HI/HU	3.010	.000	3.000
(Y4LT15)	△	IH85 (W.L. THEORY)	OT/ET = V4LT15/A9NT07= HI/HU	3.010	.000	3.000

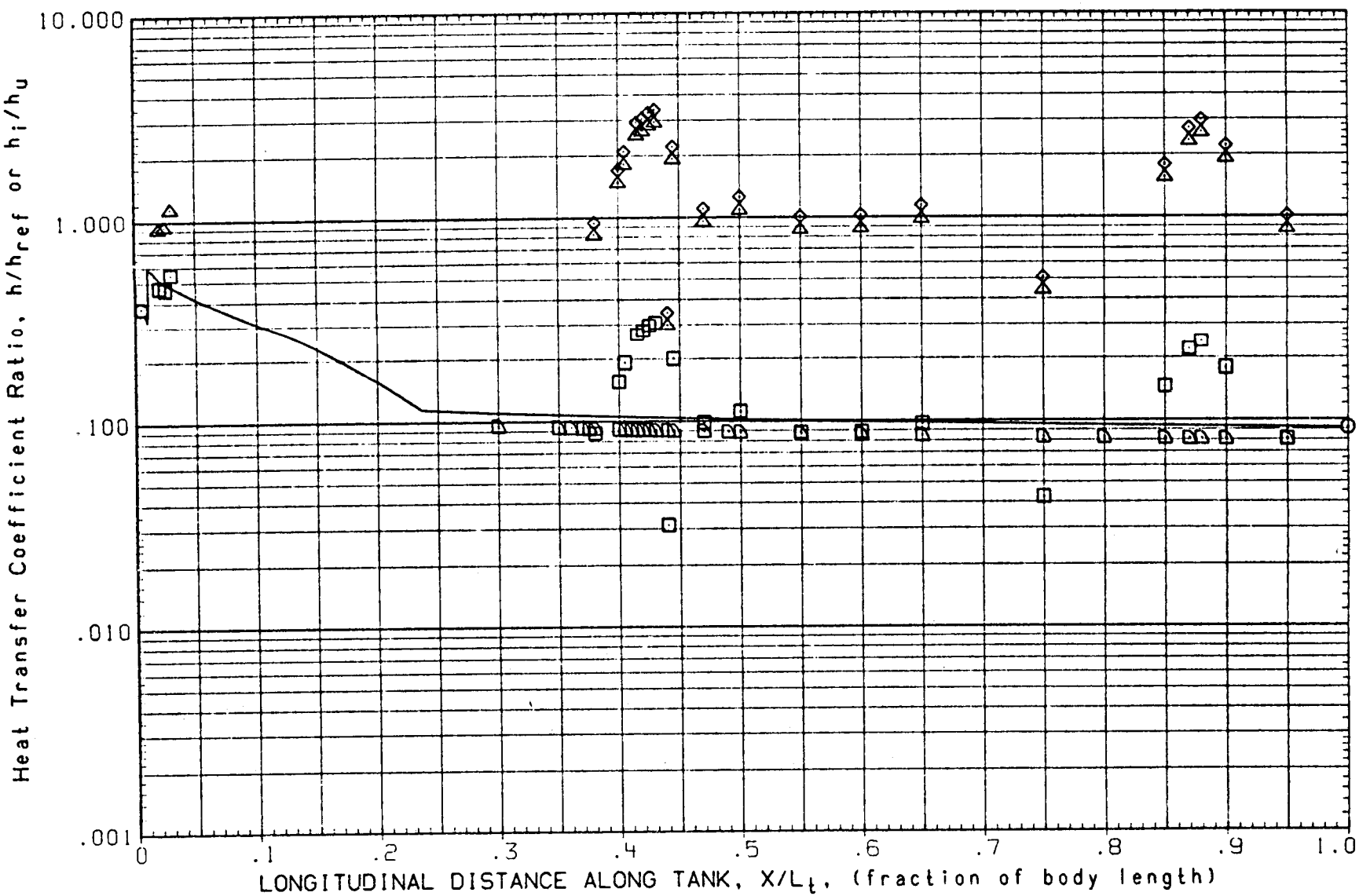

FIG. 4-23 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = .000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT07)	○	DATA NOT AVAILABLE	3.010	.000	3.000
(C9NT07)	⬠	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	3.010	.000	3.000
(V4LT15)	□	IH85, AEDC V4:A-W5, CONFIGURATION 0 (T)	3.010	.000	3.000
(X4LT15)	◇	IH85 (W.L. TEST) OT/ET = V4LT15/C9NT07= HI/HU	3.010	.000	3.000
(Y4LT15)	△	IH85 (W.L. THEORY) OT/ET = V4LT15/A9NT07= HI/HU	3.010	.000	3.000

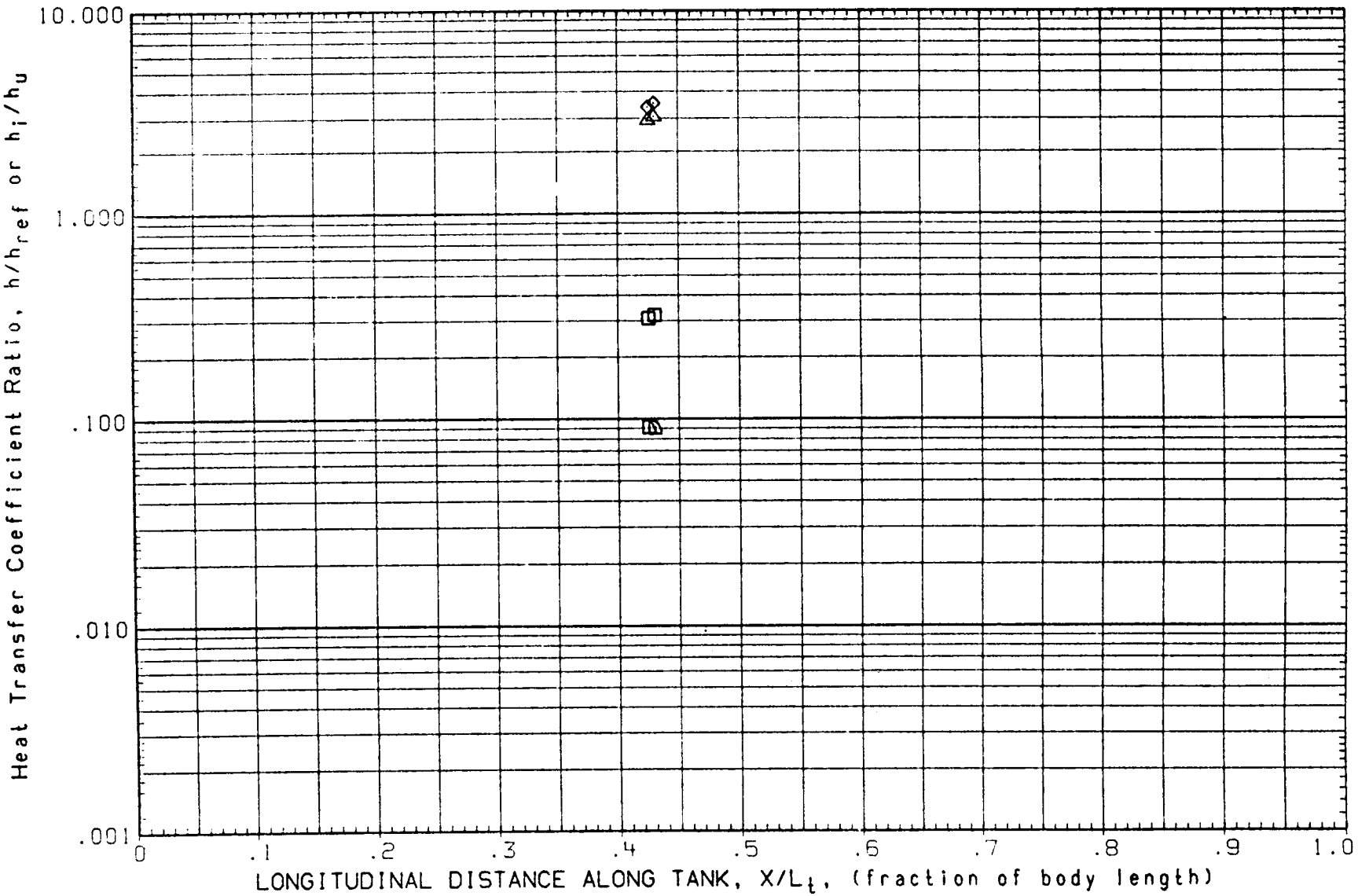

FIG. 4-23 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 5.625

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⬠	DATA NOT AVAILABLE		3.010	.000	3.000
(V4LT15)	□	DATA NOT AVAILABLE		3.010	.000	3.000
(X4LT15)	◇	DATA NOT AVAILABLE		3.010	.000	3.000
(Y4LT15)	△	DATA NOT AVAILABLE		3.010	.000	3.000

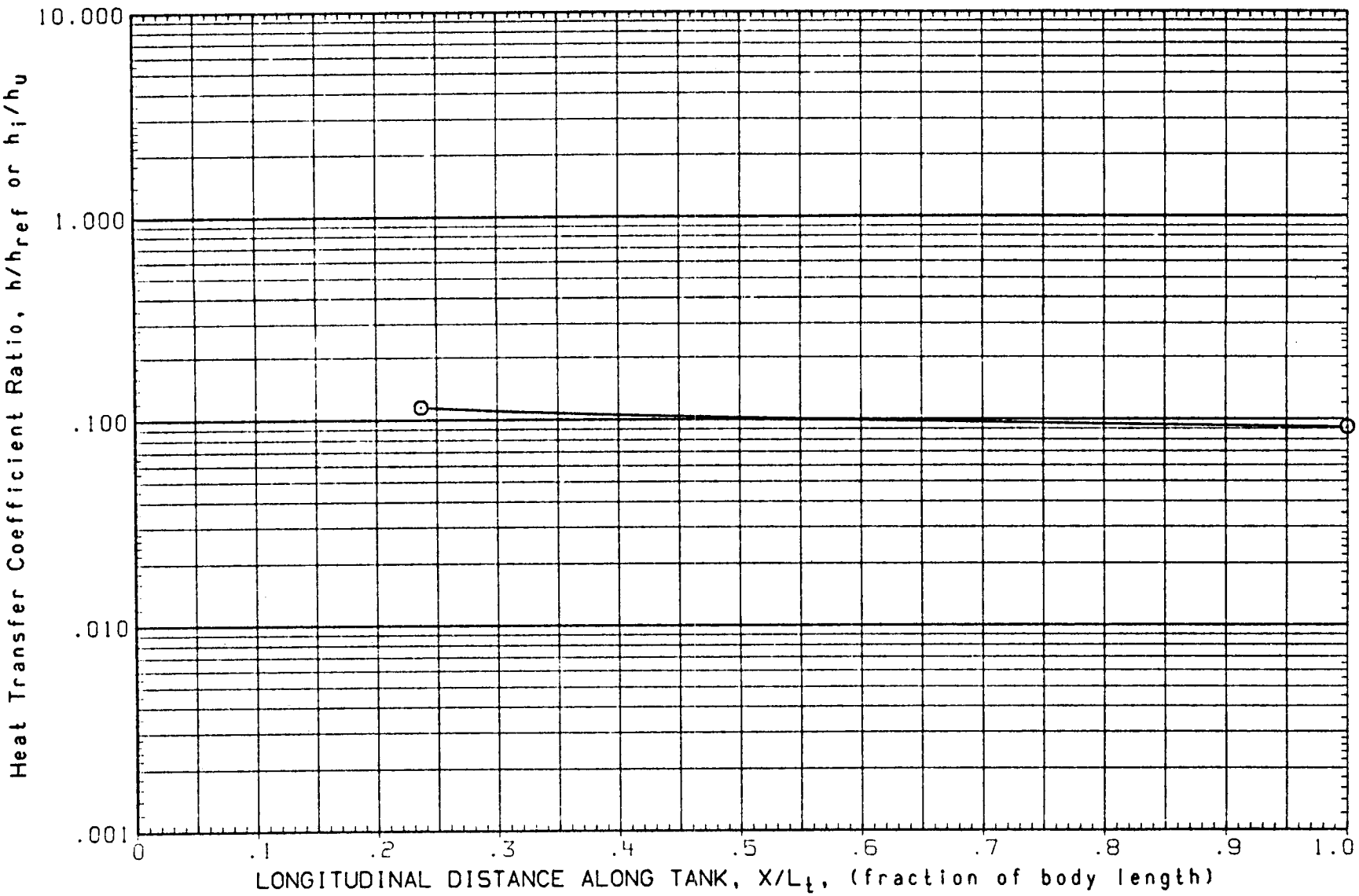

FIG. 4-23 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 5.630

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT15)	□	IH85, AEDC V4TA-W5, CONFIGURATION 0 (T)		3.010	.000	3.000
(X4LT15)	◇	IH85 (W.L. TEST)	OT/ET = V4LT15/C9NT07= HI/HU	3.010	.000	3.000
(Y4LT15)	△	IH85 (W.L. THEORY)	OT/ET = V4LT15/A9NT07= HI/HU	3.010	.000	3.000

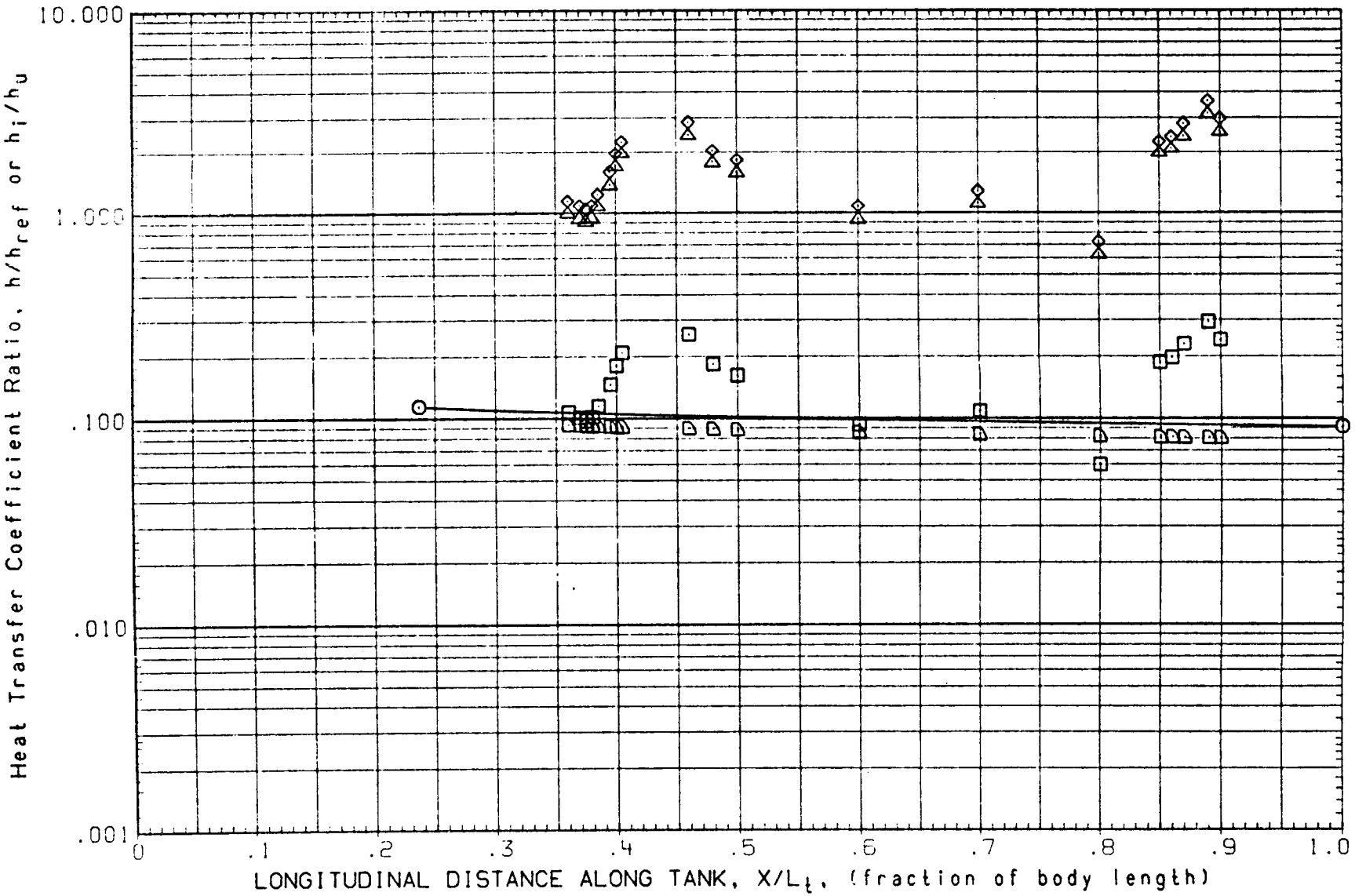

FIG. 4-23 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 11.250

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	◺	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT15)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	3.000
(X4LT15)	◇	IH85 (W.L. TEST)	OT/ET = V4LT15/C9NT07= HI/HU	3.010	.000	3.000
(Y4LT15)	△	IH85 (W.L. THEORY)	OT/ET = V4LT15/A9NT07= HI/HU	3.010	.000	3.000

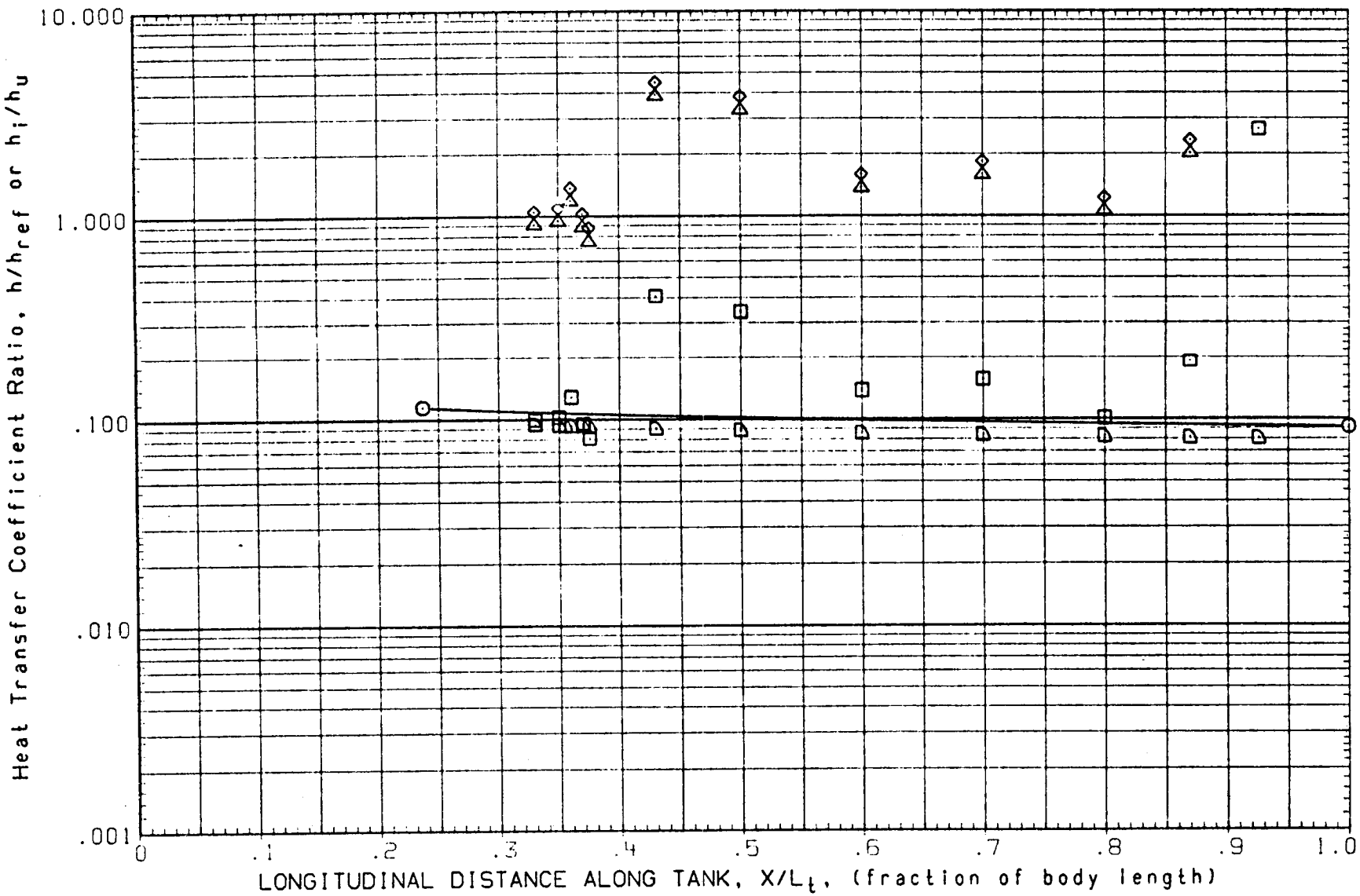

FIG. 4-23 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 17.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	□	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT15)	◇	IH85, AEDC V4TA-85, CONFIGURATION 0 (T)		3.010	.000	3.000
(X4LT15)	⧖	IH85 (W.L. TEST)	OT/ET = V4LT15/C9NT07= HI/HU	3.010	.000	3.000
(Y4LT15)	△	IH85 (W.L. THEORY)	OT/ET = V4LT15/A9NT07= HI/HU	3.010	.000	3.000

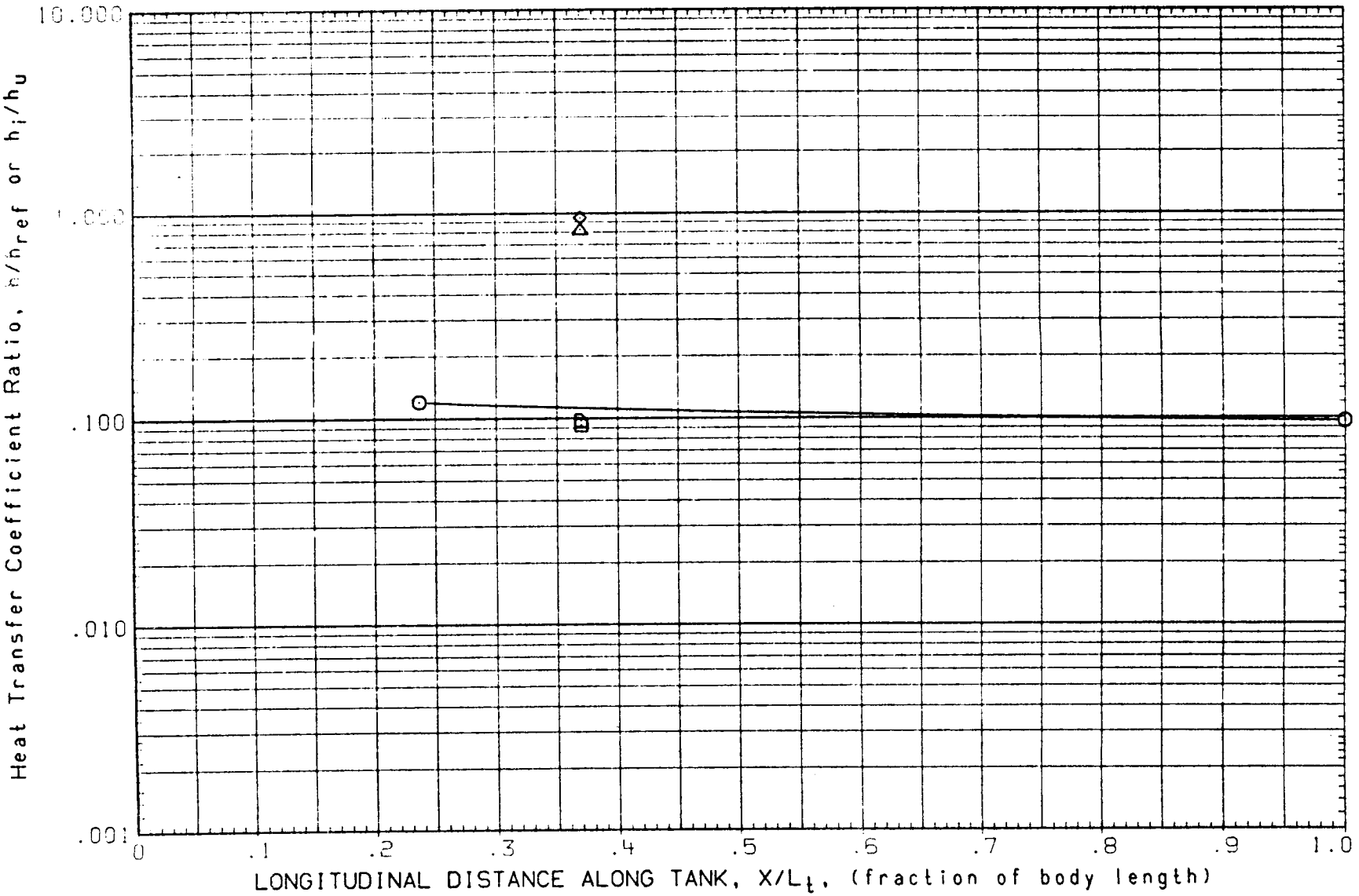

FIG. 4-23 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 20.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	□	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT15)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	3.000
(X4LT15)	◇	IH85 (W.L. TEST)	OT/ET = V4LT15/C9NT07= HI/HU	3.010	.000	3.000
(Y4LT15)	△	IH85 (W.L. THEORY)	OT/ET = V4LT15/A9NT07= HI/HU	3.010	.000	3.000

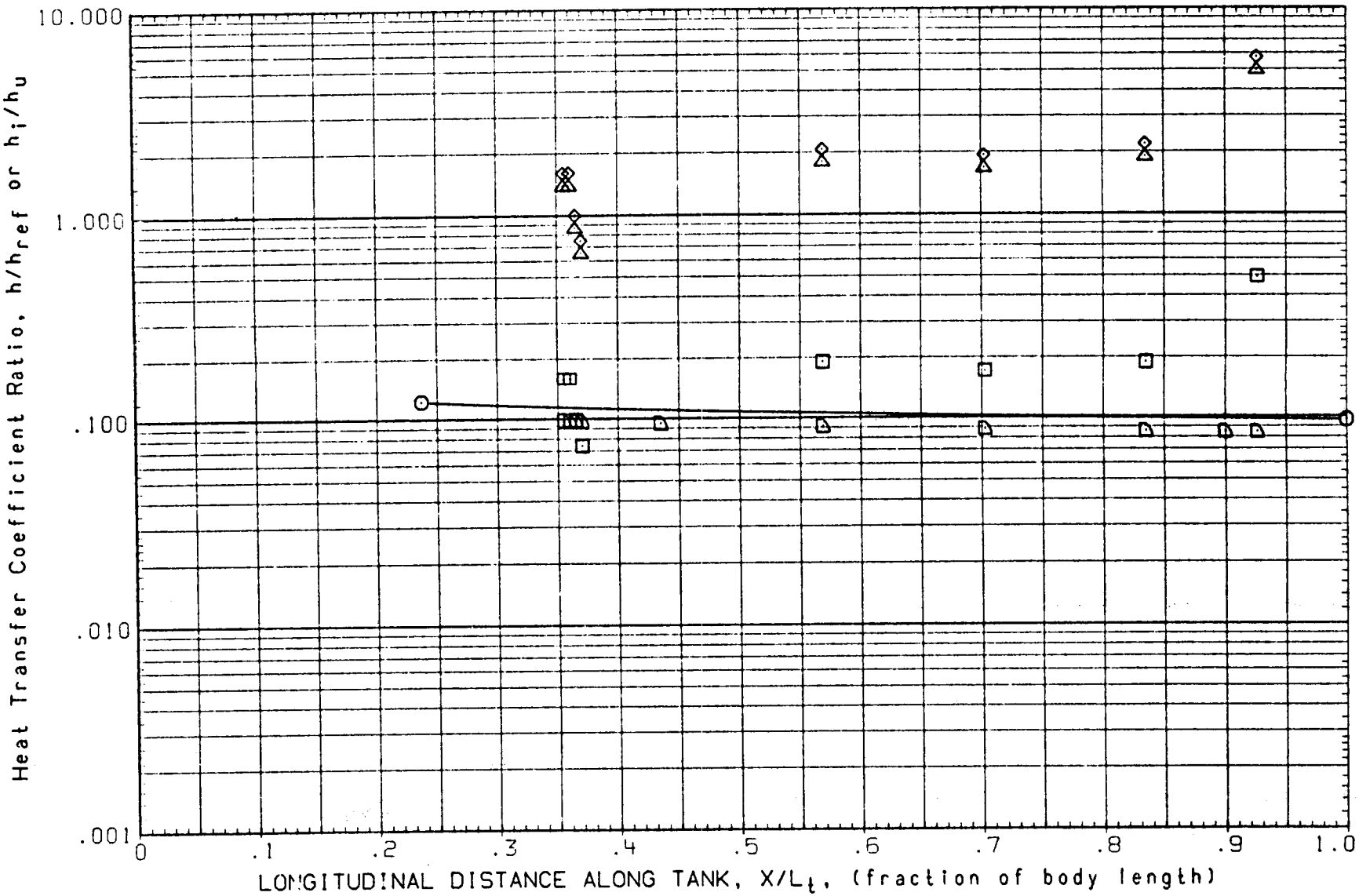

FIG. 4-23 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 23.070

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT15)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	3.000
(X4LT15)	◇	IH85 (W.L. TEST)	QT/ET = V4LT15/C9NT07= HI/HU	3.010	.000	3.000
(Y4LT15)	△	IH85 (W.L. THEORY)	QT/ET = V4LT15/A9NT07= HI/HU	3.010	.000	3.000

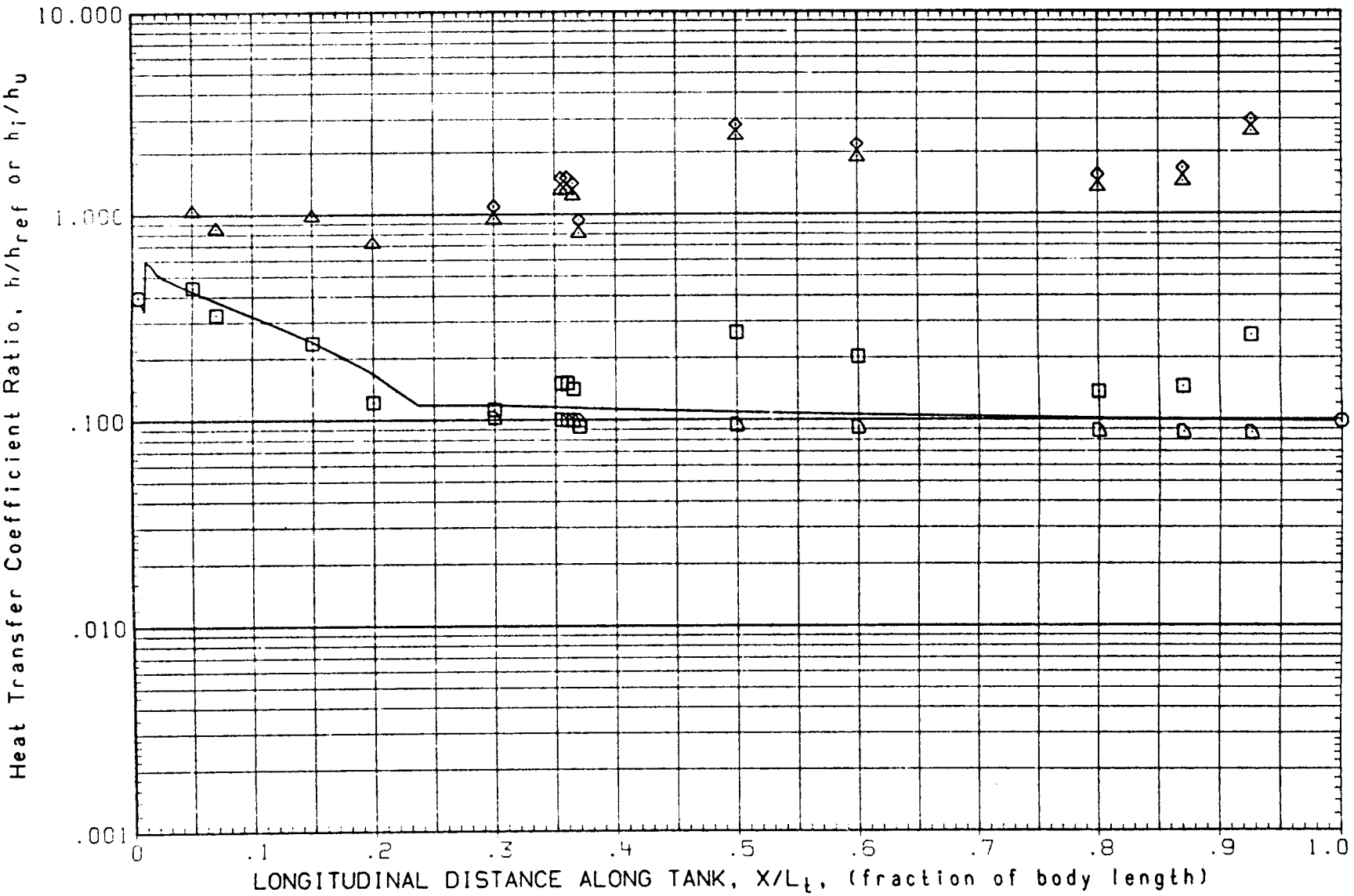

FIG. 4-23 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 29.800

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT15)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	3.000
(X4LT15)	◇	IH85 (W.L. TEST)	OT/ET = V4LT15/C9NT07= HI/HU	3.010	.000	3.000
(Y4LT15)	△	IH85 (W.L. THEORY)	OT/ET = V4LT15/A9NT07= HI/HU	3.010	.000	3.000

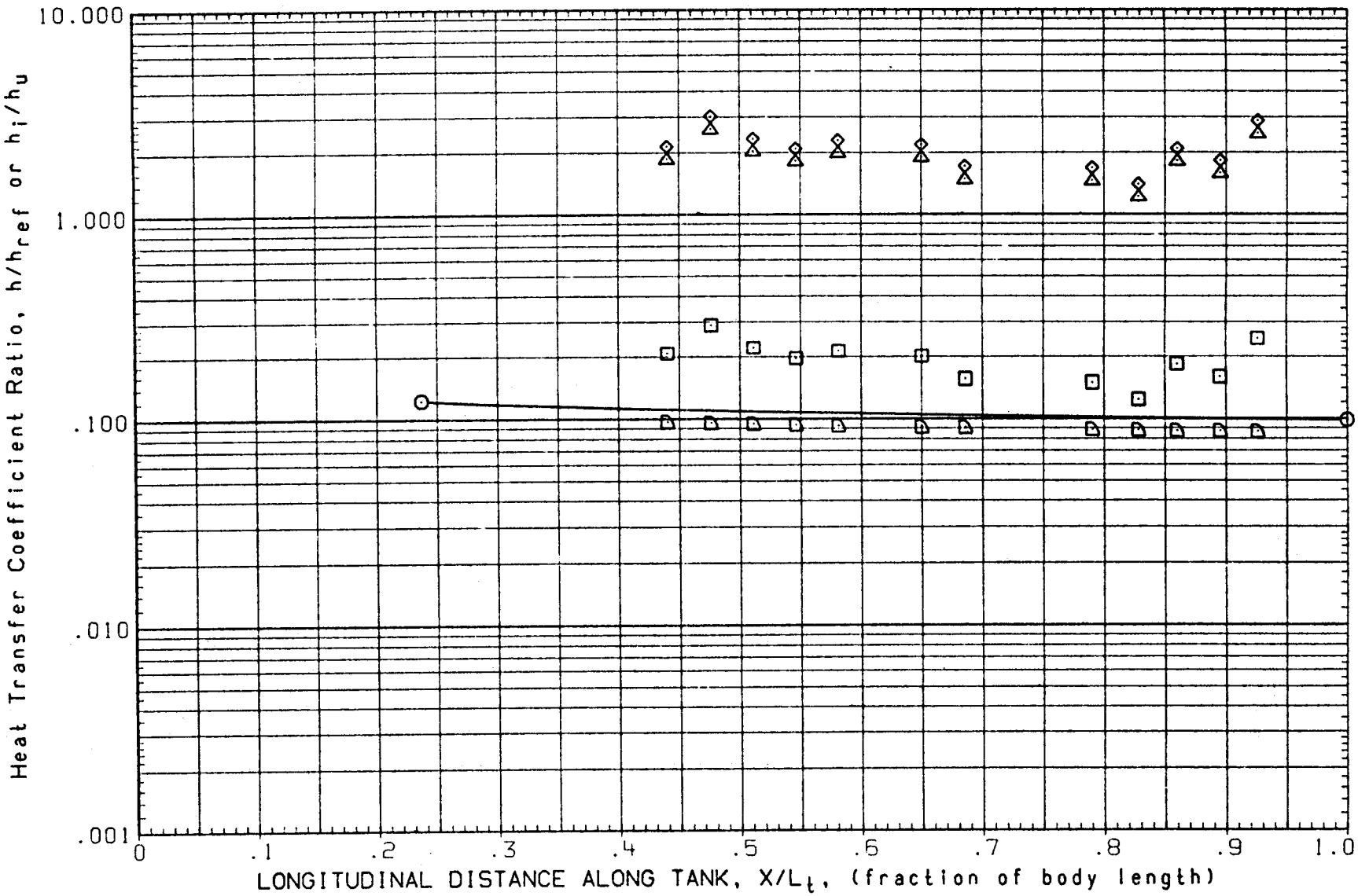

FIG. 4-23 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 31.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT15)	□	IH95, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	3.000
(X4LT15)	◇	IH85 (W.L. TEST)	OT/ET = V4LT15/C9NT07= HI/HU	3.010	.000	3.000
(Y4LT15)	△	IH85 (W.L. THEORY)	OT/ET = V4LT15/A9NT07= HI/HU	3.010	.000	3.000

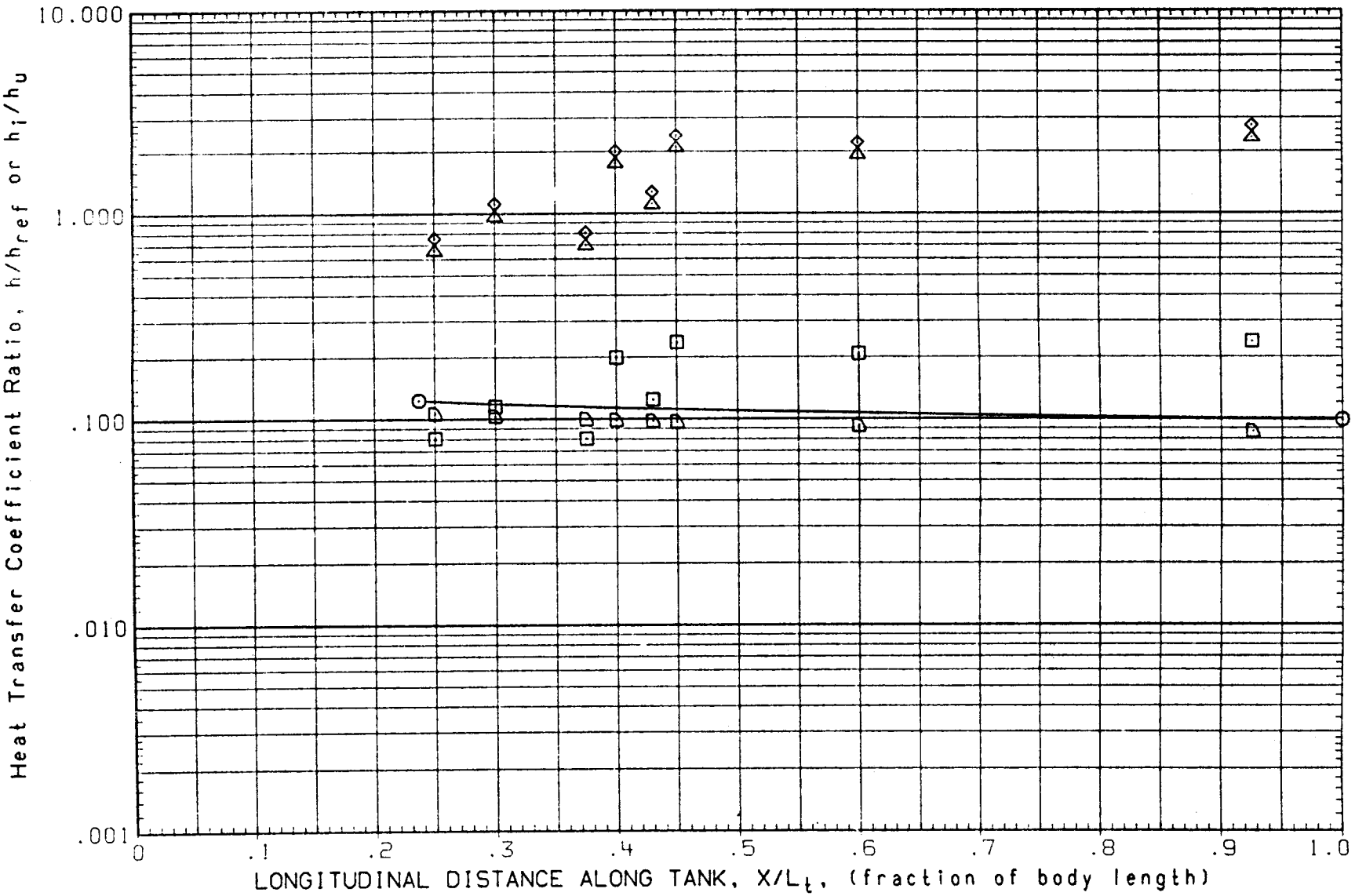

FIG. 4-23 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 33.750

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT15)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	3.000
(X4LT15)	◇	IH85 (W.L. TEST)	OT/ET = V4LT15/C9NT07= HI/HU	3.010	.000	3.000
(Y4LT15)	△	IH85 (W.L. THEORY)	OT/ET = V4LT15/A9NT07= HI/HU	3.010	.000	3.000

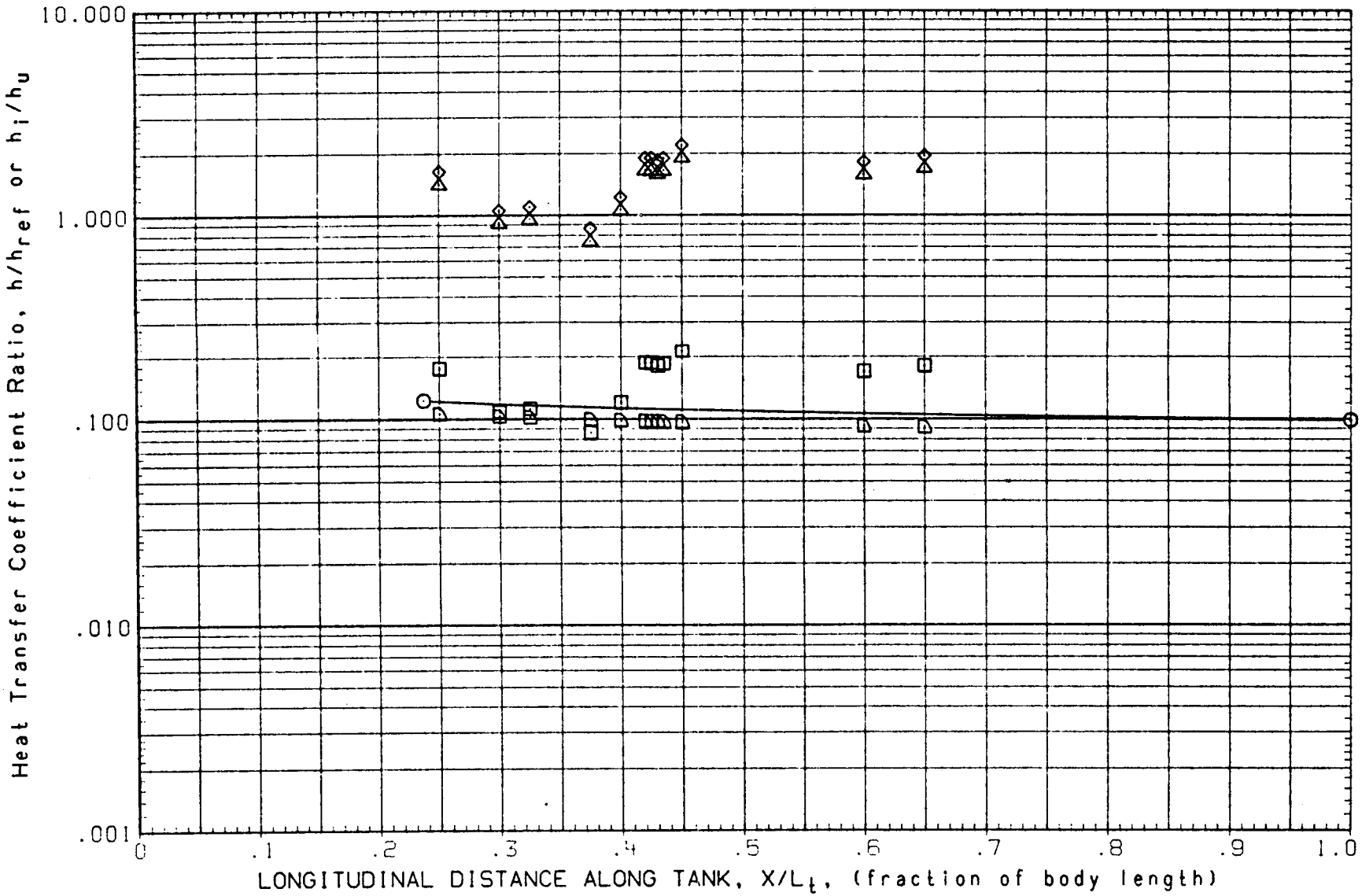

FIG. 4-23 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 36.320

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	□	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT15)	□	IH85, AEDC V4TA-K5, CONFIGURATION 0 (T)		3.010	.000	3.000
(X4LT15)	◇	IH85 (W.L. TEST)	OT/ET = V4LT15/C9NT07= HI/HU	3.010	.000	3.000
(Y4LT15)	△	IH85 (W.L. THEORY)	OT/ET = V4LT15/A9NT07= HI/HU	3.010	.000	3.000

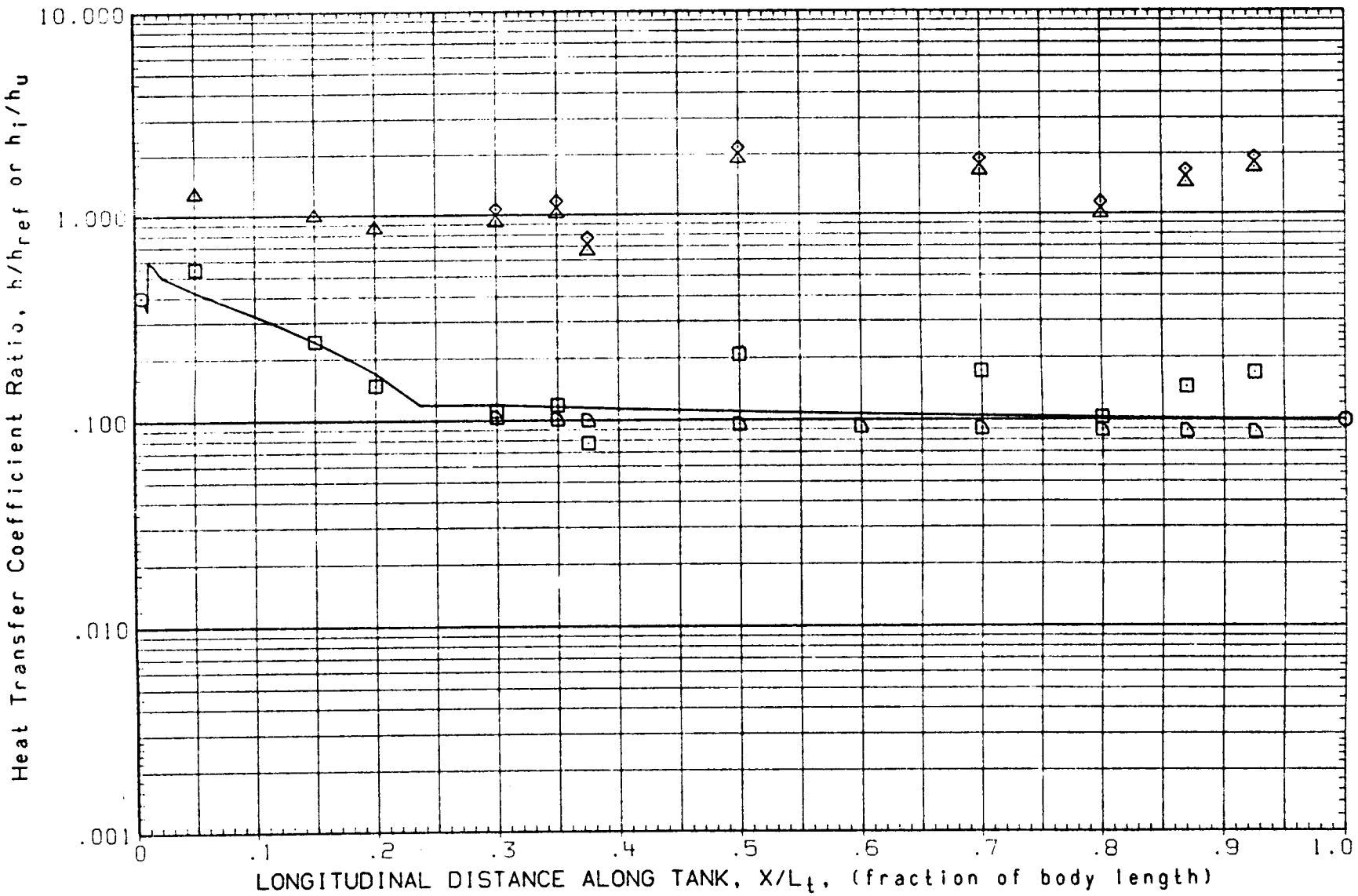

FIG. 4-23 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 37.700

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	D	DATA NOT AVAILABLE		3.010	.000	3.000
(Y4LT15)	□	DATA NOT AVAILABLE		3.010	.000	3.000
(X4LT15)	◇	DATA NOT AVAILABLE		3.010	.000	3.000
(Y4LT15)	△	DATA NOT AVAILABLE		3.010	.000	3.000

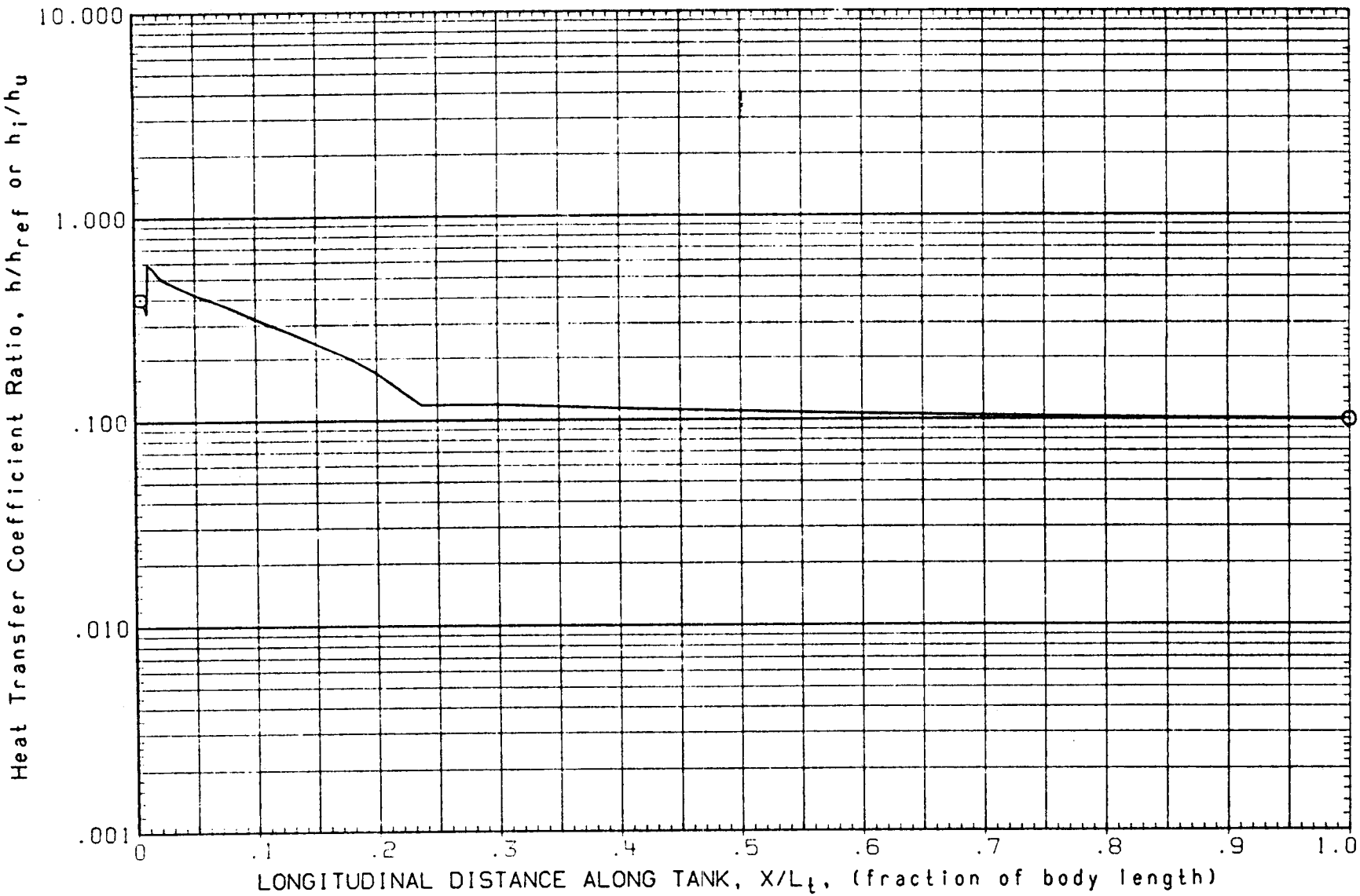

FIG. 4-23 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 39.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	◐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT15)	□	IH85, AEDC V4TA-W5, CONFIGURATION 0 (T)		3.010	.000	3.000
(X4LT15)	◇	IH85 (W.L. TEST)	OT/ET = V4LT15/C9NT07= HI/HU	3.010	.000	3.000
(Y4LT15)	△	IH85 (W.L. THEORY)	OT/ET = V4LT15/A9NT07= HI/HU	3.010	.000	3.000

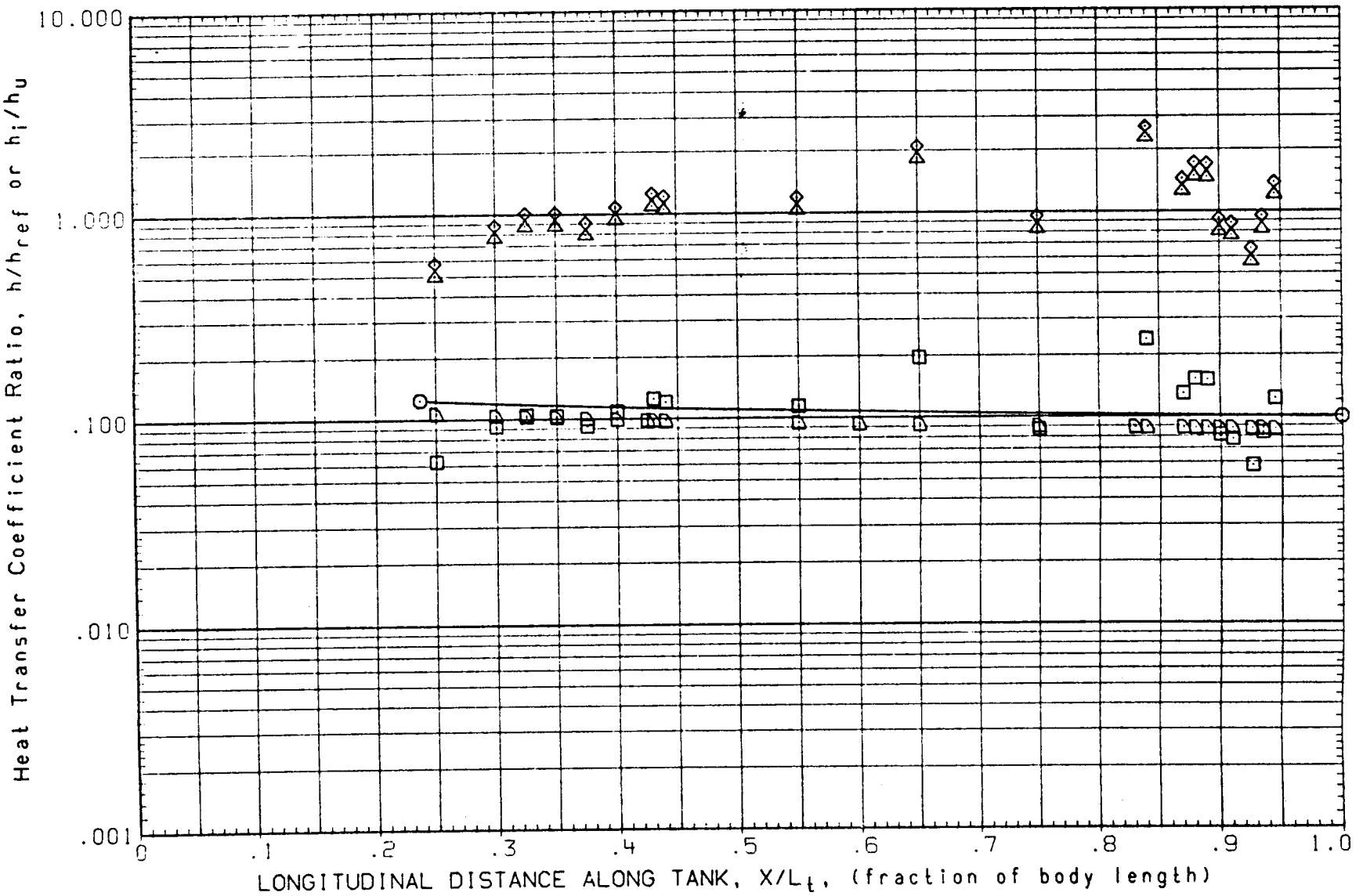

FIG. 4-23 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 45.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	3.010	.000	3.000
(C9NT07)	⬠	DATA NOT AVAILABLE	3.010	.000	3.000
(V4LT15)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)	3.010	.000	3.000
(X4LT15)	◇	DATA NOT AVAILABLE	3.010	.000	3.000
(Y4LT15)	△	IH85 (W.L. THEORY) 0T/ET = V4LT15/A9NT07= HI/HU	3.010	.000	3.000

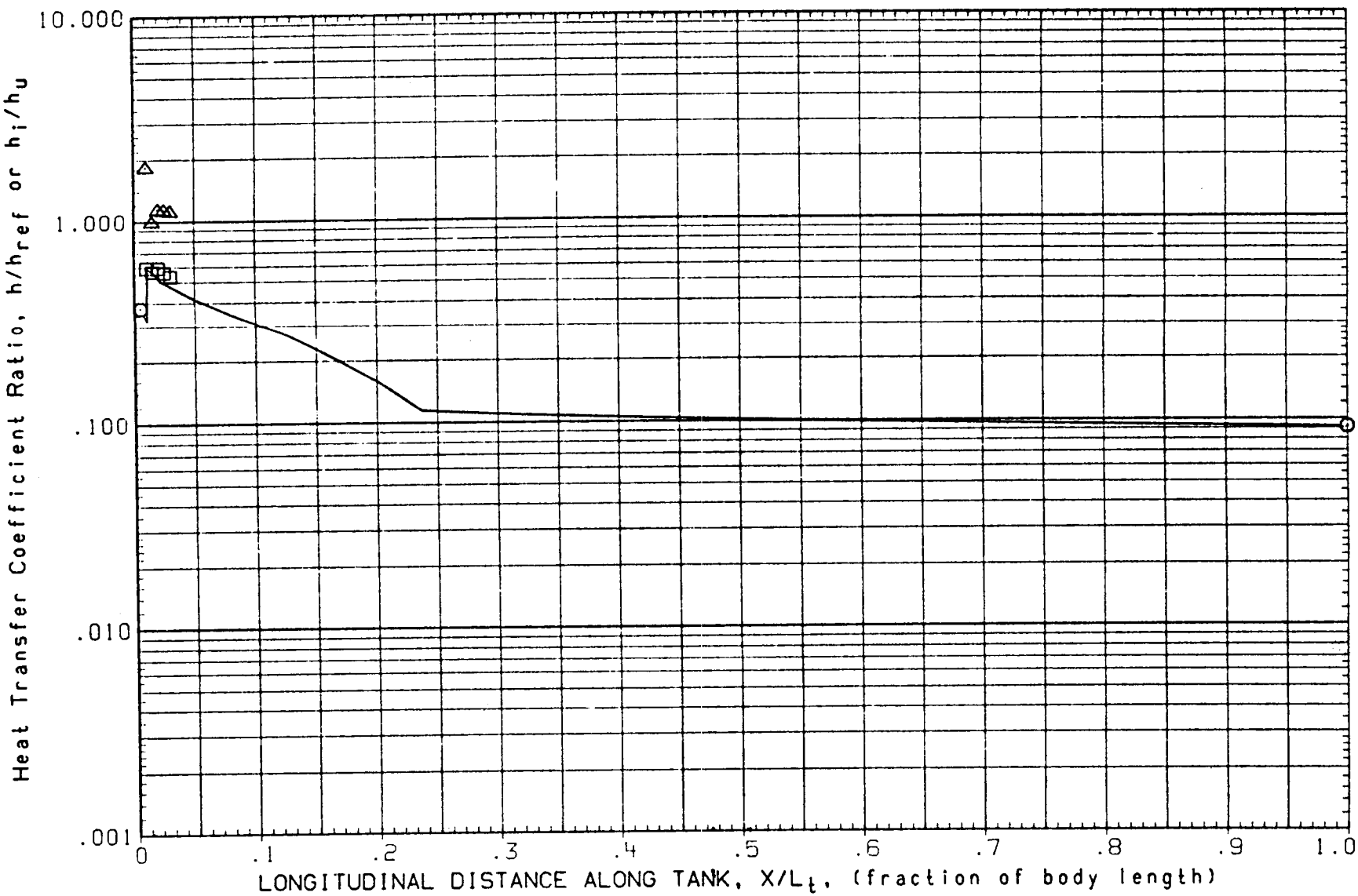

FIG. 4-23 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 180.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⬠	DATA NOT AVAILABLE		3.010	.000	3.000
(V4LT15)	□	DATA NOT AVAILABLE		3.010	.000	3.000
(X4LT15)	◇	DATA NOT AVAILABLE		3.010	.000	3.000
(Y4LT15)	△	DATA NOT AVAILABLE		3.010	.000	3.000

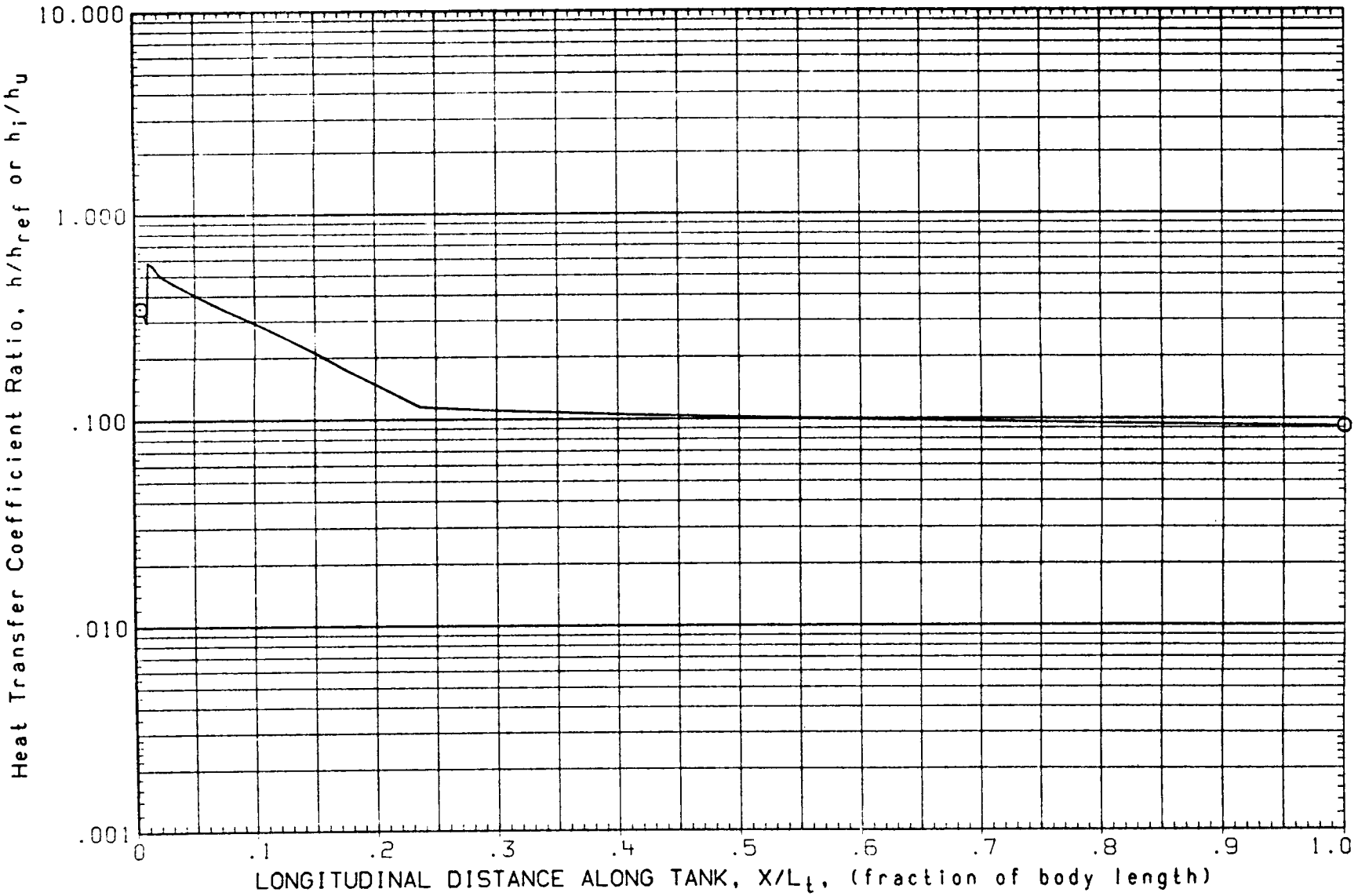

FIG. 4-23 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 235.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT15)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	3.000
(X4LT15)	◇	IH85 (W.L. TEST)	OT/ET = V4LT15/C9NT07= HI/HU	3.010	.000	3.000
(Y4LT15)	△	IH85 (W.L. THEORY)	OT/ET = V4LT15/A9NT07= HI/HU	3.010	.000	3.000

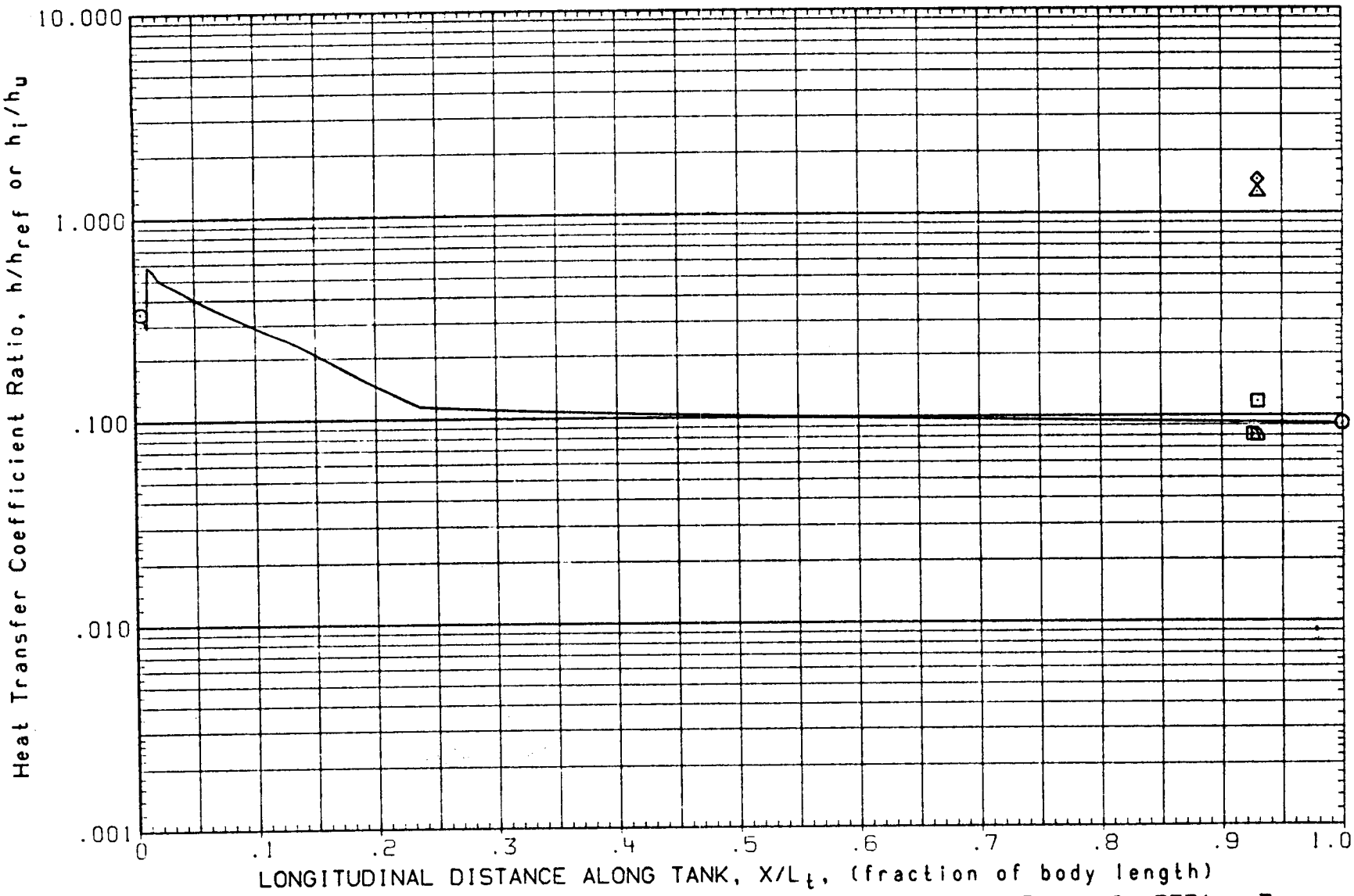

FIG. 4-23 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 247.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⬠	DATA NOT AVAILABLE		3.010	.000	3.000
(V4LT15)	□	DATA NOT AVAILABLE		3.010	.000	3.000
(X4LT15)	◇	DATA NOT AVAILABLE		3.010	.000	3.000
(Y4LT15)	△	DATA NOT AVAILABLE		3.010	.000	3.000

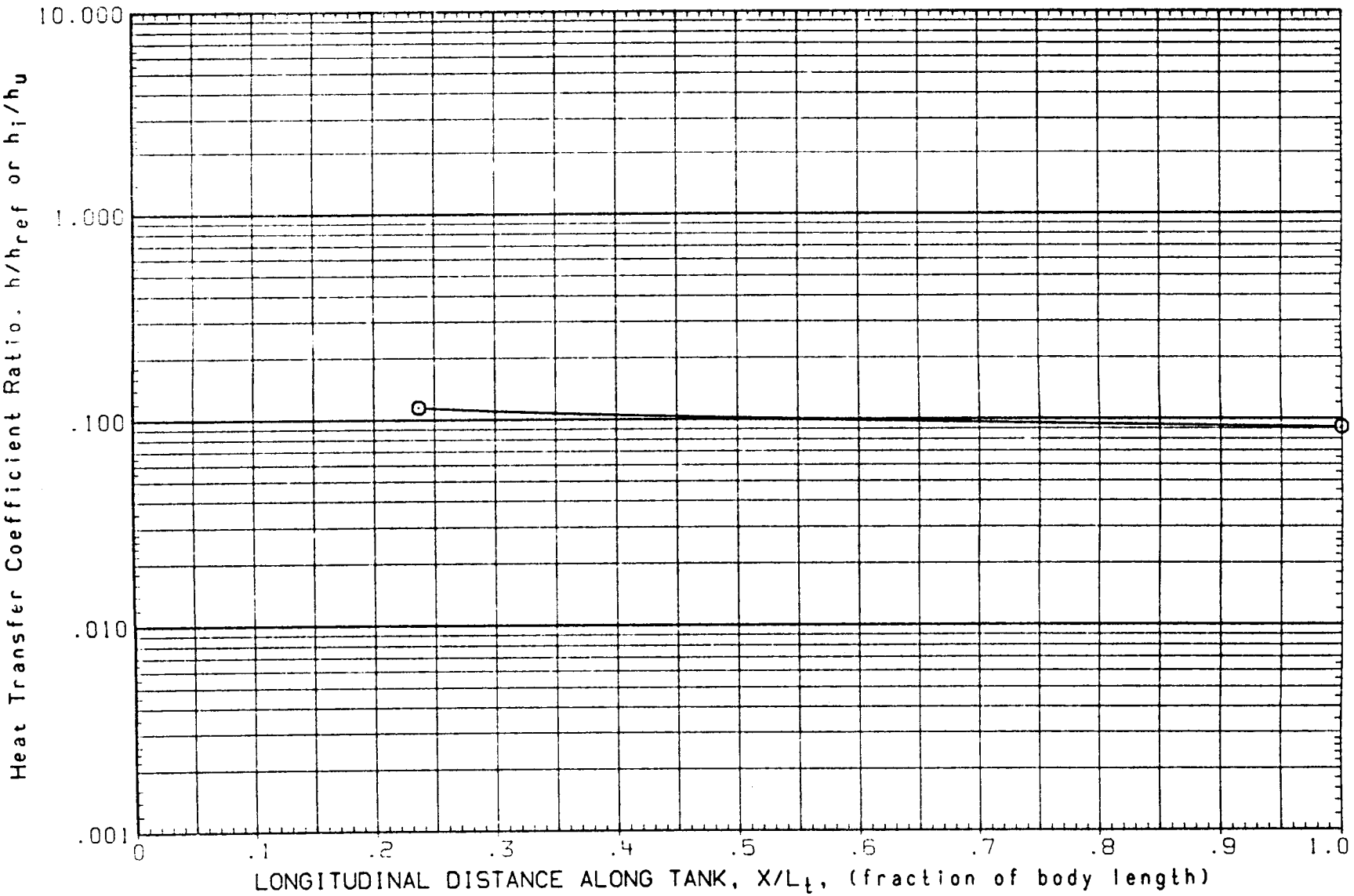

FIG. 4-23 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 247.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT15)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	3.000
(X4LT15)	◇	IH85 (W.L. TEST)	OT/ET = V4LT15/C9NT07= HI/HU	3.010	.000	3.000
(Y4LT15)	△	IH85 (W.L. THEORY)	OT/ET = V4LT15/A9NT07= HI/HU	3.010	.000	3.000

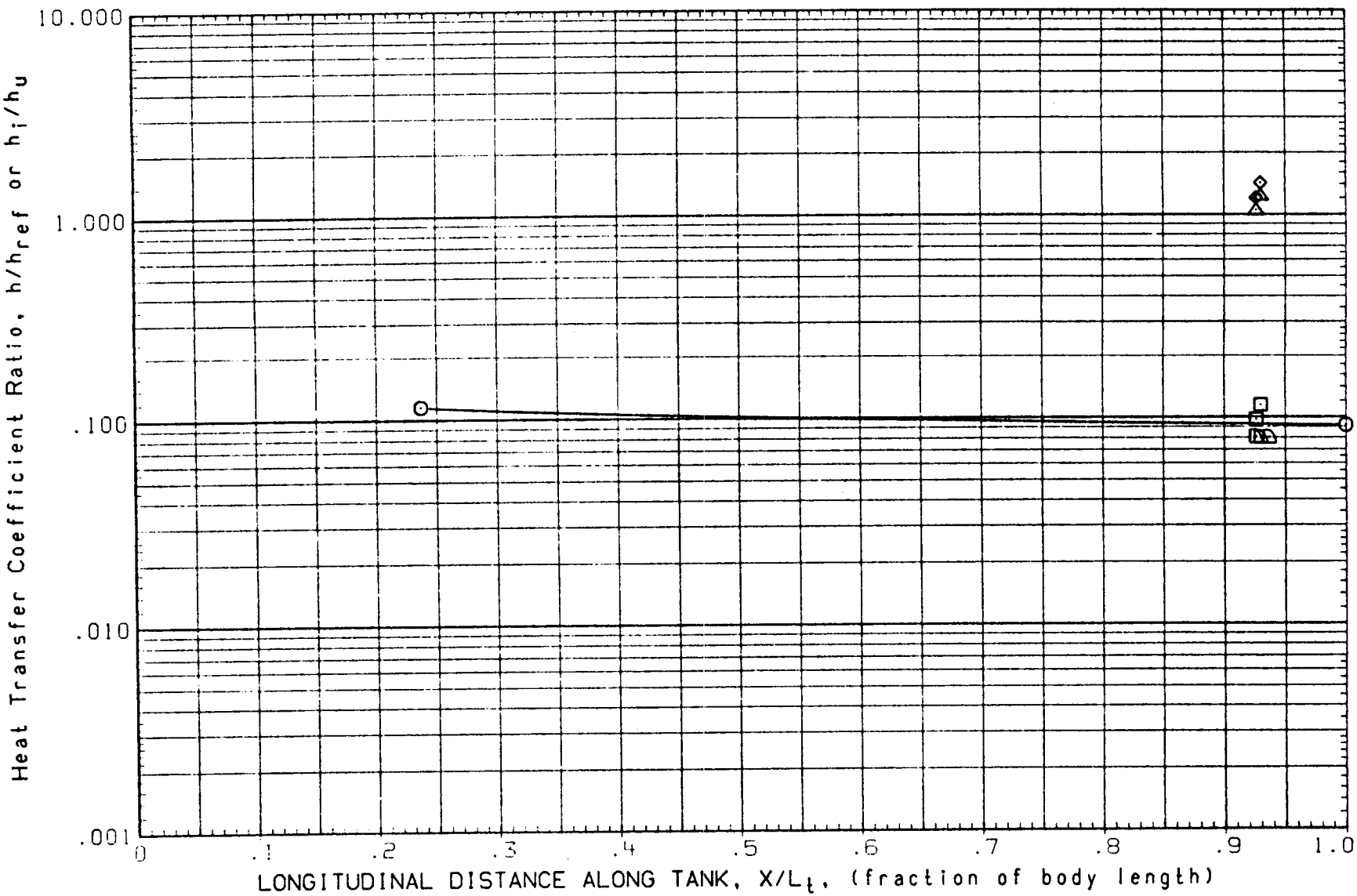

FIG. 4-23 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 250.570

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT15)	□	IHPE, AEDC V4TA-H.S. CONFIGURATION 0 (T)		3.010	.000	3.000
(X4LT15)	◇	IH85 (W.L. TEST)	OT/ET = V4LT15/C9NT07= HI/HU	3.010	.000	3.000
(Y4LT15)	△	IH85 (W.L. THEORY)	OT/ET = V4LT15/A9NT07= HI/HU	3.010	.000	3.000

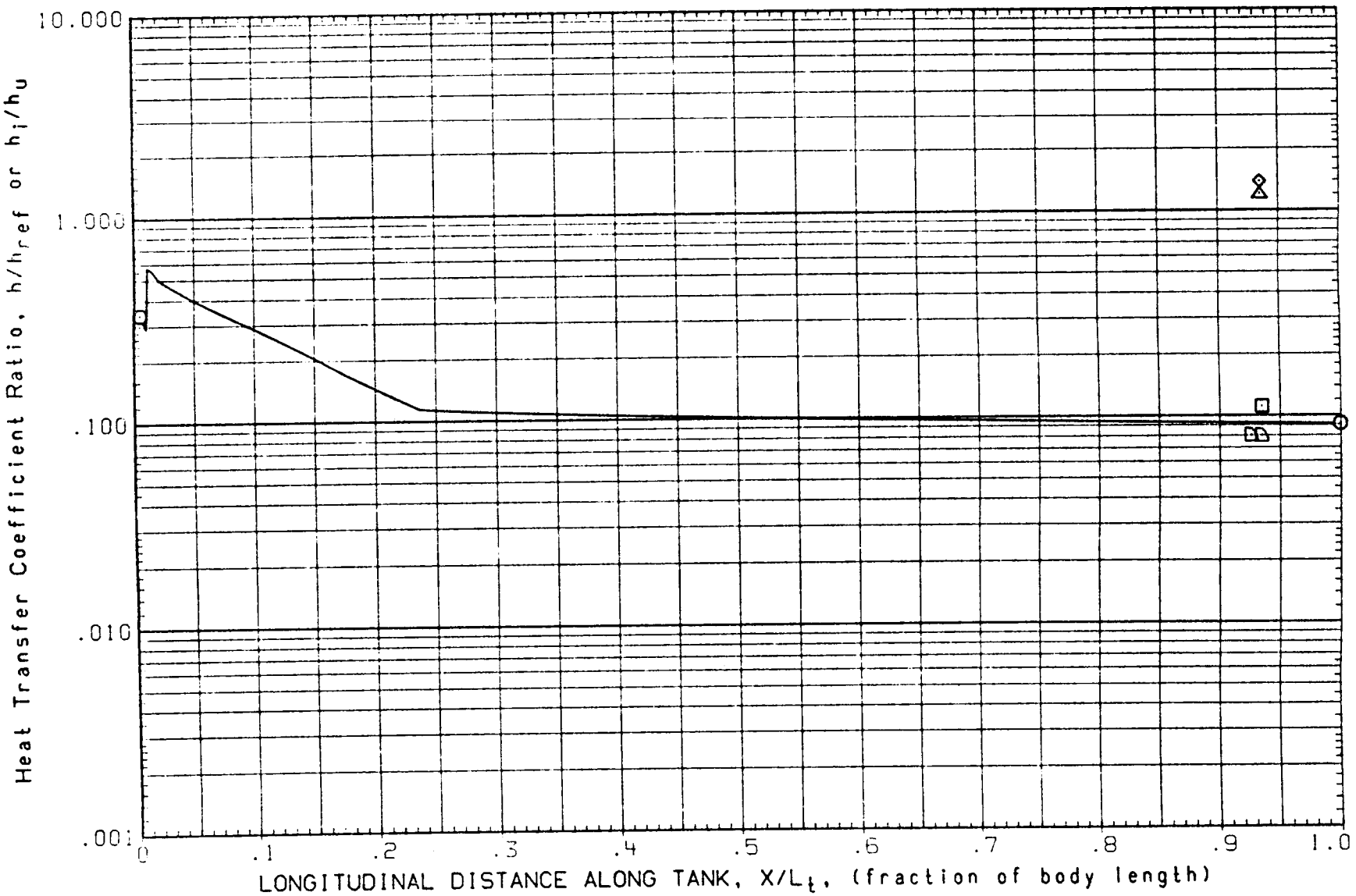

FIG. 4-23 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 258.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT15)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	3.000
(X4LT15)	◇	IH85 (W.L. TEST) OT/ET = V4LT15/C9NT07=	HI/HU	3.010	.000	3.000
(Y4LT15)	△	IH85 (W.L. THEORY) OT/ET = V4LT15/A9NT07=	HI/HU	3.010	.000	3.000

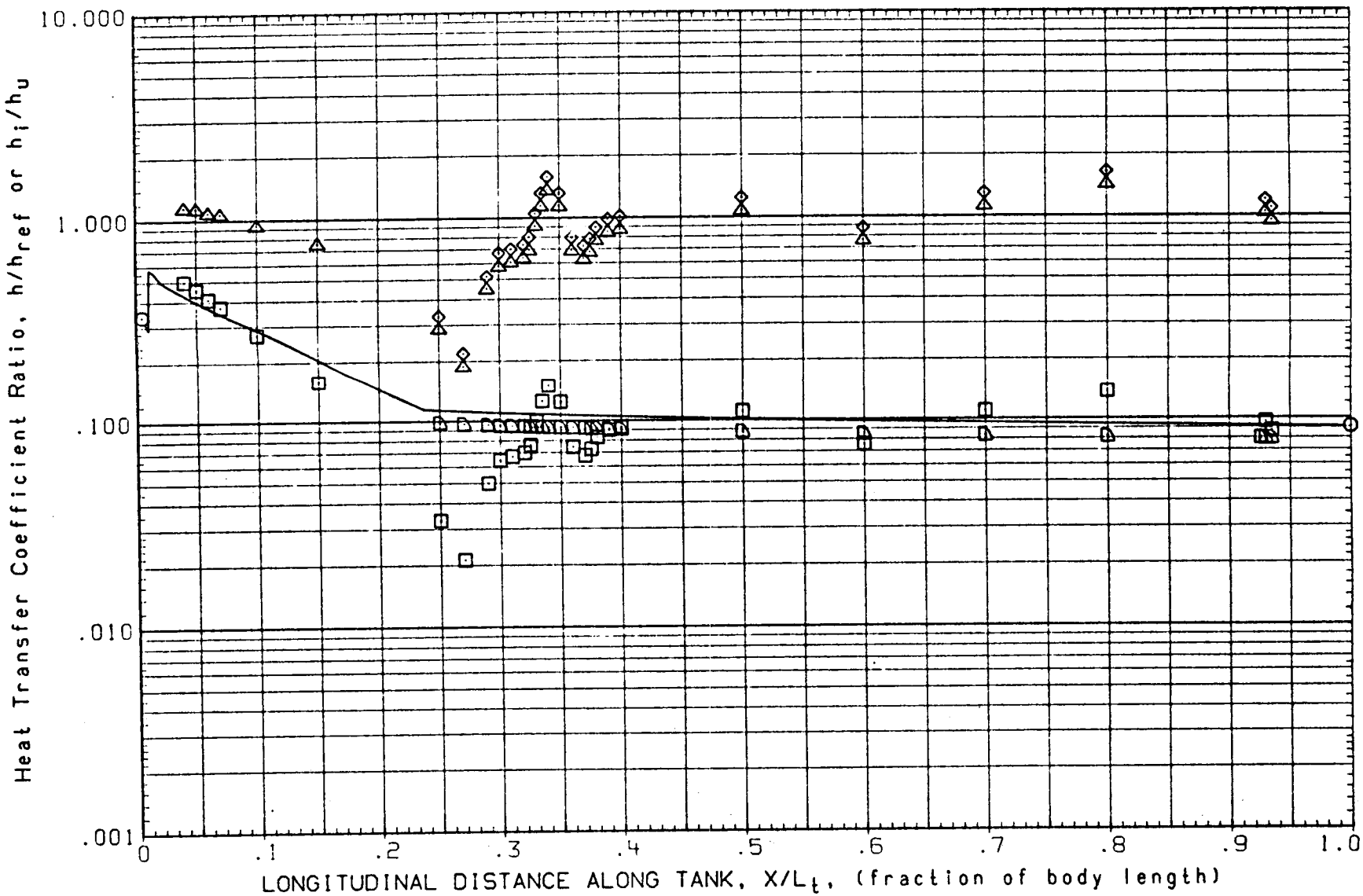

FIG. 4-23 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 270.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT15)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	3.000
(X4LT15)	◇	IH85 (W.L. TEST) OT/ET = V4LT15/C9NT07=	HI/HU	3.010	.000	3.000
(Y4LT15)	△	IH85 (W.L. THEORY) OT/ET = V4LT15/A9NT07=	HI/HU	3.010	.000	3.000

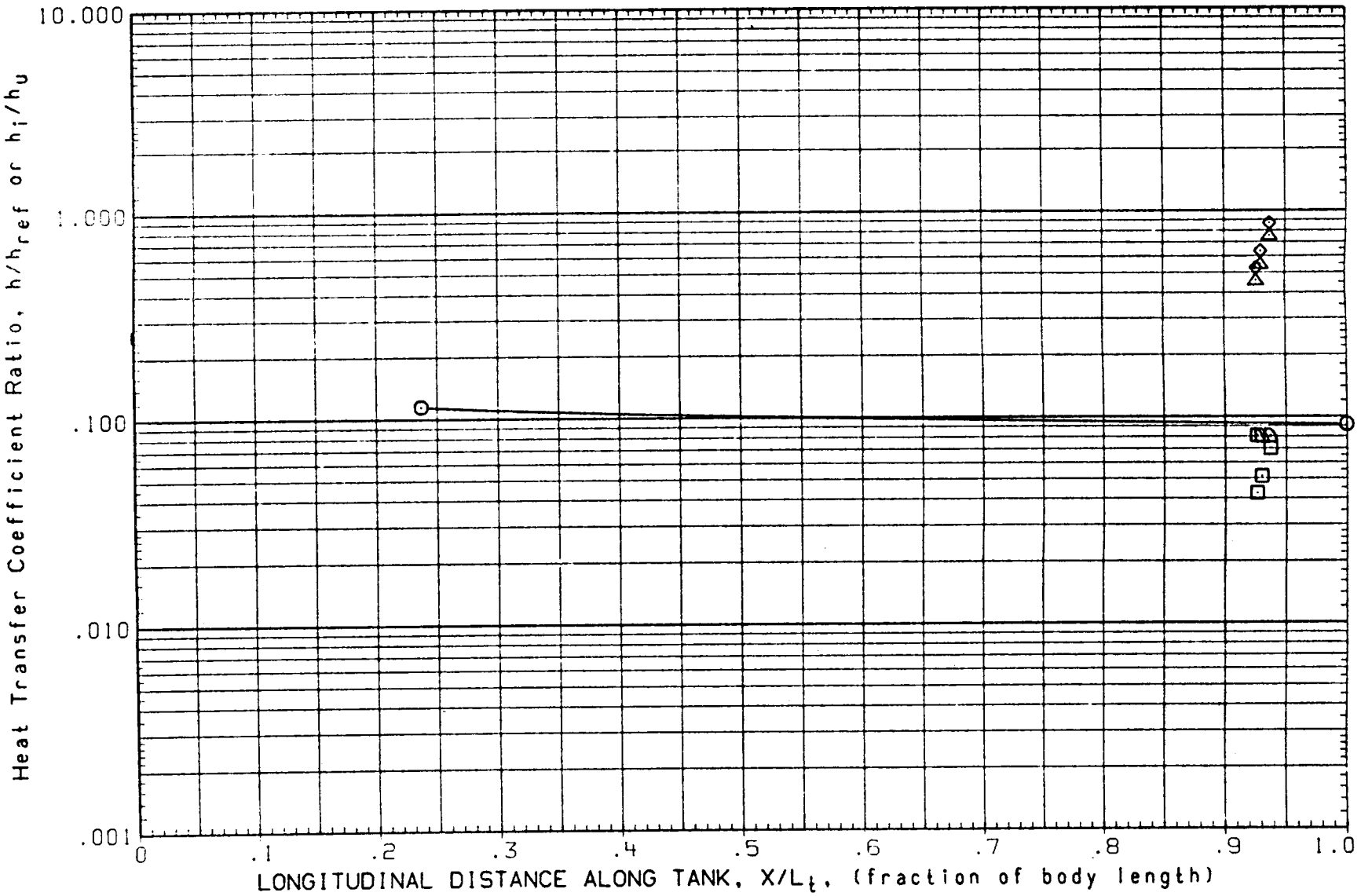

FIG. 4-23 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 289.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT15)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	3.000
(X4LT15)	◇	IH85 (W.L. TEST)	OT/ET = V4LT15/C9NT07= HI/HU	3.010	.000	3.000
(Y4LT15)	△	IH85 (W.L. THEORY)	OT/ET = V4LT15/A9NT07= HI/HU	3.010	.000	3.000

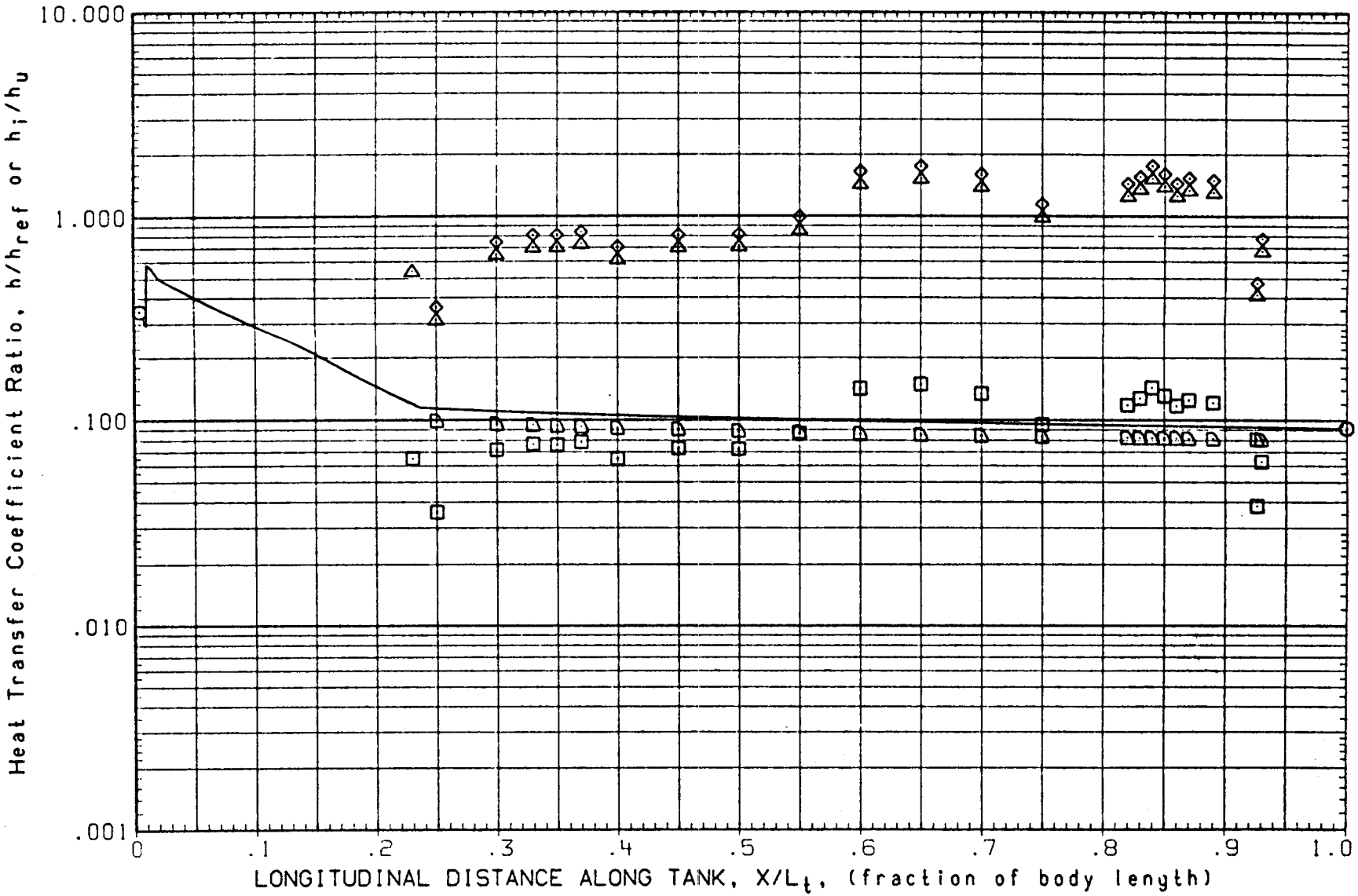

FIG. 4-23 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 292.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT15)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	3.000
(X4LT15)	◇	IH85 (W.L. TEST)	OT/ET = V4LT15/C9NT07= HI/HU	3.010	.000	3.000
(Y4LT15)	△	IH85 (W.L. THEORY)	OT/ET = V4LT15/A9NT07= HI/HU	3.010	.000	3.000

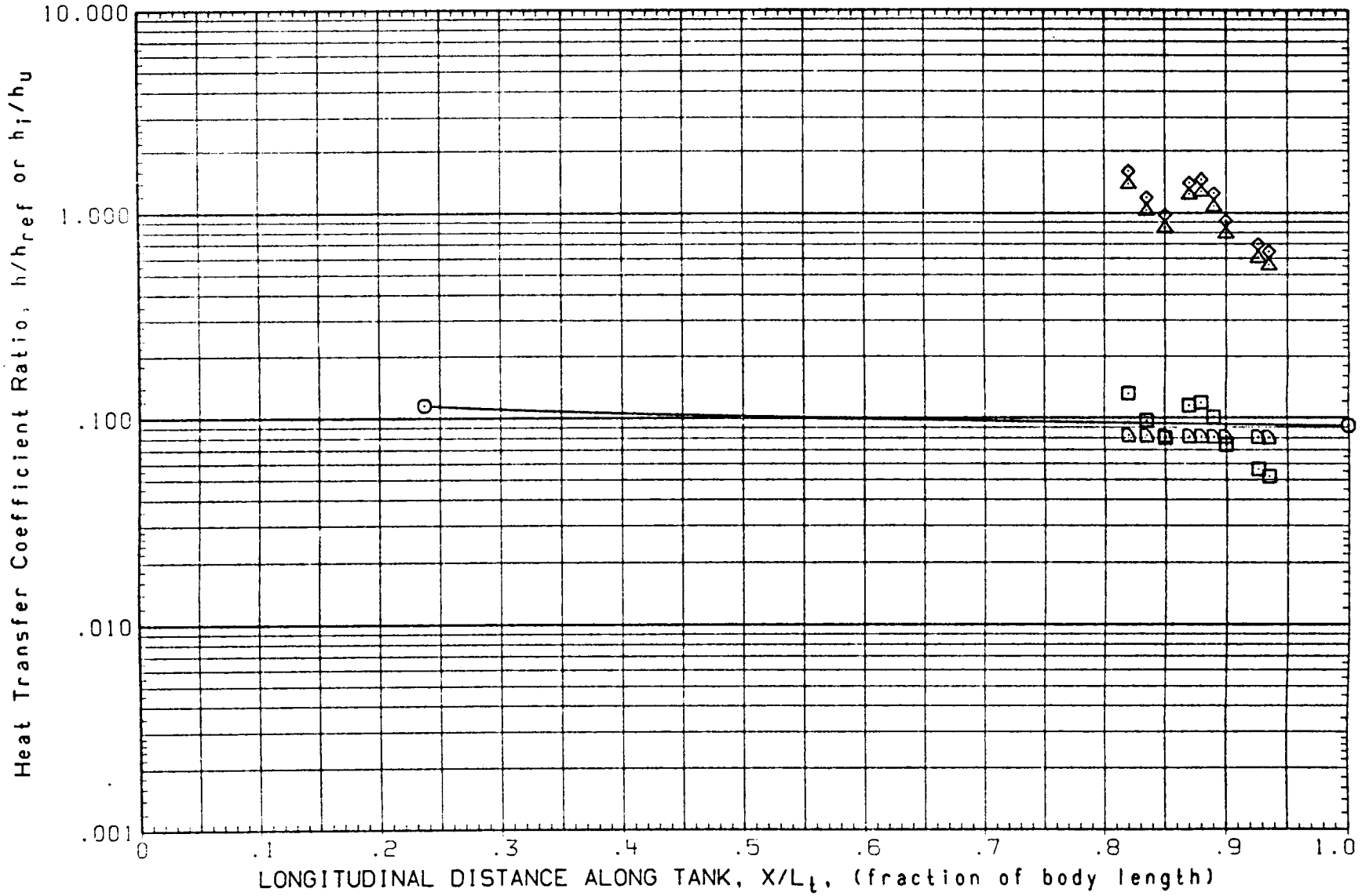

FIG. 4-23 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 301.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT15)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	3.000
(X4LT15)	◇	IH85 (W.L. TEST)	OT/ET = V4LT15/C9NT07= HI/HU	3.010	.000	3.000
(Y4LT15)	△	IH85 (W.L. THEORY)	OT/ET = V4LT15/A9NT07= HI/HU	3.010	.000	3.000

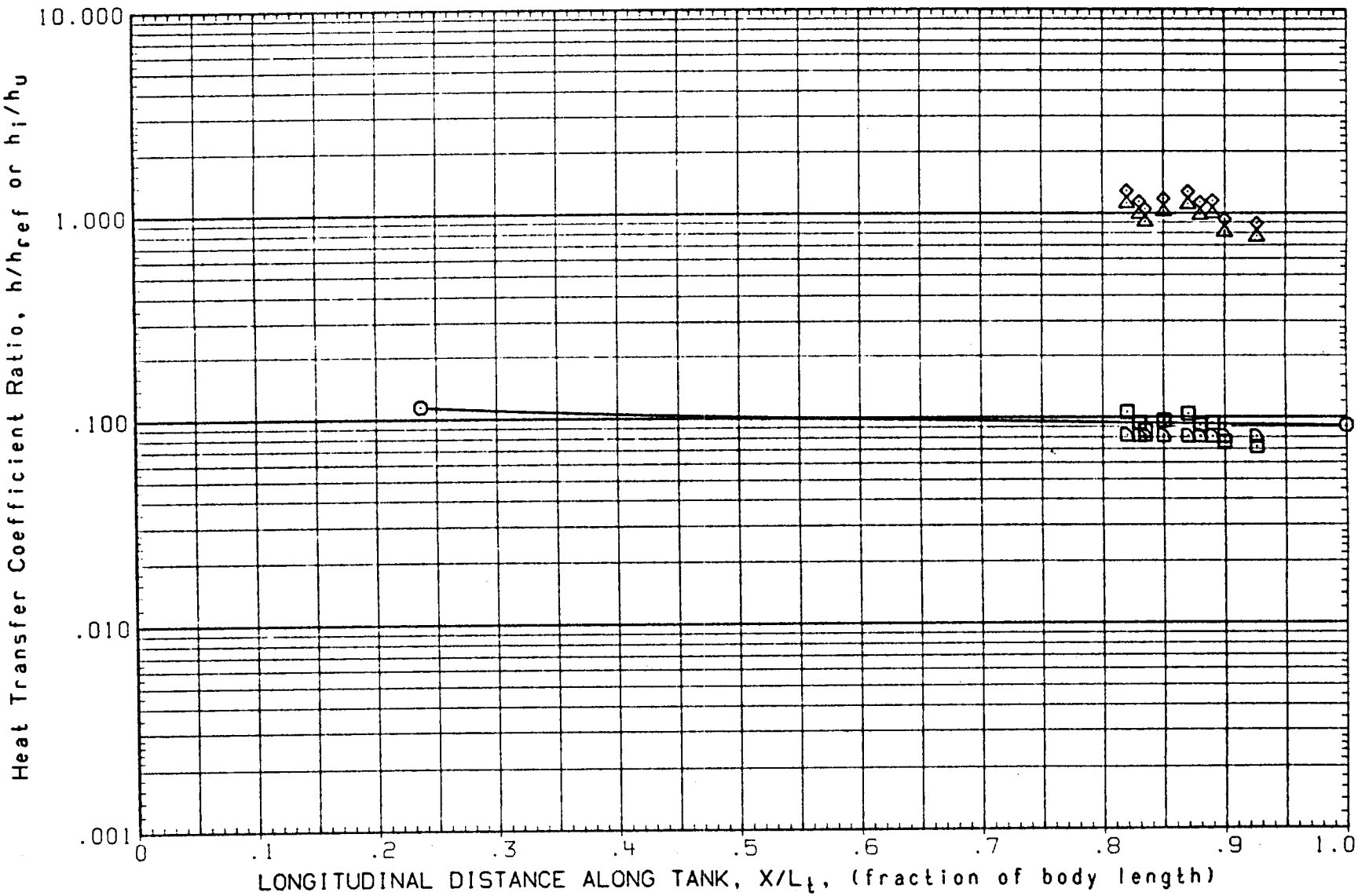

FIG. 4-23 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 305.400

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⊏	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT15)	□	IH85, AEDC V4TA-W5, CONFIGURATION 0 (T)		3.010	.000	3.000
(X4LT15)	◇	IH85 (W.L. TEST)	OT/ET = V4LT15/C9NT07=	HI/HU	3.010	.000	3.000
(Y4LT15)	△	IH85 (W.L. THEORY)	OT/ET = V4LT15/A9NT07=	HI/HU	3.010	.000	3.000

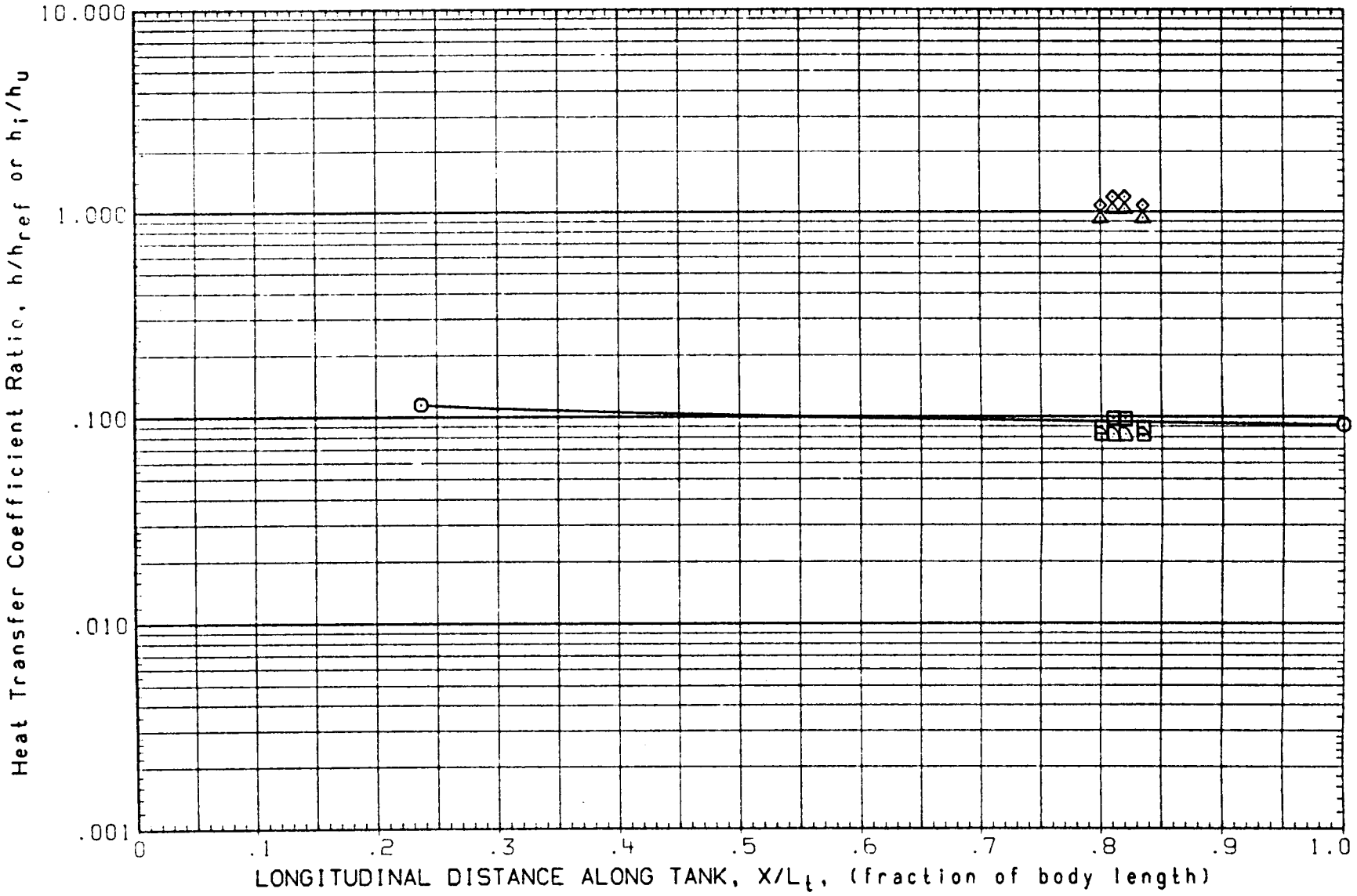

FIG. 4-23 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 309.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT15)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	3.000
(X4LT15)	◇	IH85 (W.L. TEST)	OT/ET = V4LT15/C9NT07= HI/HU	3.010	.000	3.000
(Y4LT15)	△	IH85 (W.L. THEORY)	OT/ET = V4LT15/A9NT07= HI/HU	3.010	.000	3.000

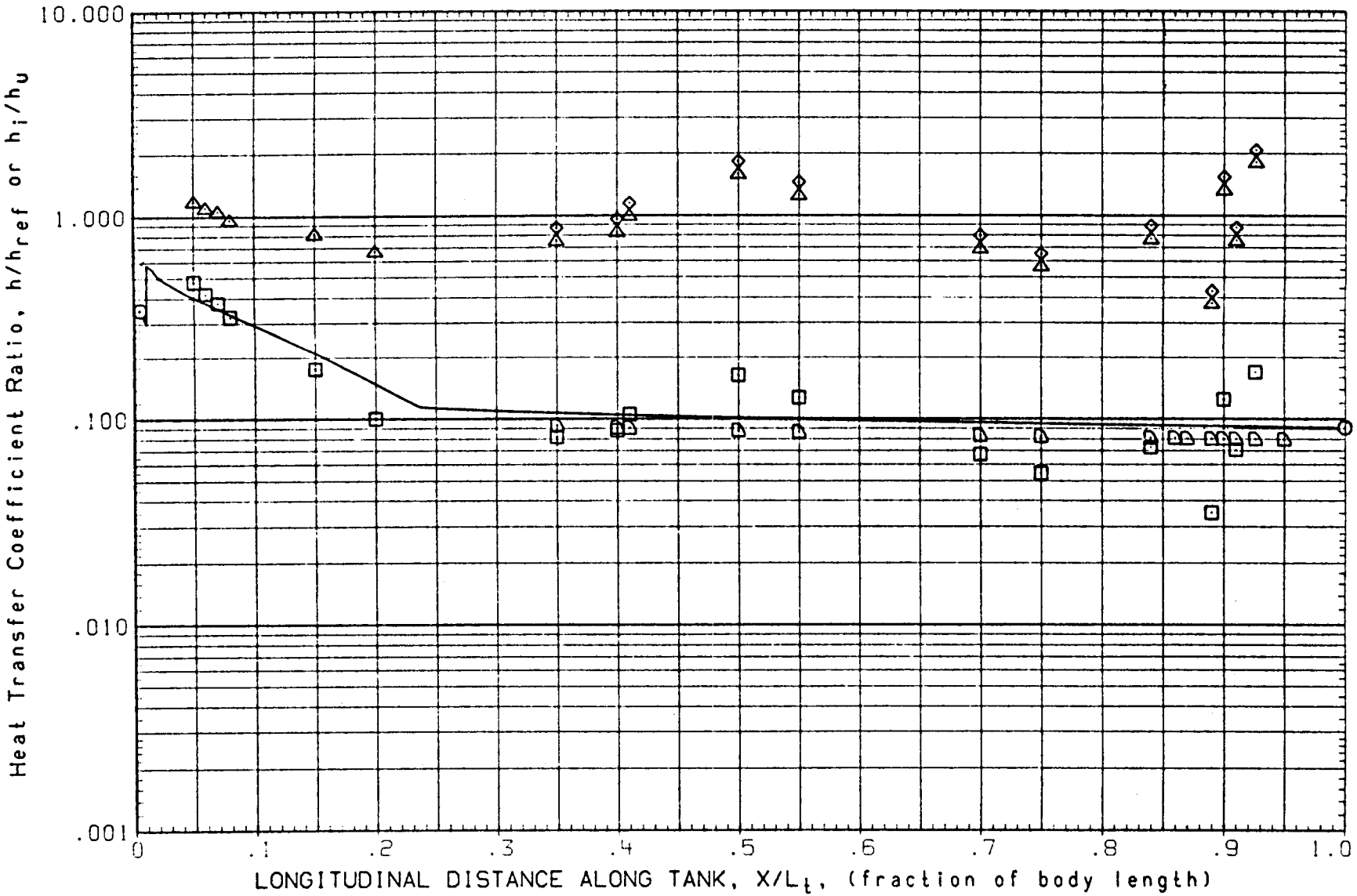

FIG. 4-23 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 315.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT15)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	3.000
(X4LT15)	◇	IH85 (W.L. TEST) OTHET = V4LT15/C9NT07= HI/HU		3.010	.000	3.000
(Y4LT15)	△	IH85 (W.L. THEORY) OTHET = V4LT15/A9NT07= HI/HU		3.010	.000	3.000

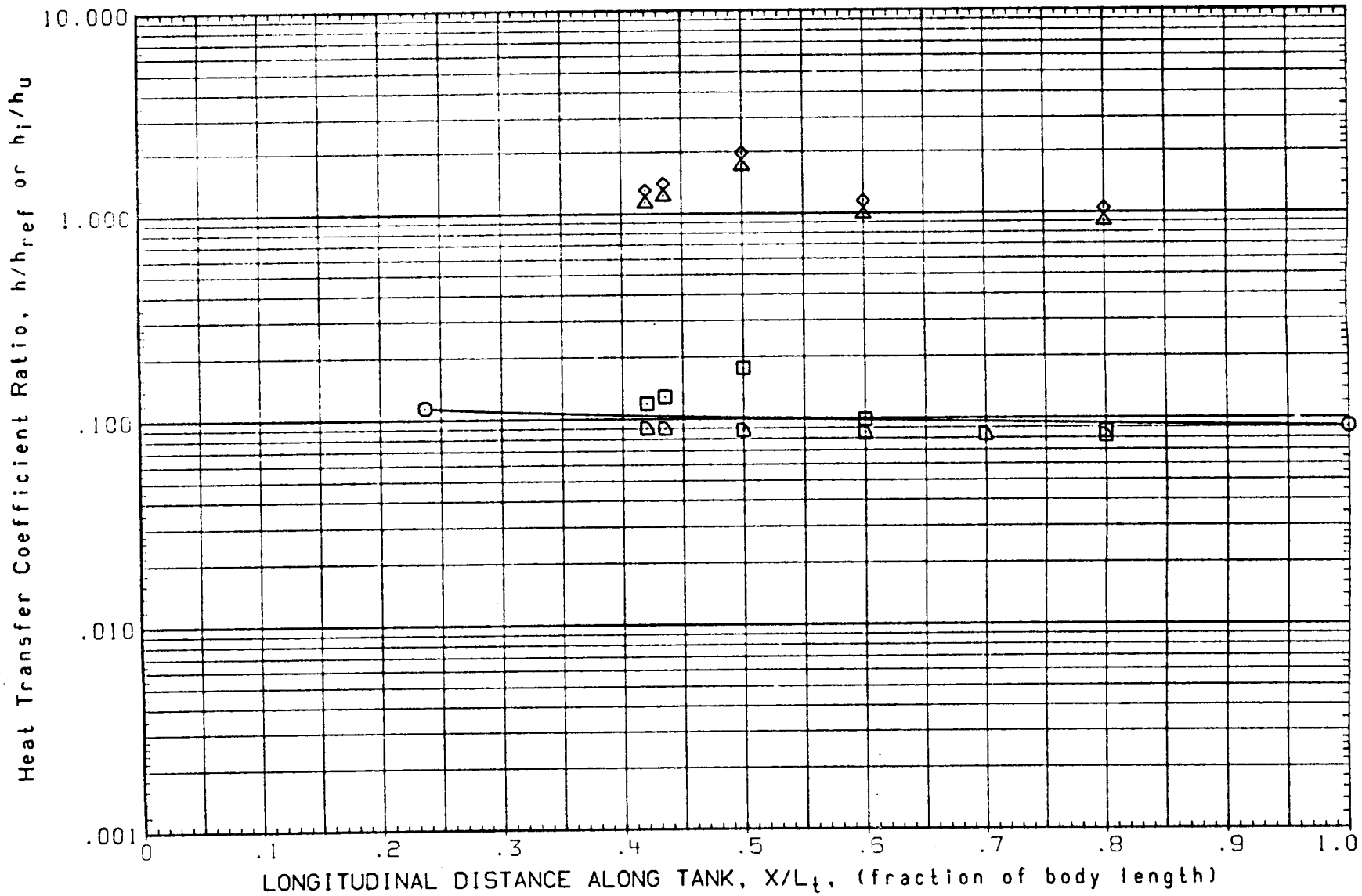

FIG. 4-23 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 322.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT15)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	3.000
(X4LT15)	◇	IH85 (W.L. TEST)	OT/ET = V4LT15/C9NT07= HI/HU	3.010	.000	3.000
(Y4LT15)	△	IH85 (W.L. THEORY)	OT/ET = V4LT15/A9NT07= HI/HU	3.010	.000	3.000

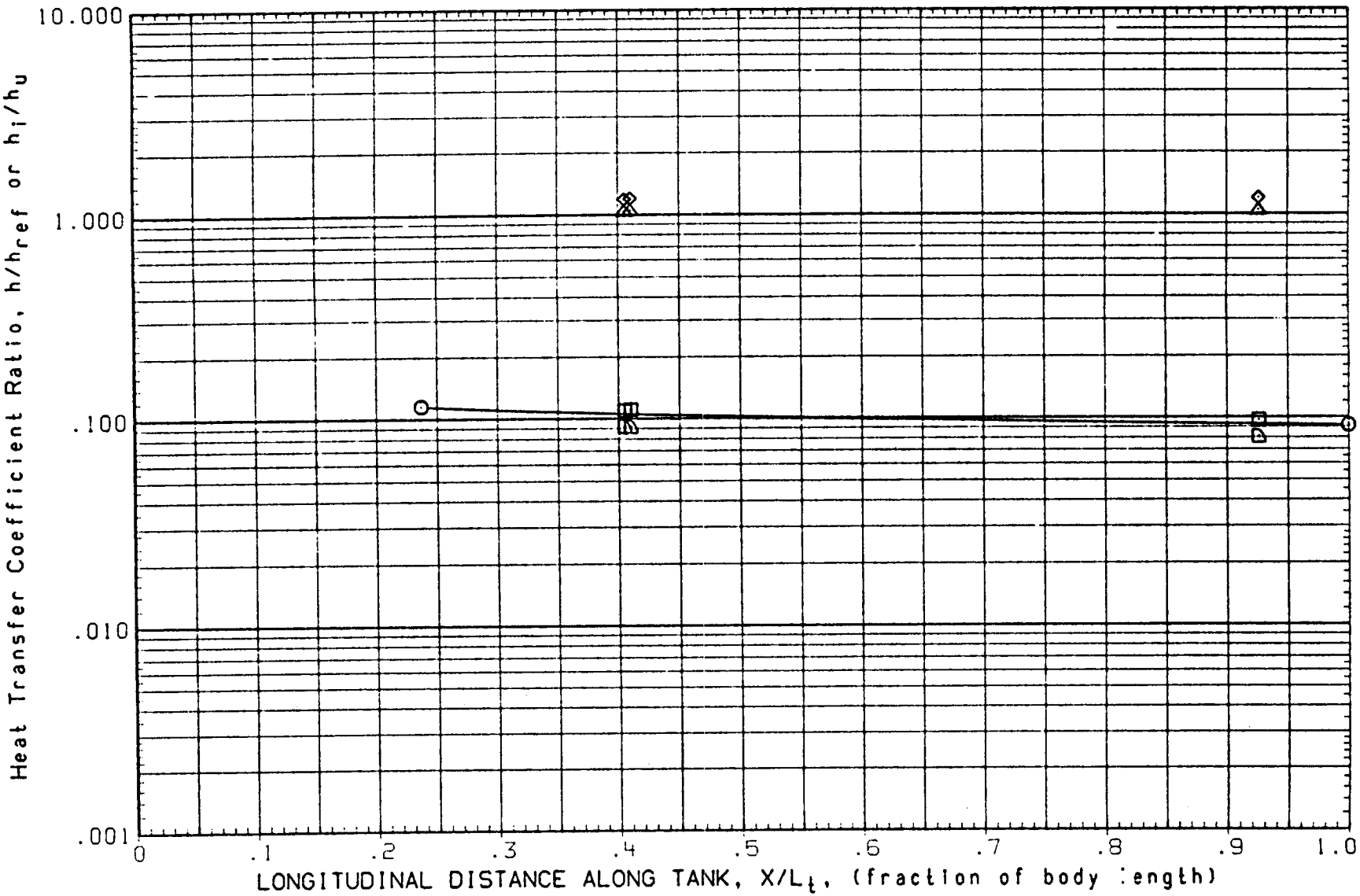

FIG. 4-23 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 324.450

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT15)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	3.000
(X4LT15)	◇	IH85 (W.L. TEST)	OT/ET = V4LT15/C9NT07= HI/HU	3.010	.000	3.000
(Y4LT15)	△	IH85 (W.L. THEORY)	OT/ET = V4LT15/A9NT07= HI/HU	3.010	.000	3.000

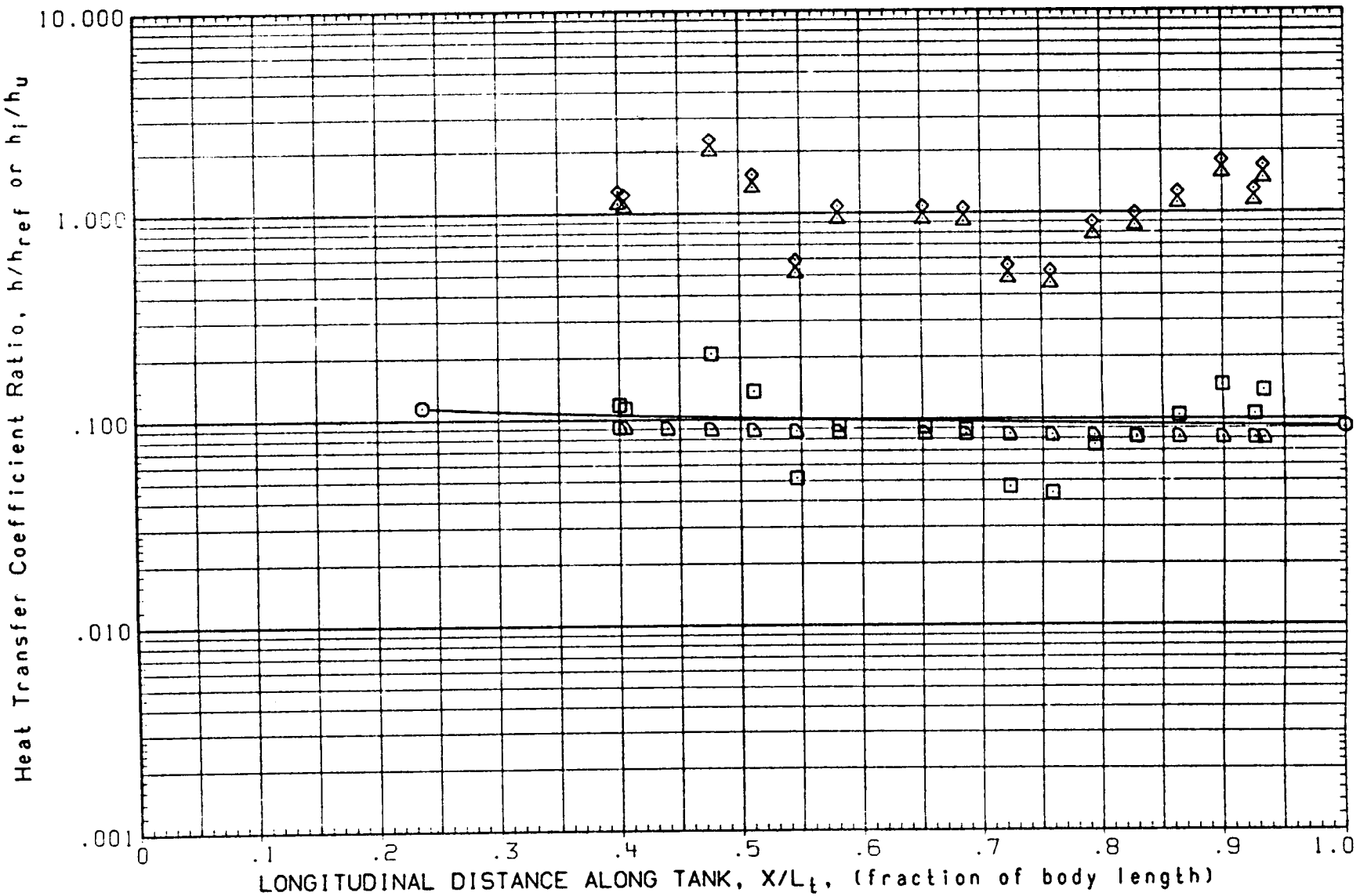

FIG. 4-23 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 326.850

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT15)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	3.000
(X4LT15)	◇	IH85 (W.L. TEST)	OT/ET = V4LT15/C9NT07= HI/HU	3.010	.000	3.000
(Y4LT15)	△	IH85 (W.L. THEORY)	OT/ET = V4LT15/A9NT07= HI/HU	3.010	.000	3.000

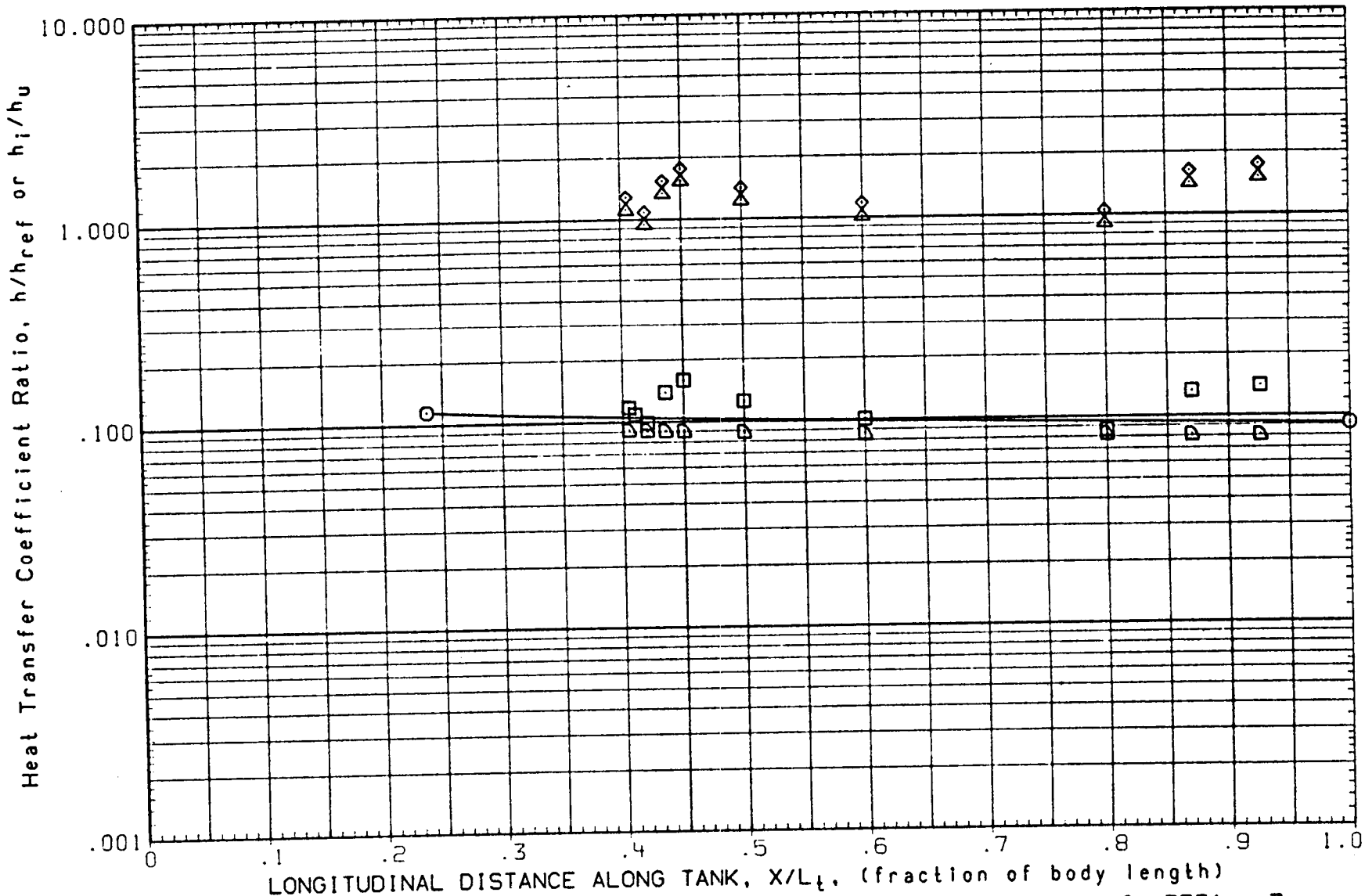

FIG. 4-23 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 330.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT15)	□	IH85, AEDC V4TA-W5, CONFIGURATION 0 (T)		3.010	.000	3.000
(X4LT15)	◇	IH85 (W.L. TEST)	OT/ET = V4LT15/C9NT07= HI/HU	3.010	.000	3.000
(Y4LT15)	△	IH85 (W.L. THEORY)	OT/ET = V4LT15/A9NT07= HI/HU	3.010	.000	3.000

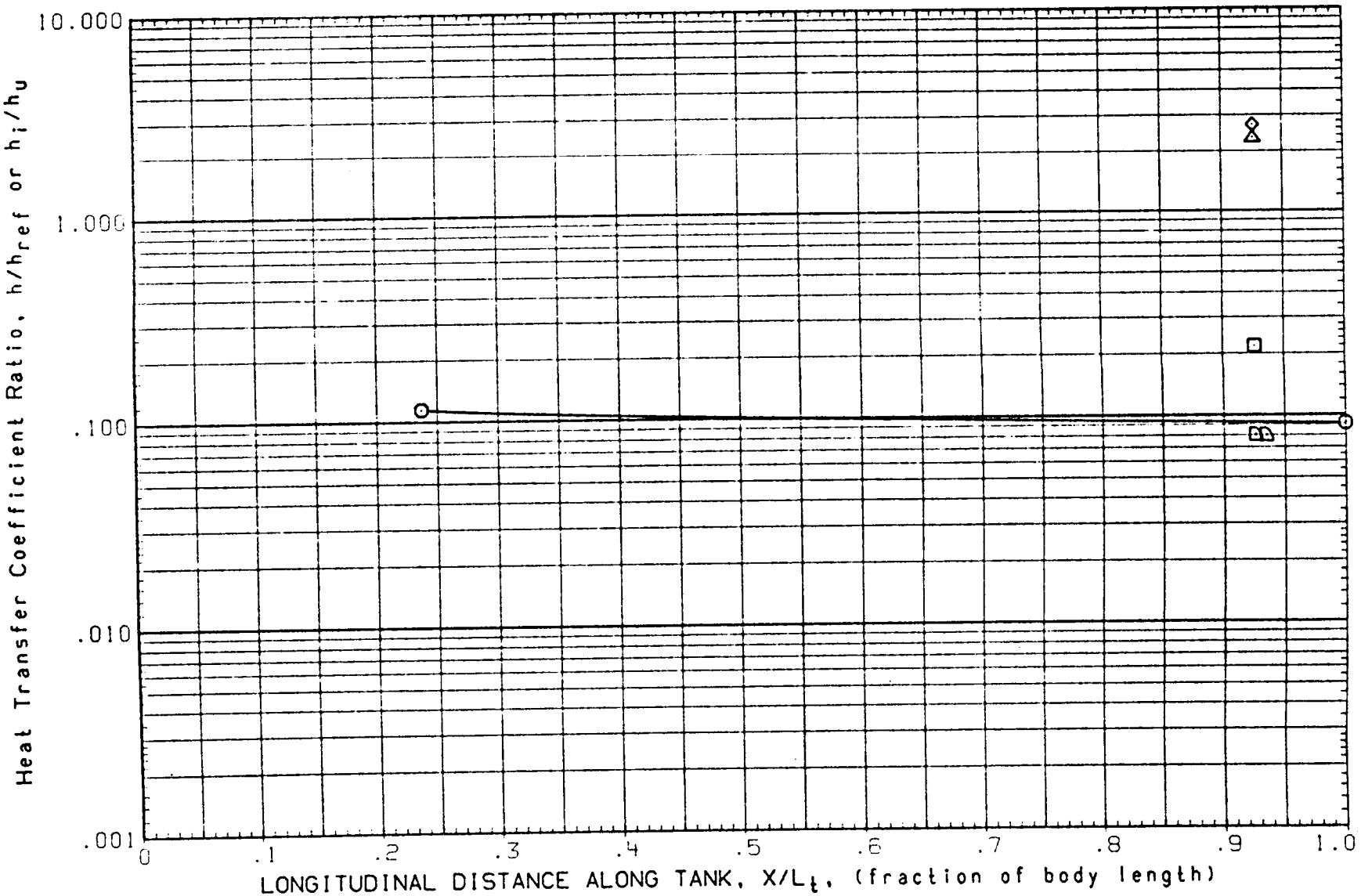

FIG. 4-23 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 RUN = 334.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT15)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	3.000
(X4LT15)	◇	IH85 (W.L. TEST) OT/ET = V4LT15/C9NT07=	HI/HU	3.010	.000	3.000
(Y4LT15)	△	IH85 (W.L. THEORY) OT/ET = V4LT15/A9NT07=	HI/HU	3.010	.000	3.000

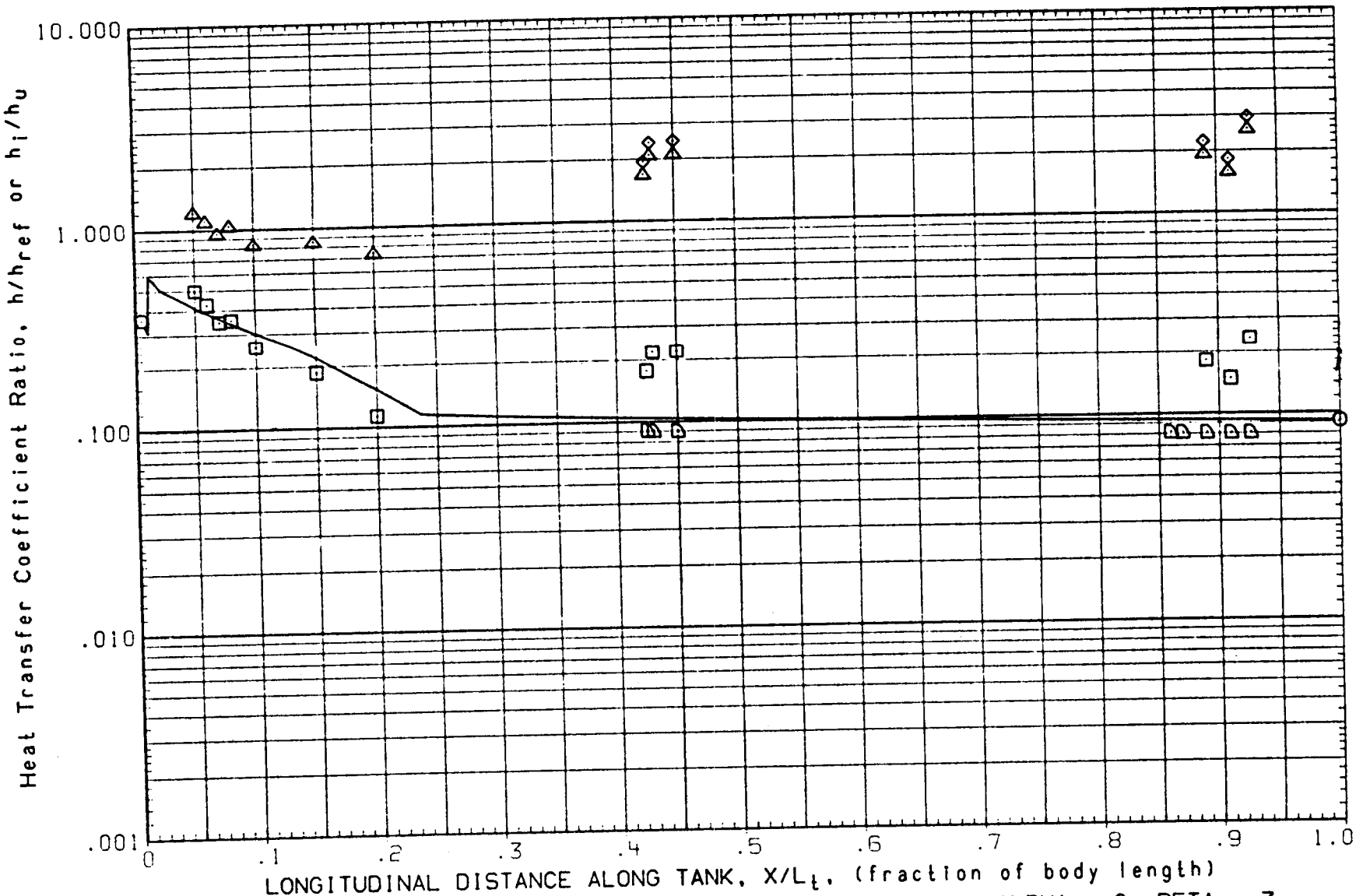

FIG. 4-23 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 337.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⊘	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT15)	□	IH85, AEDC V4TA-W5, CONFIGURATION 0 (T)		3.010	.000	3.000
(X4LT15)	◇	IH85 (W.L. TEST)	OT/ET = V4LT15/C9NT07= HI/HU	3.010	.000	3.000
(Y4LT15)	△	IH85 (W.L. THEORY)	OT/ET = V4LT15/A9NT07= HI/HU	3.010	.000	3.000

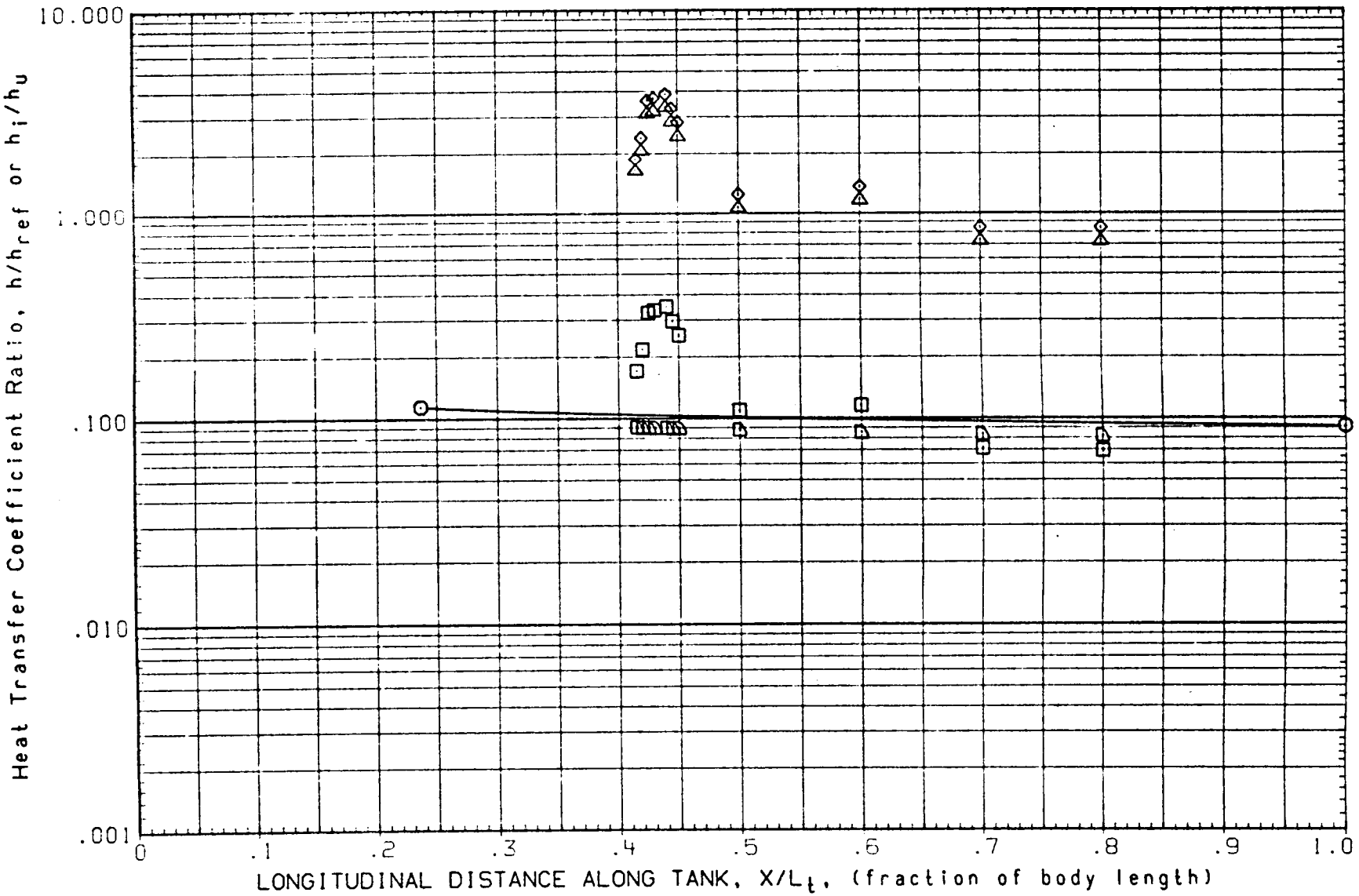

FIG. 4-23 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 343.120

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT15)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	3.000
(X4LT15)	◇	IH85 (W.L. TEST)	OT/ET = V4LT15/C9NT07= HI/HU	3.010	.000	3.000
(Y4LT15)	△	IH85 (W.L. THEORY)	OT/ET = V4LT15/A9NT07= HI/HU	3.010	.000	3.000

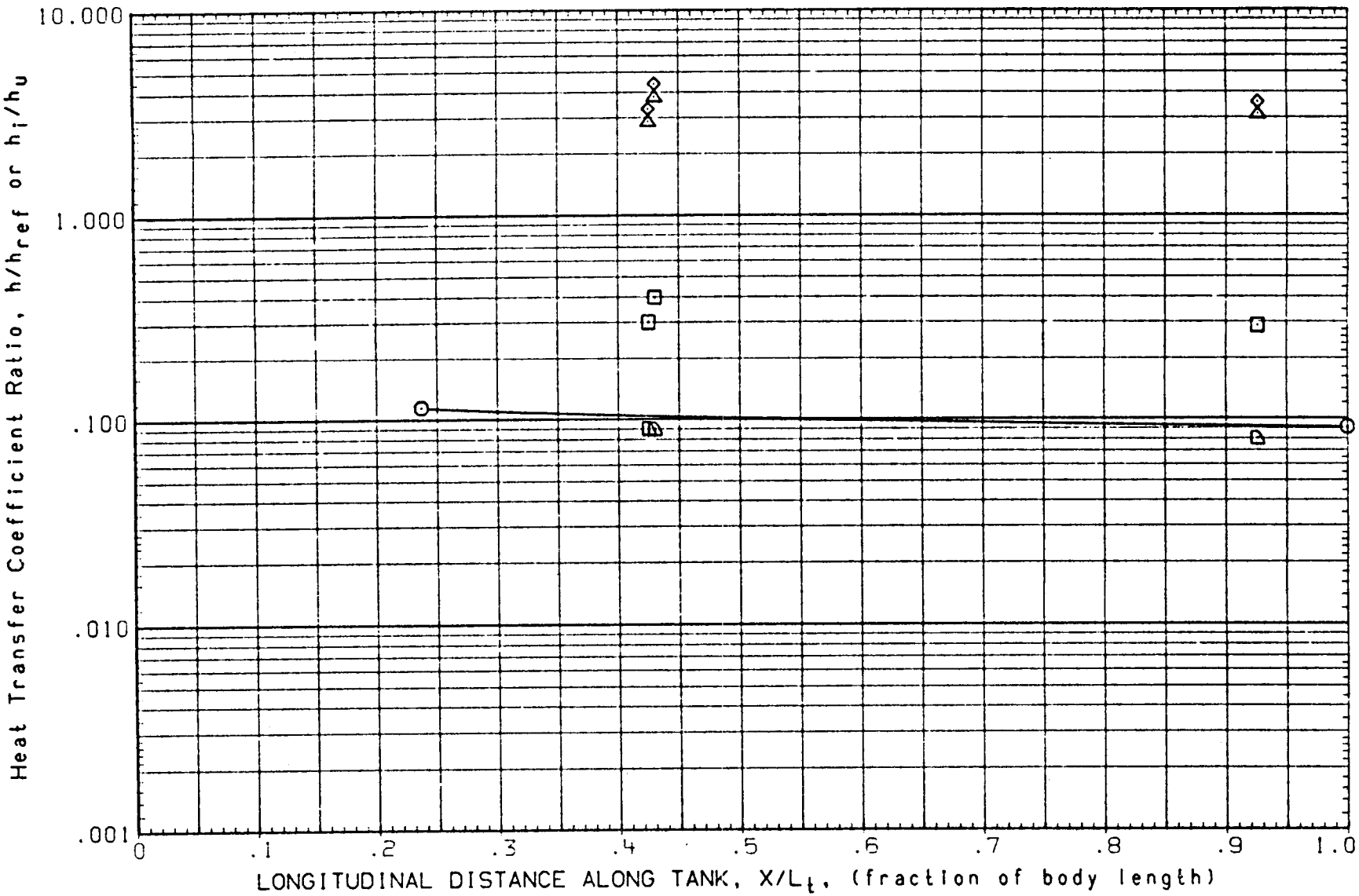

FIG. 4-23 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 345.560

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT15)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	3.000
(X4LT15)	◇	IH85 (W.L. TEST) OT/ET = V4LT15/C9NT07=	HI/HU	3.010	.000	3.000
(Y4LT15)	△	IH85 (W.L. THEORY) OT/ET = V4LT15/A9NT07=	HI/HU	3.010	.000	3.000

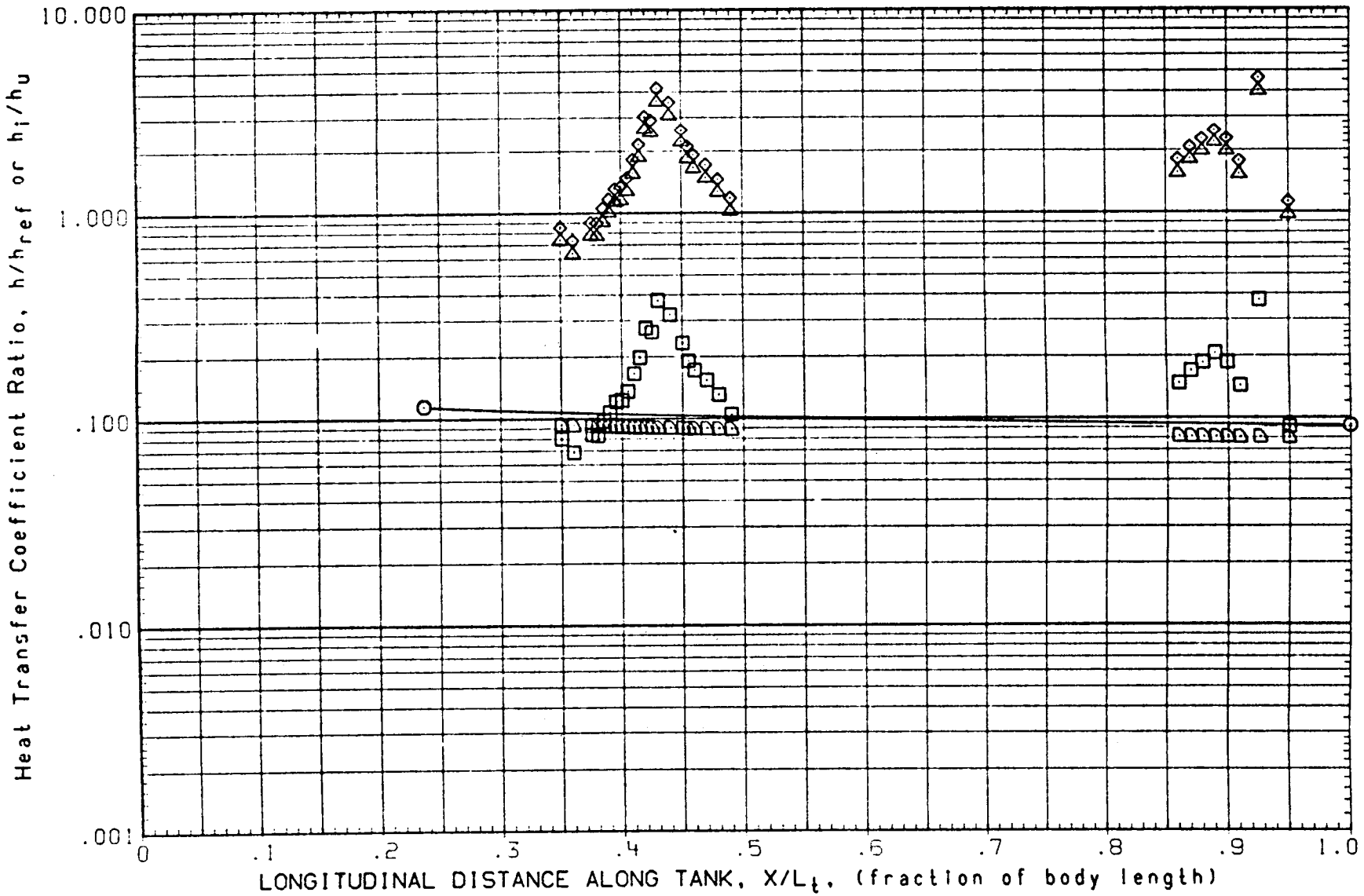

FIG. 4-23 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 348.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT15)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	3.000
(X4LT15)	◇	IH85 (W.L. TEST)	OT/ET = V4LT15/C9NT07= HI/HU	3.010	.000	3.000
(Y4LT15)	△	IH85 (W.L. THEORY)	OT/ET = V4LT15/A9NT07= HI/HU	3.010	.000	3.000

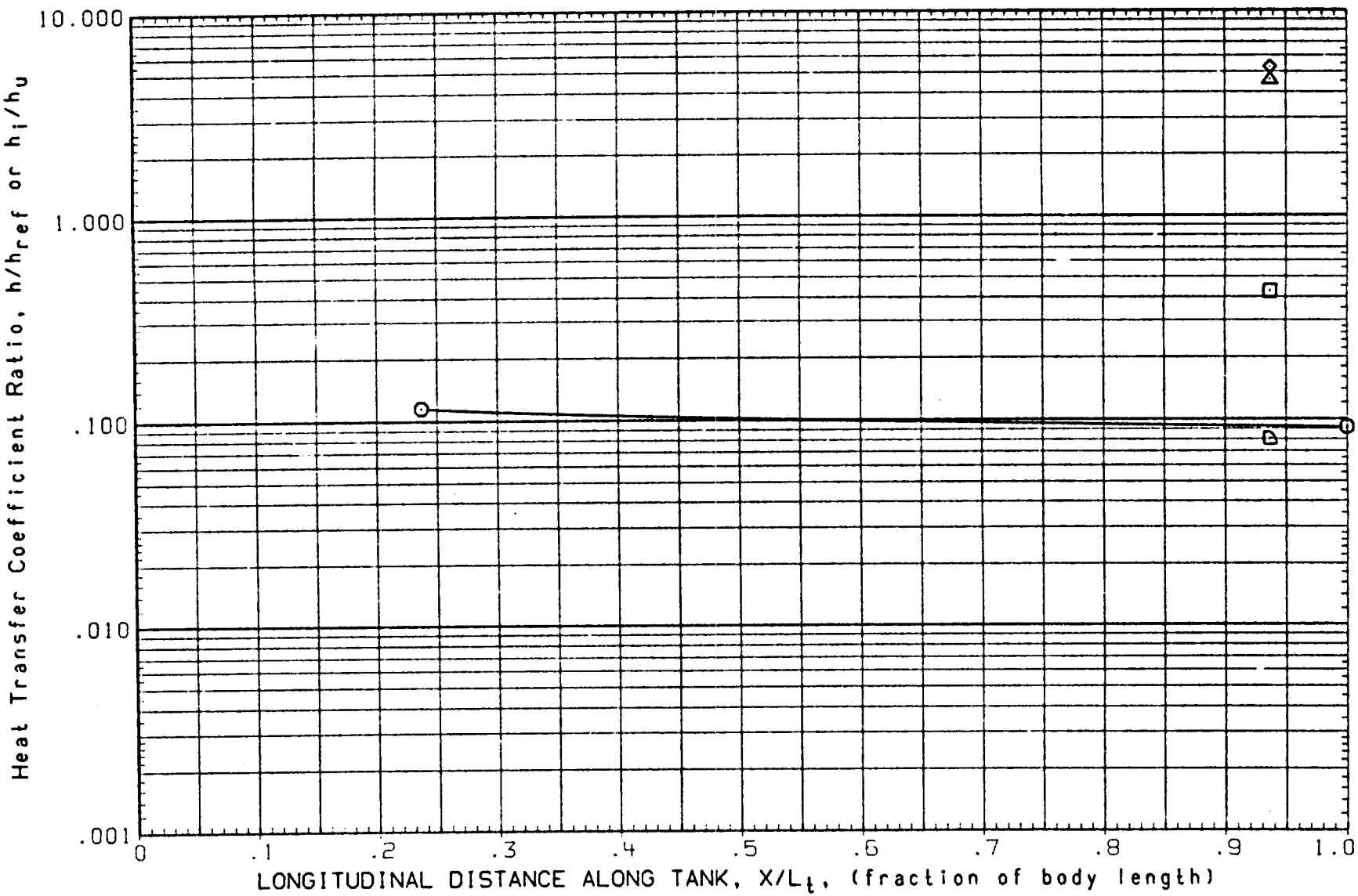

FIG. 4-23 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 352.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	▢	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	3.000
(V4LT15)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	3.000
(X4LT15)	◇	IH85 (W.L. TEST)	OT/ET = V4LT15/C9NT07= HI/HU	3.010	.000	3.000
(Y4LT15)	△	IH85 (W.L. THEORY)	OT/ET = V4LT15/A9NT07= HI/HU	3.010	.000	3.000

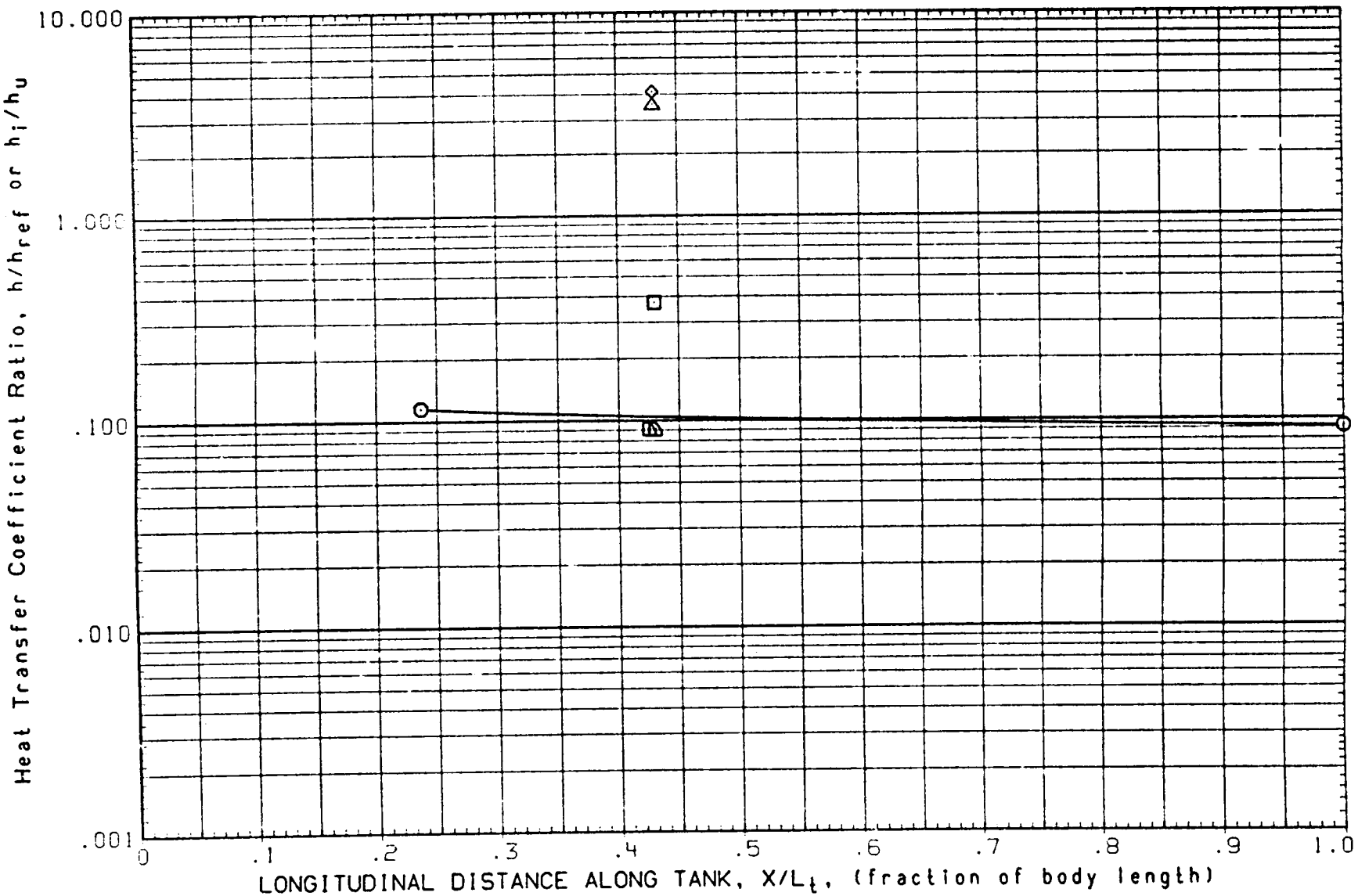

FIG. 4-23 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 354.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	⬠	DATA NOT AVAILABLE		3.010	.000	3.000
(V4LT15)	□	DATA NOT AVAILABLE		3.010	.000	3.000
(X4LT15)	◇	DATA NOT AVAILABLE		3.010	.000	3.000
(Y4LT15)	△	DATA NOT AVAILABLE		3.010	.000	3.000

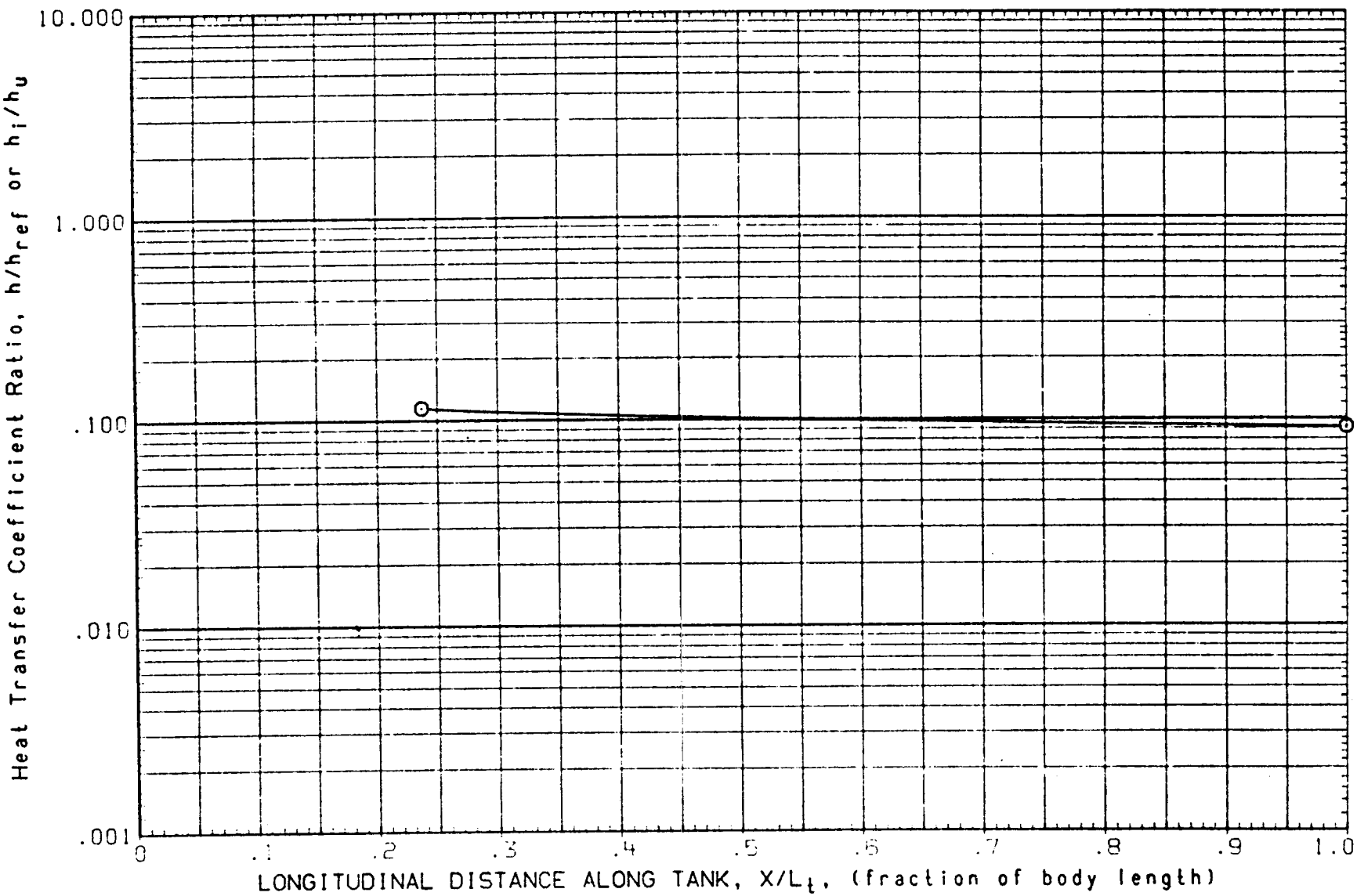

FIG. 4-23 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 225.160

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT07)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	3.000
(C9NT07)	▷	DATA NOT AVAILABLE		3.010	.000	3.000
(V4LT15)	□	DATA NOT AVAILABLE		3.010	.000	3.000
(X4LT15)	◇	DATA NOT AVAILABLE		3.010	.000	3.000
(Y4LT15)	△	DATA NOT AVAILABLE		3.010	.000	3.000

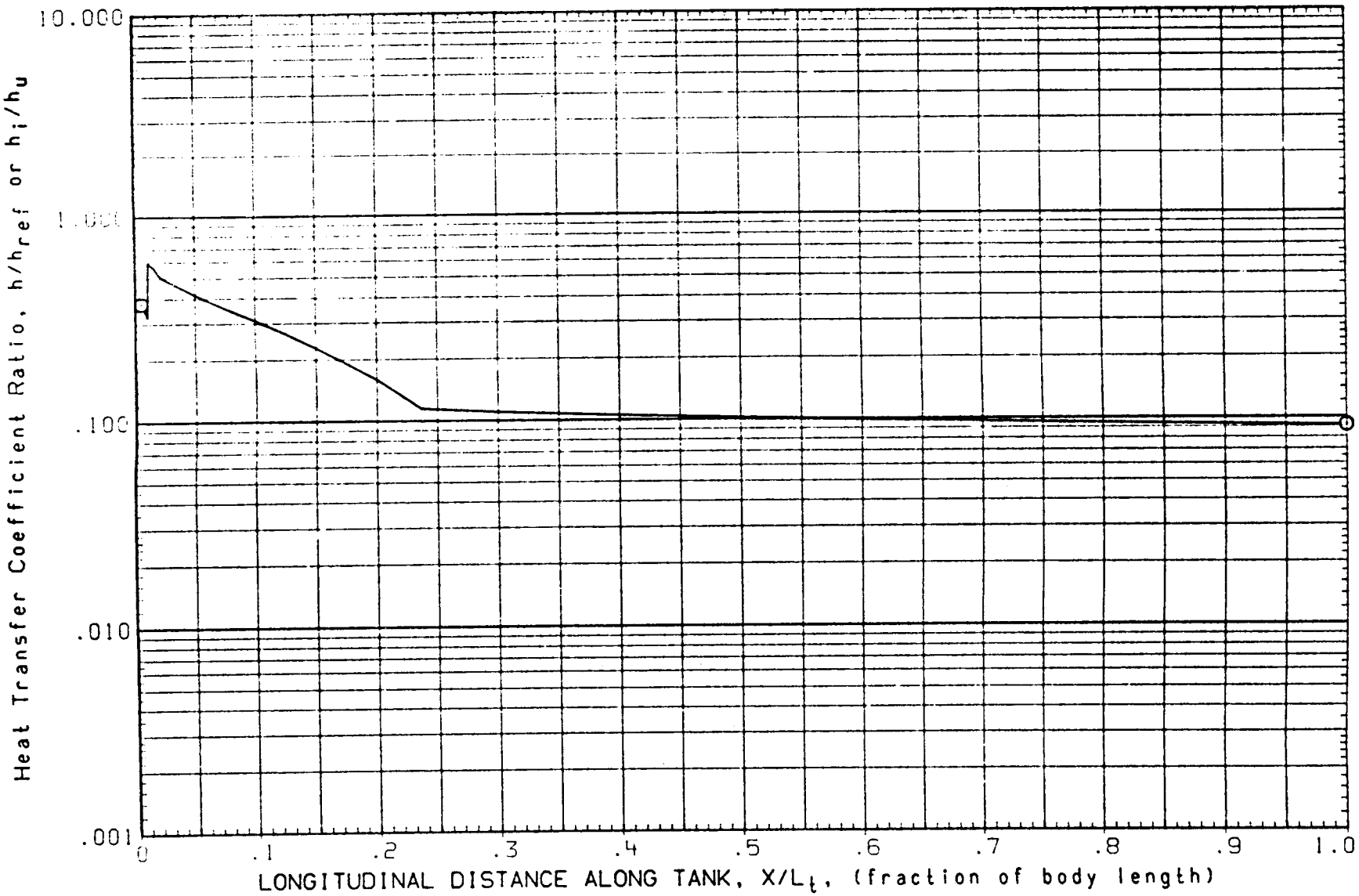

FIG. 4-23 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 3
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 360.000

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT08)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	5.000
(C9NT08)	⊿	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	5.000
(V4LT16)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	5.000
(X4LT16)	◇	IH85 (W.L. TEST)	OT/ET = V4LT16/C9NT08= HI/HU	3.010	.000	5.000
(Y4LT16)	△	IH85 (W.L. THEORY)	OT/ET = V4LT16/A9NT08= HI/HU	3.010	.000	5.000

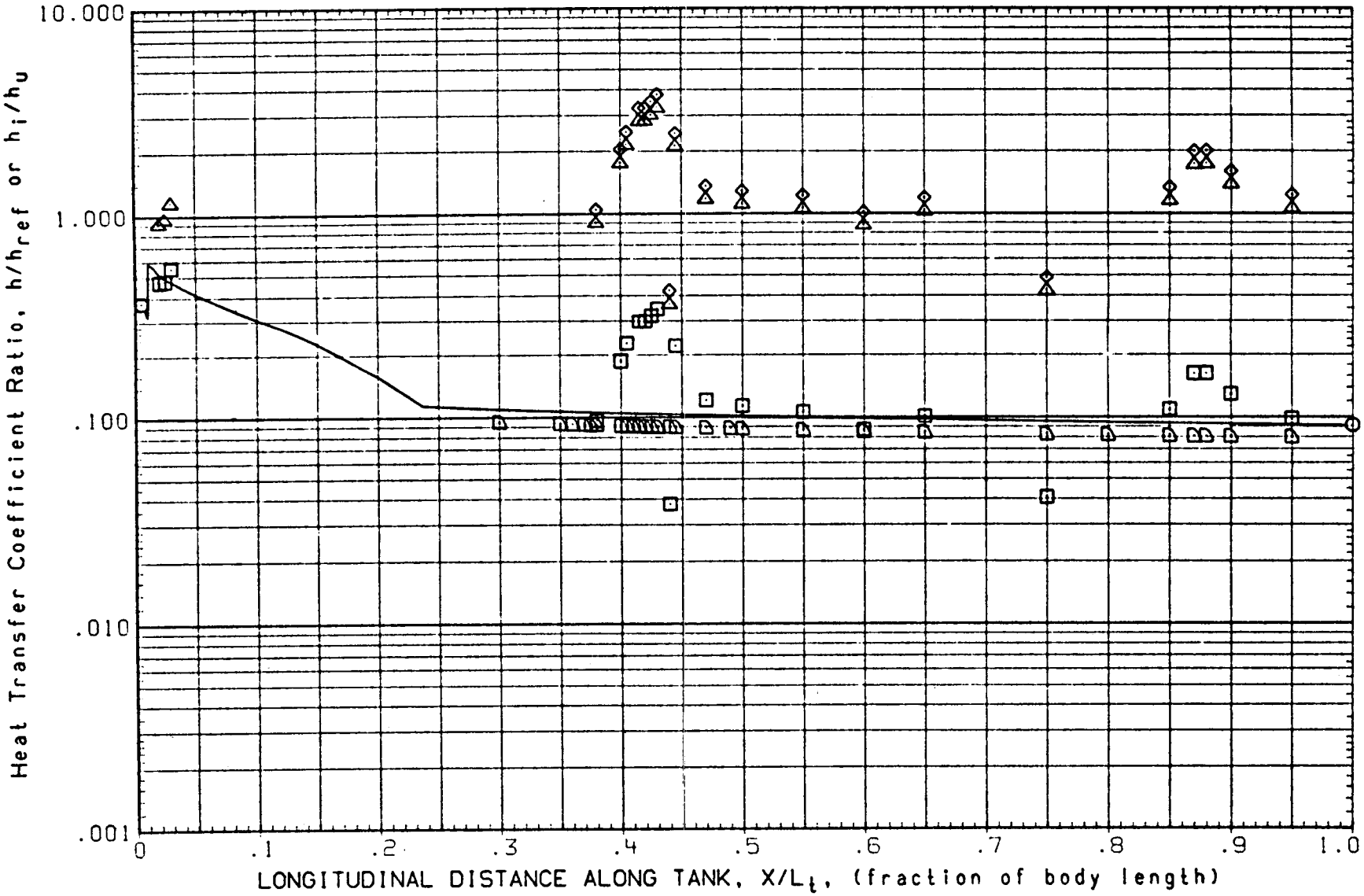

FIG. 4-24 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = .000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT08)	○	DATA NOT AVAILABLE	3.010	.000	5.000
(C9NT08)	⊐	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	3.010	.000	5.000
(V4LT16)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)	3.010	.000	5.000
(X4LT16)	◇	IH85 (W.L. TEST) OT/ET = V4LT16/C9NT08= HI/HU	3.010	.000	5.000
(Y4LT16)	△	IH85 (W.L. THEORY) OT/ET = V4LT16/A9NT08= HI/HU	3.010	.000	5.000

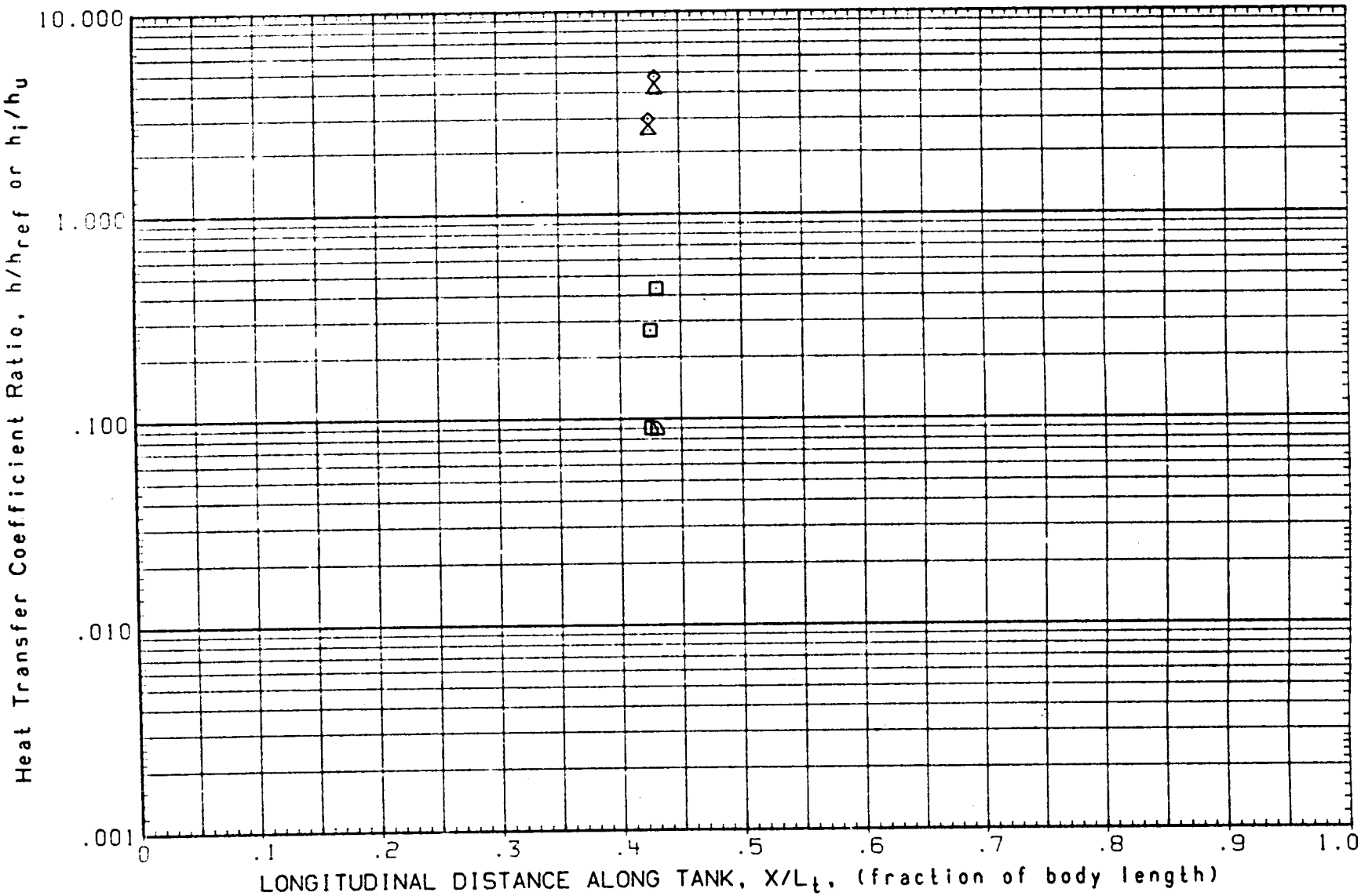

FIG. 4-24 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 5.625

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT08)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	5.000
(C9NT08)	⌂	DATA NOT AVAILABLE		3.010	.000	5.000
(Y4LT16)	□	DATA NOT AVAILABLE		3.010	.000	5.000
(X4LT16)	◇	DATA NOT AVAILABLE		3.010	.000	5.000
(Y4LT16)	△	DATA NOT AVAILABLE		3.010	.000	5.000

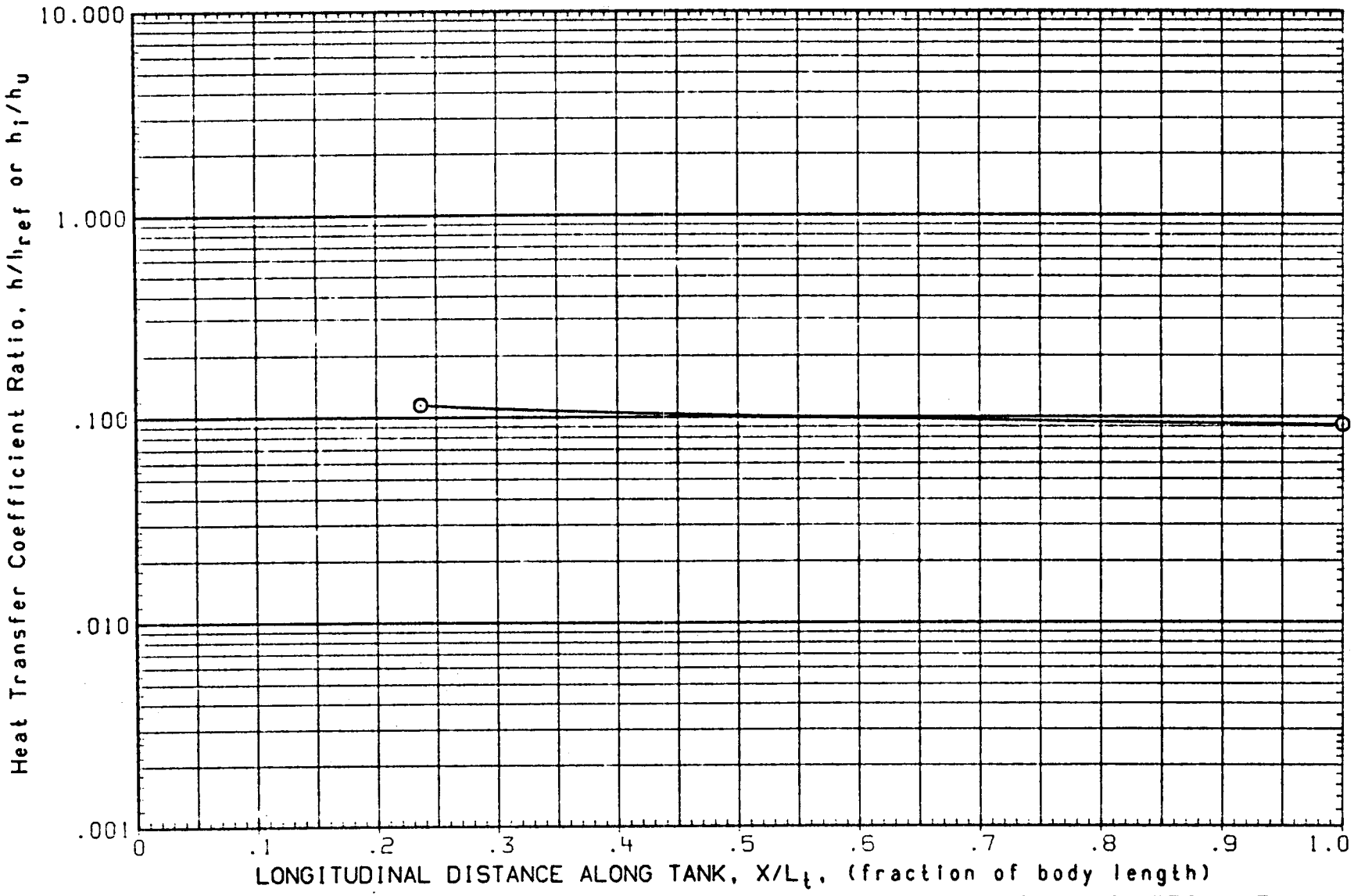

FIG. 4-24 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 5.630

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT08)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	5.000
(C9NT08)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	5.000
(V4LT16)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	5.000
(X4LT16)	◇	IH85 (W.L. TEST)	OT/ET = V4LT16/C9NT08= HI/HU	3.010	.000	5.000
(Y4LT16)	△	IH85 (W.L. THEORY)	OT/ET = V4LT16/A9NT08= HI/HU	3.010	.000	5.000

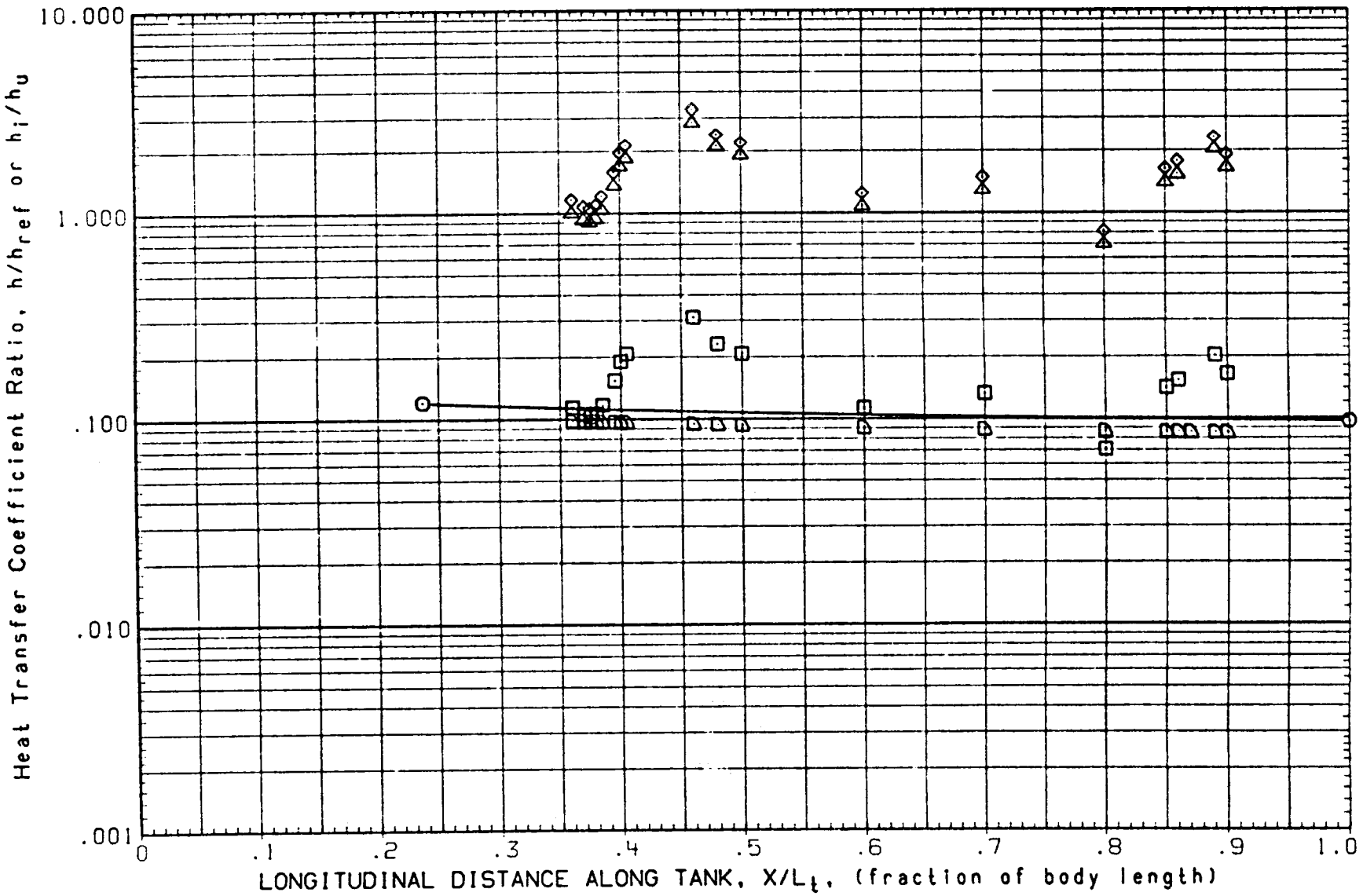

FIG. 4-24 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 11.250

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT08)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	5.000
(C9NT08)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	5.000
(V4LT16)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	5.000
(X4LT16)	◇	IH85 (W.L. TEST)	OT/ET = V4LT16/C9NT08= HI/HU	3.010	.000	5.000
(Y4LT16)	△	IH85 (W.L. THEORY)	OT/ET = V4LT16/A9NT08= HI/HU	3.010	.000	5.000

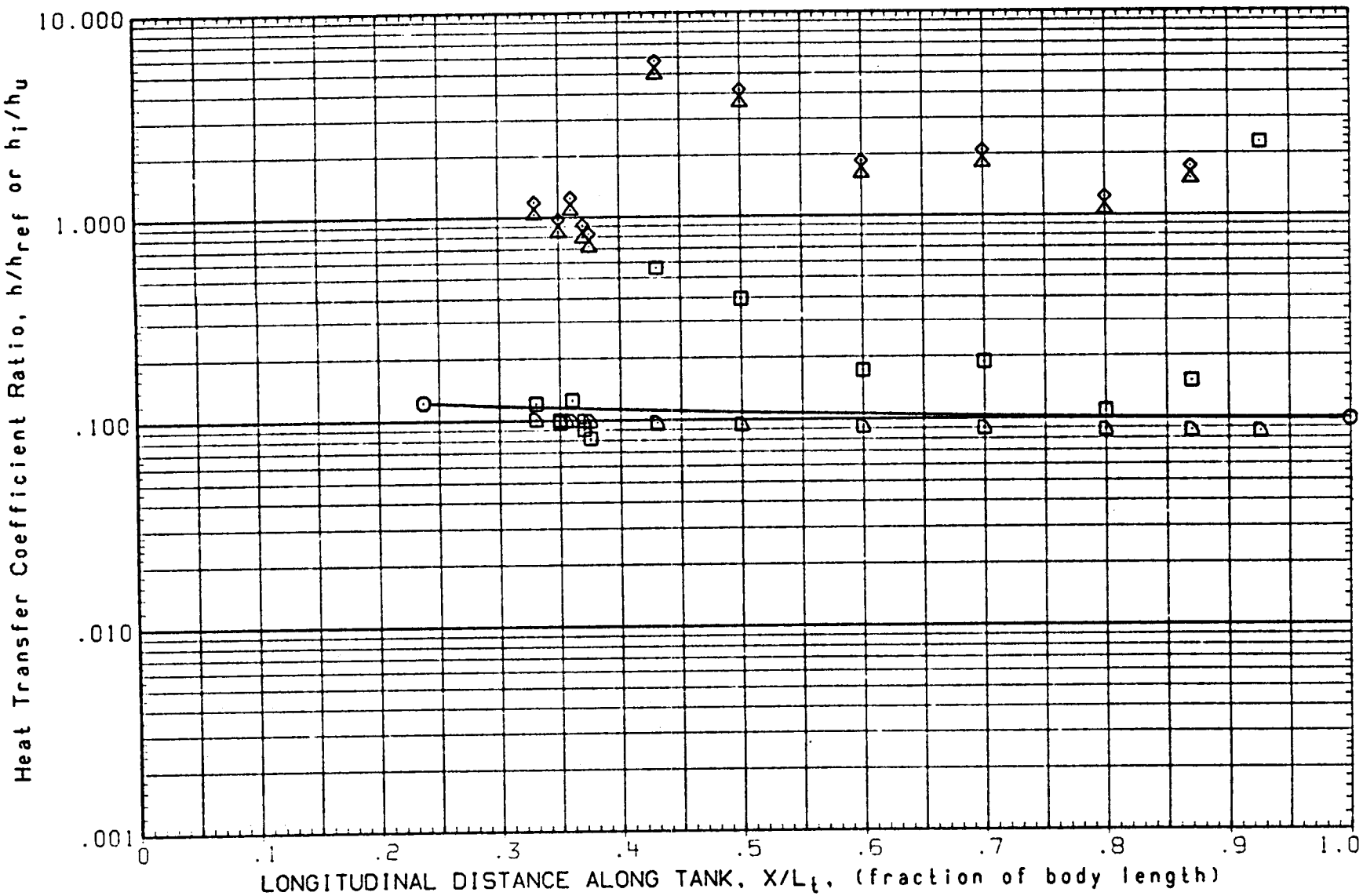

FIG. 4-24 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 17.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT08)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	3.010	.000	5.000
(C9NT08)	▷	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	3.010	.000	5.000
(V4LT16)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)	3.010	.000	5.000
(X4LT16)	◇	IH85 (W.L. TEST) OT/ET = V4LT16/C9NT08= HI/HU	3.010	.000	5.000
(Y4LT16)	△	IH85 (W.L. THEORY) OT/ET = V4LT16/A9NT08= HI/HU	3.010	.000	5.000

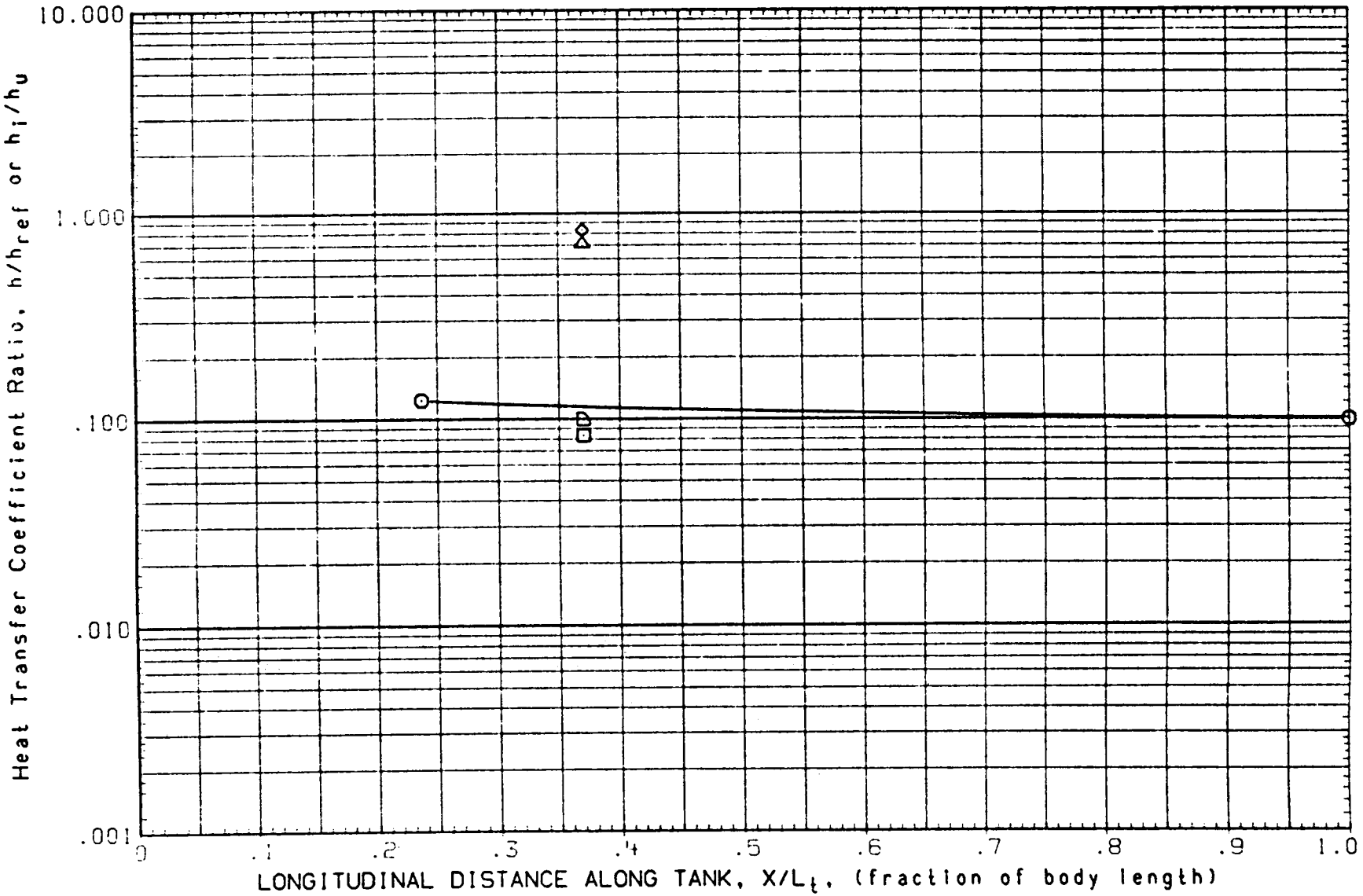

FIG. 4-24 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 20.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT08)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	5.000
(C9NT09)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	5.000
(V4LT16)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	5.000
(X4LT16)	◇	IH85 (W.L. TEST)	OT/ET = V4LT16/C9NT08= HI/HU	3.010	.000	5.000
(Y4LT16)	△	IH85 (W.L. THEORY)	OT/ET = V4LT16/A9NT08= HI/HU	3.010	.000	5.000

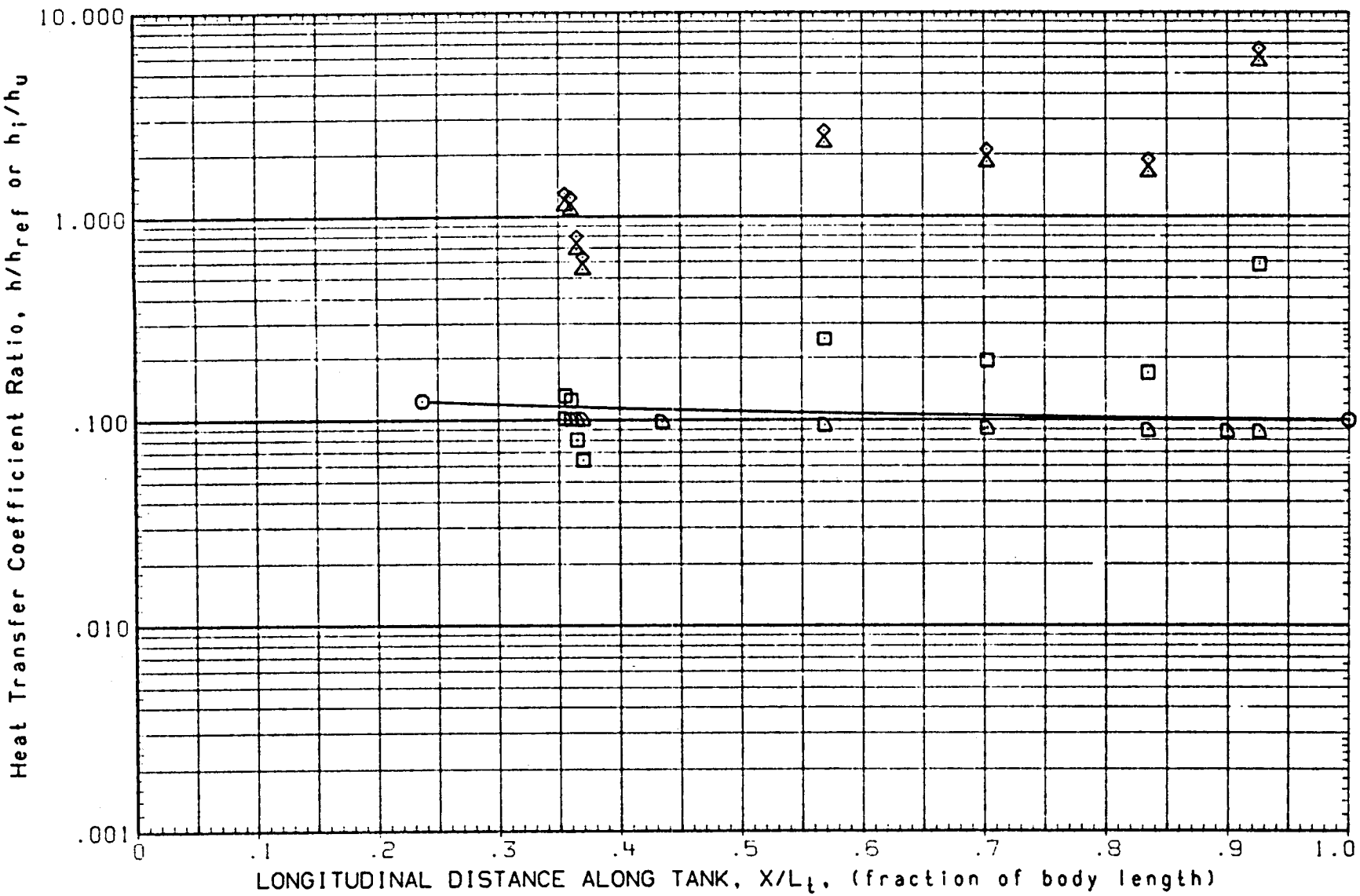

FIG. 4-24 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 23.070

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT08)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	5.000
(C9NT08)	□	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	5.000
(V4LT16)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	5.000
(X4LT16)	◇	IH85 (W.L. TEST)	OT/ET = V4LT16/C9NT08= HI/HU	3.010	.000	5.000
(Y4LT16)	△	IH85 (W.L. THEORY)	OT/ET = V4LT16/A9NT08= HI/HU	3.010	.000	5.000

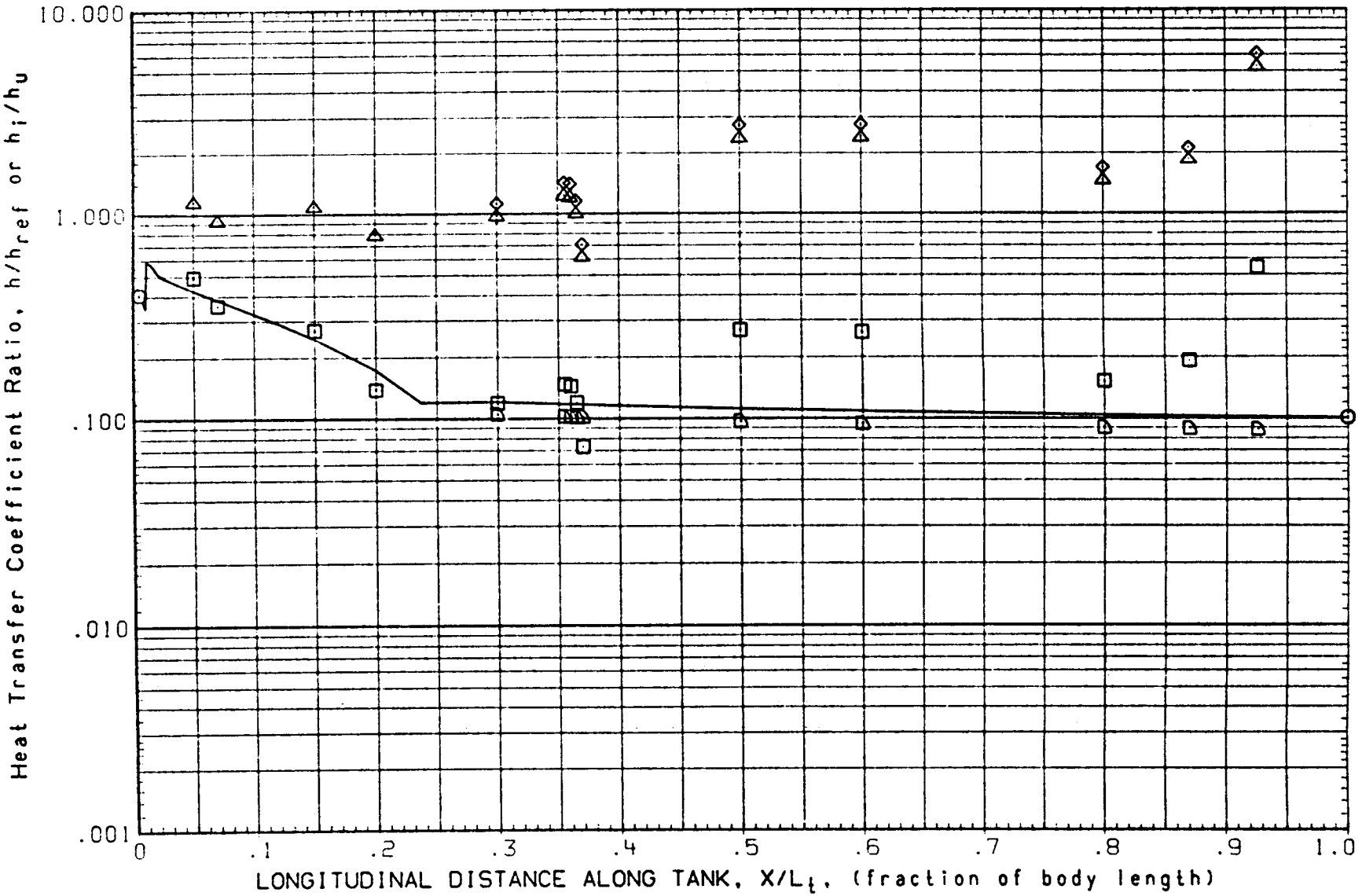

FIG. 4-24 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 29.800

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT08)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	3.010	.000	5.000
(C9NT08)	⊐	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	3.010	.000	5.000
(V4LT16)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)	3.010	.000	5.000
(X4LT16)	◇	IH85 (W.L. TEST) OT/ET = V4LT16/C9NT08= HI/HU	3.010	.000	5.000
(Y4LT16)	△	IH85 (W.L. THEORY) OT/ET = V4LT16/A9NT08= HI/HU	3.010	.000	5.000

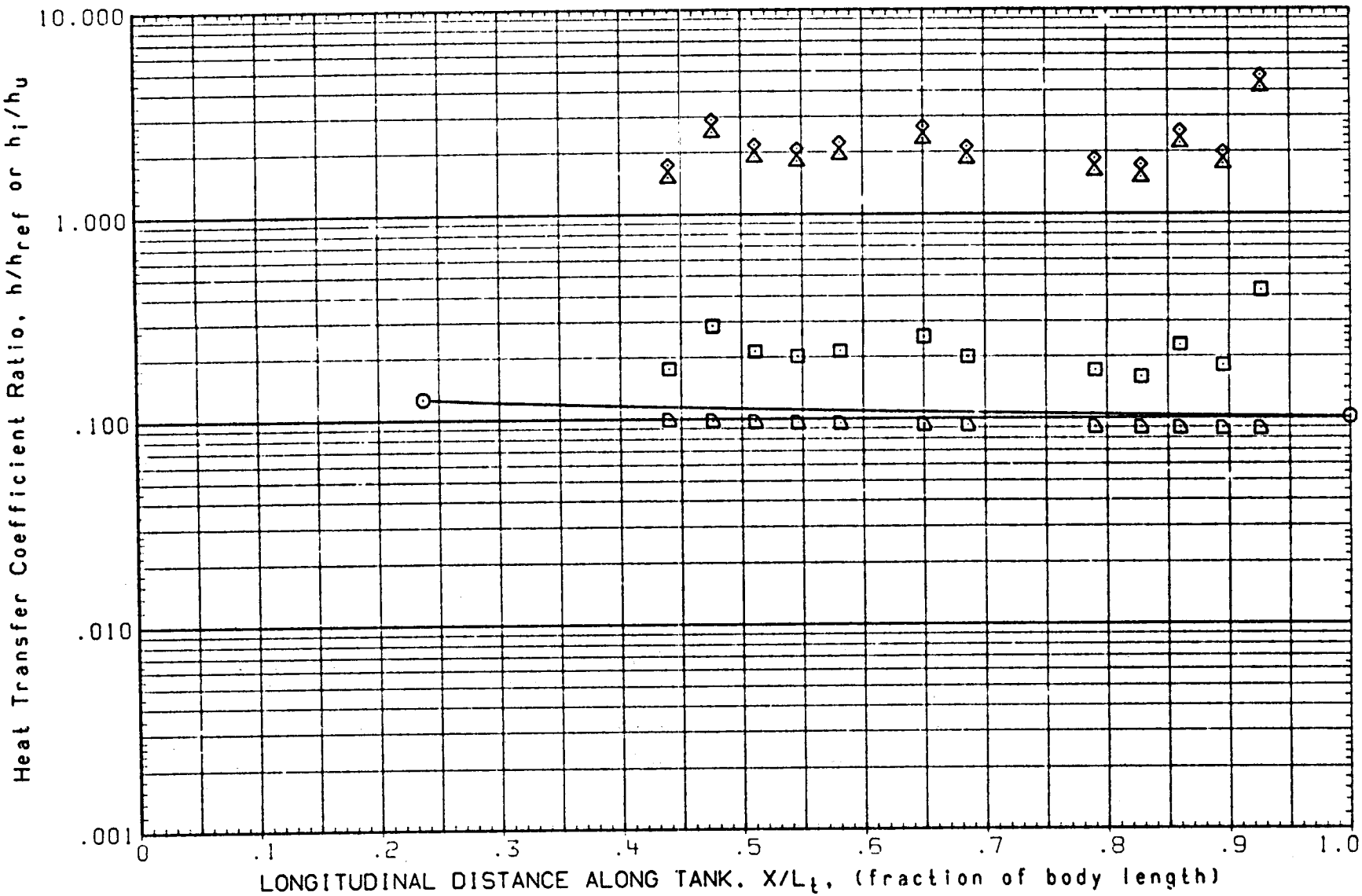

FIG. 4-24 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 31.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(C9NT08)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	5.000
(C9NT08)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	5.000
(V4LT16)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	5.000
(X4LT16)	◇	IH85 (W.L. TEST)	OT/ET = V4LT16/C9NT08= HI/HU	3.010	.000	5.000
(Y4LT16)	△	IH85 (W.L. THEORY)	OT/ET = V4LT16/A9NT08= HI/HU	3.010	.000	5.000

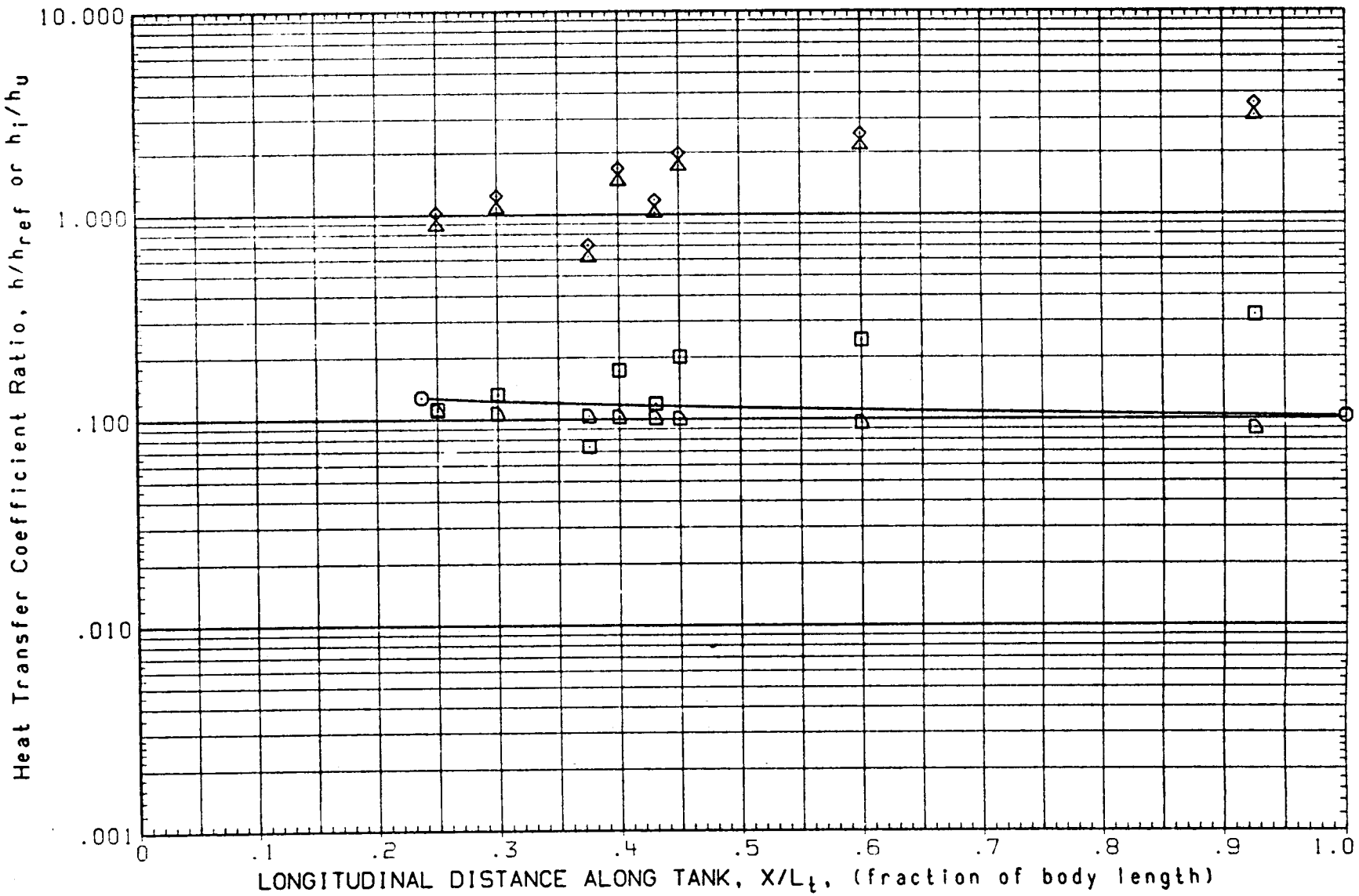

FIG. 4-24 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 33.750

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT08)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	3.010	.000	5.000
(C9NT08)	◗	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	3.010	.000	5.000
(V4LT16)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)	3.010	.000	5.000
(X4LT16)	◇	IH85 (W.L. TEST) OT/ET = V4LT16/C9NT08= HI/HU	3.010	.000	5.000
(Y4LT16)	△	IH85 (W.L. THEORY) OT/ET = V4LT16/A9NT08= HI/HU	3.010	.000	5.000

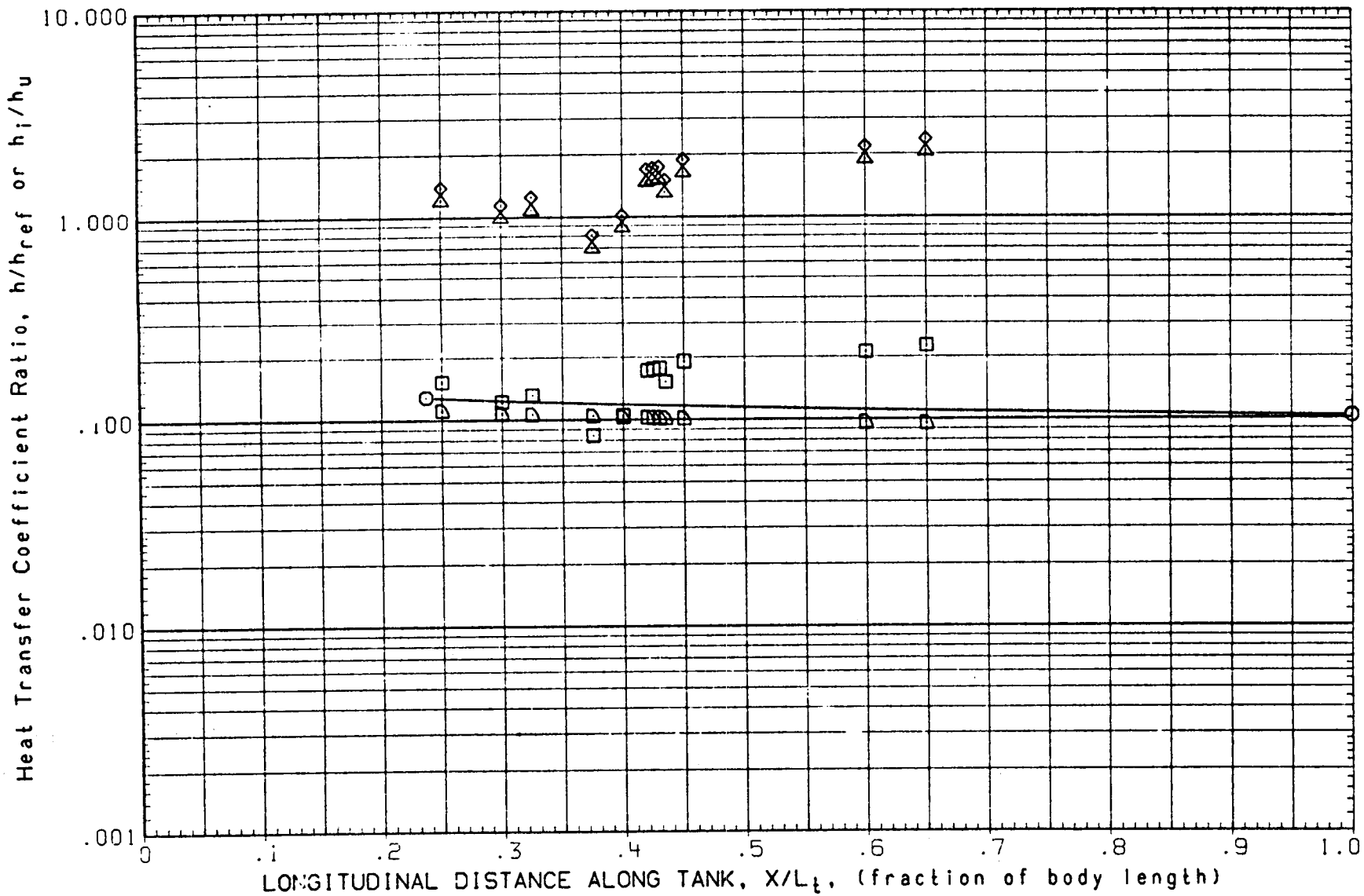

FIG. 4-24 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 36.320

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT08)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	5.000
(C9NT08)	▷	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	5.000
(V4LT16)	□	IH85, AEDC V4TA-H5, CONFIGURATION 0 (T)		3.010	.000	5.000
(X4LT16)	◇	IH85 (W.L. TEST)	OT/ET = V4LT16/C9NT08= HI/HU	3.010	.000	5.000
(Y4LT16)	△	IH85 (W.L. THEORY)	OT/ET = V4LT16/A9NT08= HI/HU	3.010	.000	5.000

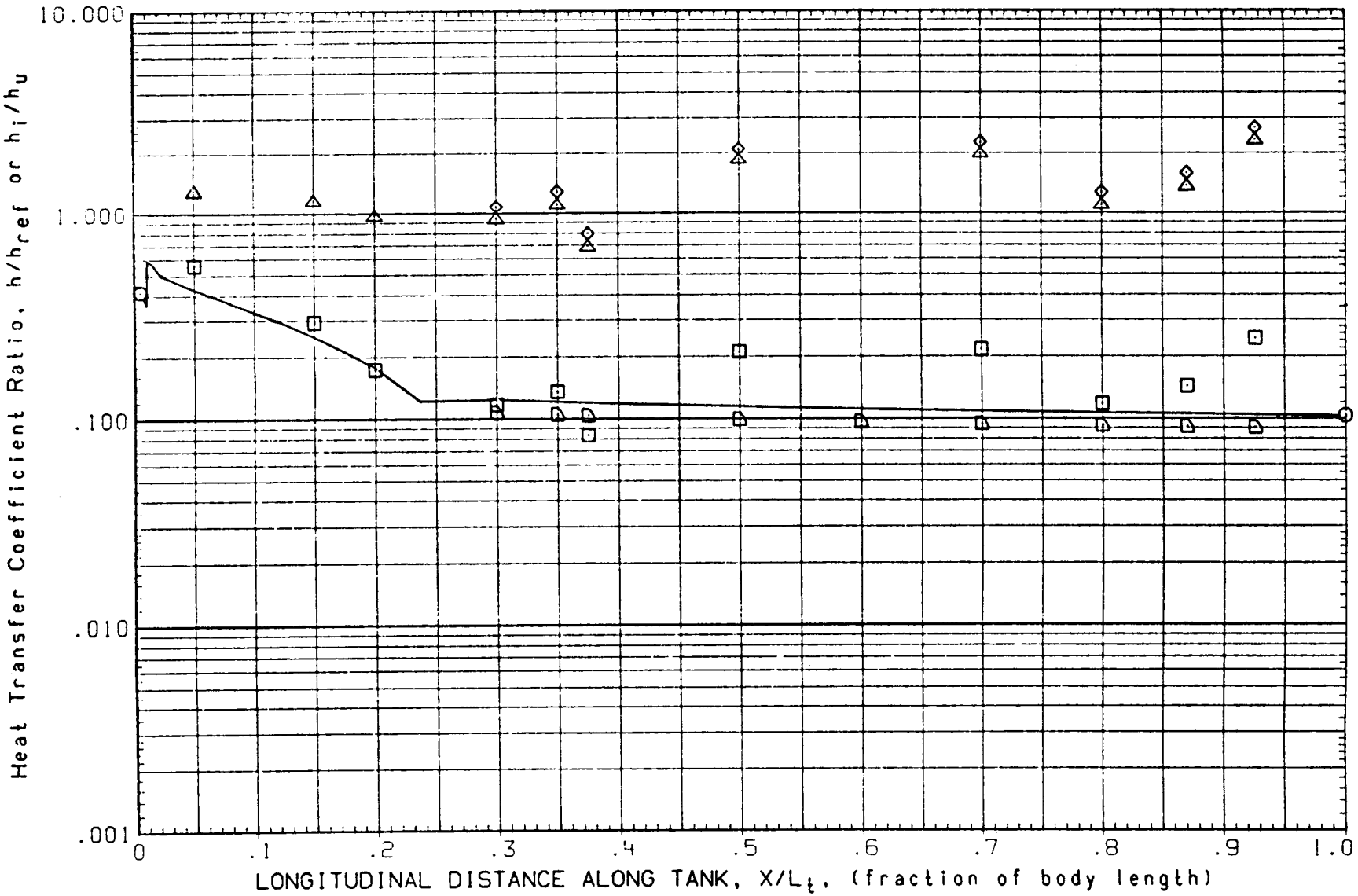

FIG. 4-24 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 37.700

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT08)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	5.000
(C9NT08)	⌂	DATA NOT AVAILABLE		3.010	.000	5.000
(V4LT16)	□	DATA NOT AVAILABLE		3.010	.000	5.000
(X4LT16)	◇	DATA NOT AVAILABLE		3.010	.000	5.000
(Y4LT16)	△	DATA NOT AVAILABLE		3.010	.000	5.000

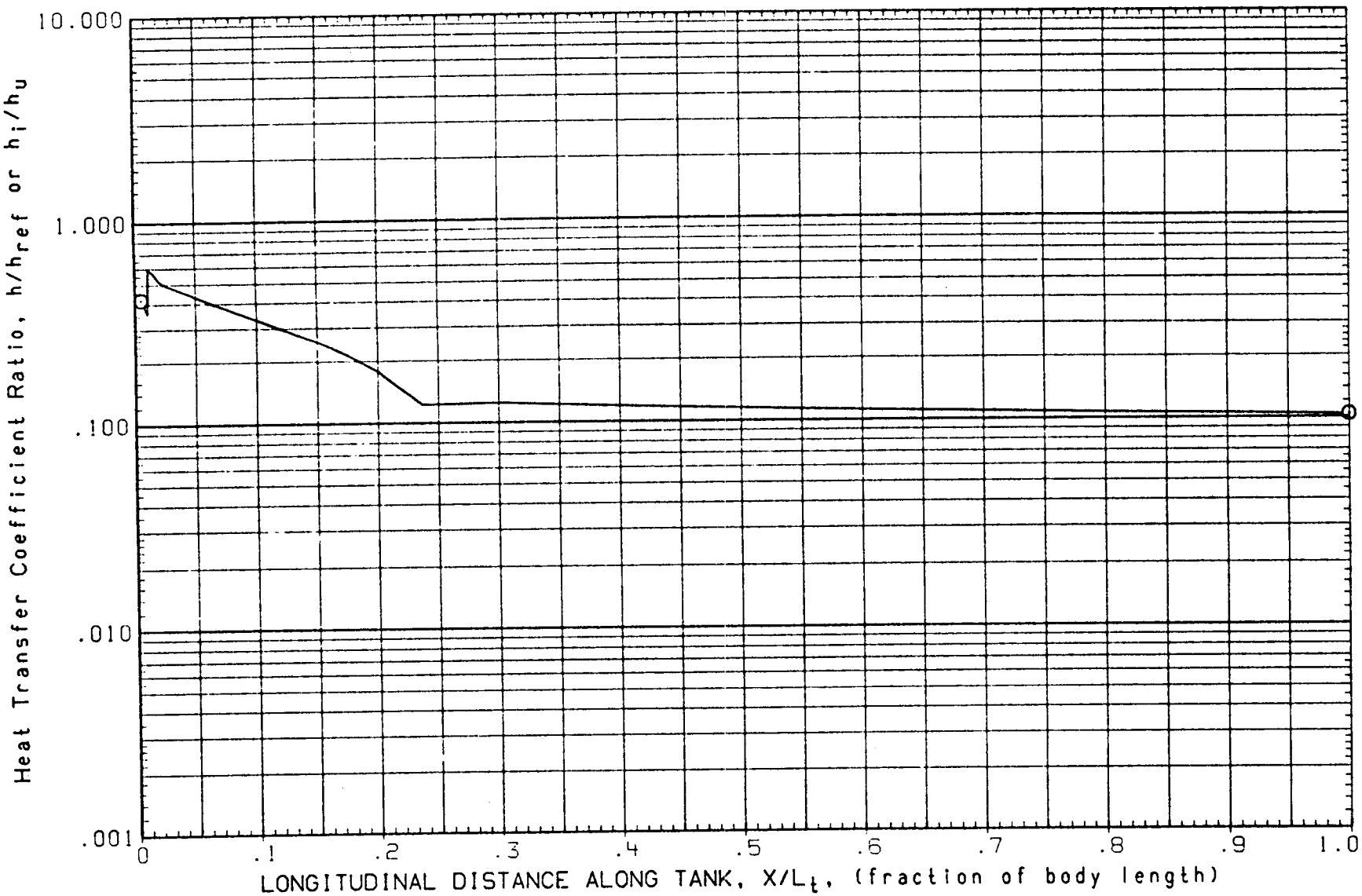

FIG. 4-24 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 39.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT08)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	5.000
(C9NT08)	◑	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	5.000
(V4LT16)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	5.000
(X4LT16)	◇	IH85 (W.L. TEST)	OT/ET = V4LT16/C9NT08= HI/HU	3.010	.000	5.000
(Y4LT16)	△	IH85 (W.L. THEORY)	OT/ET = V4LT16/A9NT08= HI/HU	3.010	.000	5.000

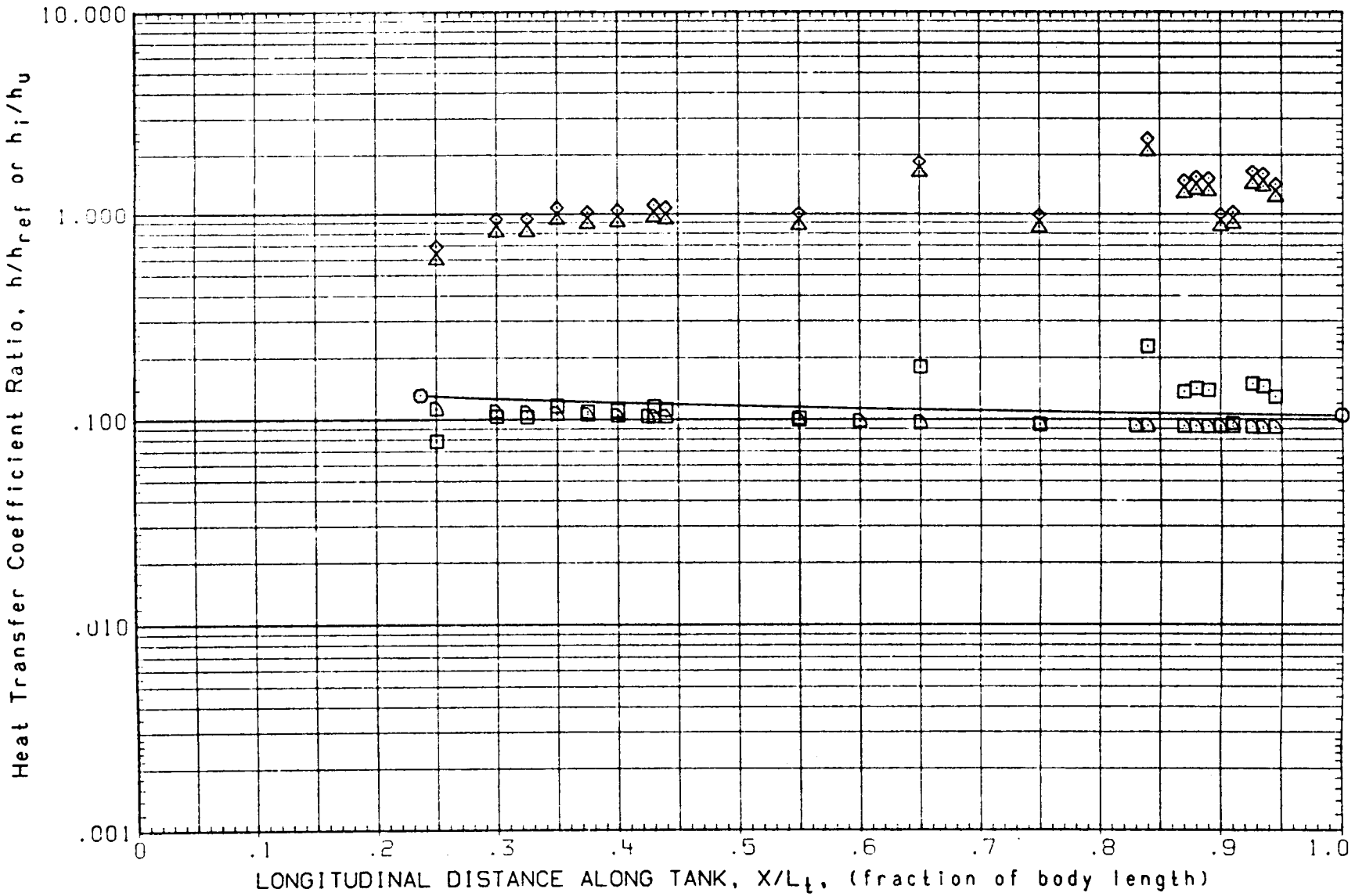

FIG. 4-24 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 45.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT08)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	3.010	.000	5.000
(C9NT08)	⬠	DATA NOT AVAILABLE	3.010	.000	5.000
(V4LT16)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)	3.010	.000	5.000
(X4LT16)	◇	DATA NOT AVAILABLE	3.010	.000	5.000
(Y4LT16)	△	IH85 (W.L. THEORY) OT/ET = V4LT16/A9NT08= HI/HU	3.010	.000	5.000

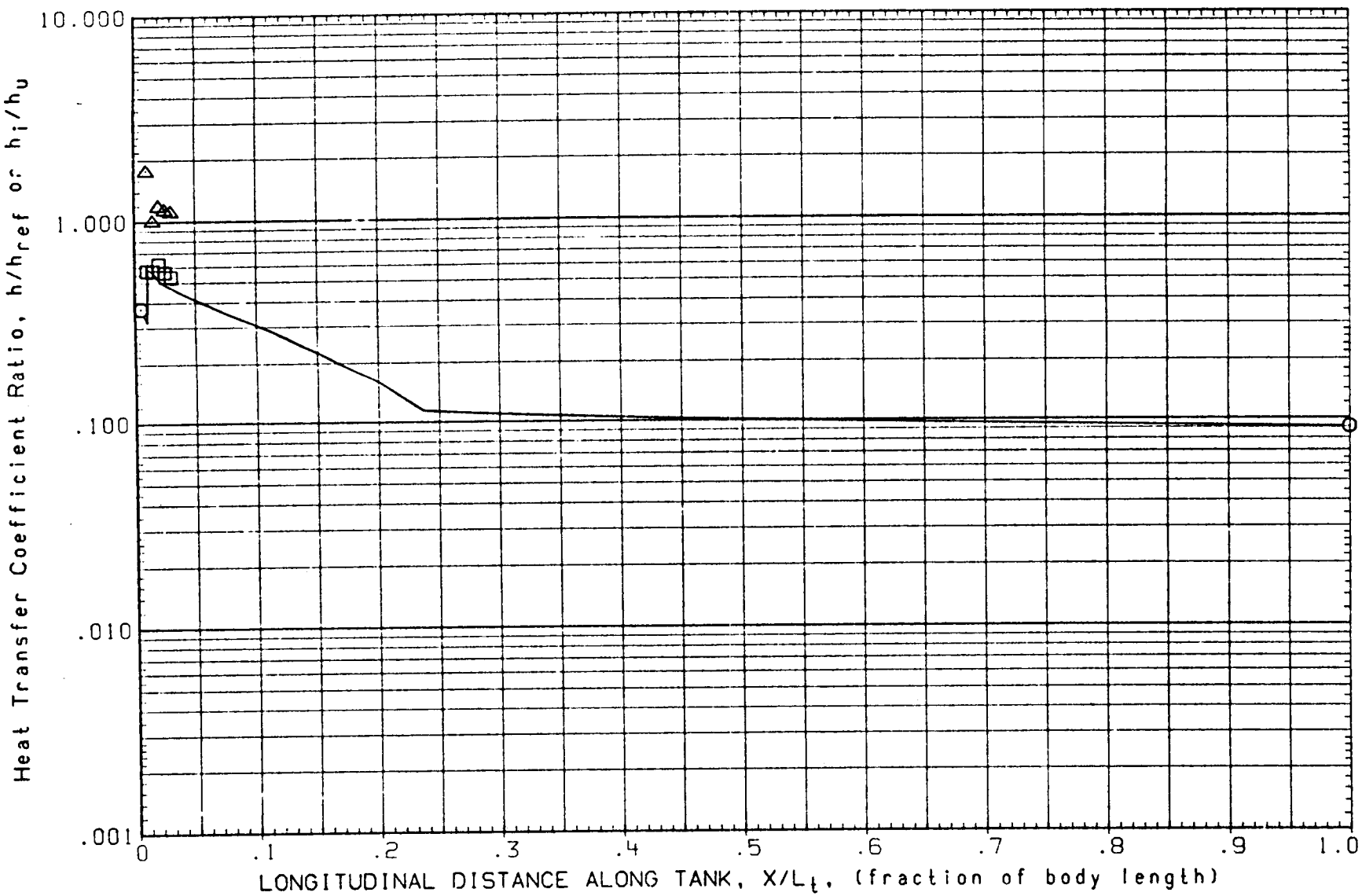

FIG. 4-24 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 180.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT08)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	5.000
(C9NT08)	⬠	DATA NOT AVAILABLE		3.010	.000	5.000
(Y4LT16)	□	DATA NOT AVAILABLE		3.010	.000	5.000
(X4LT16)	◇	DATA NOT AVAILABLE		3.010	.000	5.000
(Y4LT16)	△	DATA NOT AVAILABLE		3.010	.000	5.000

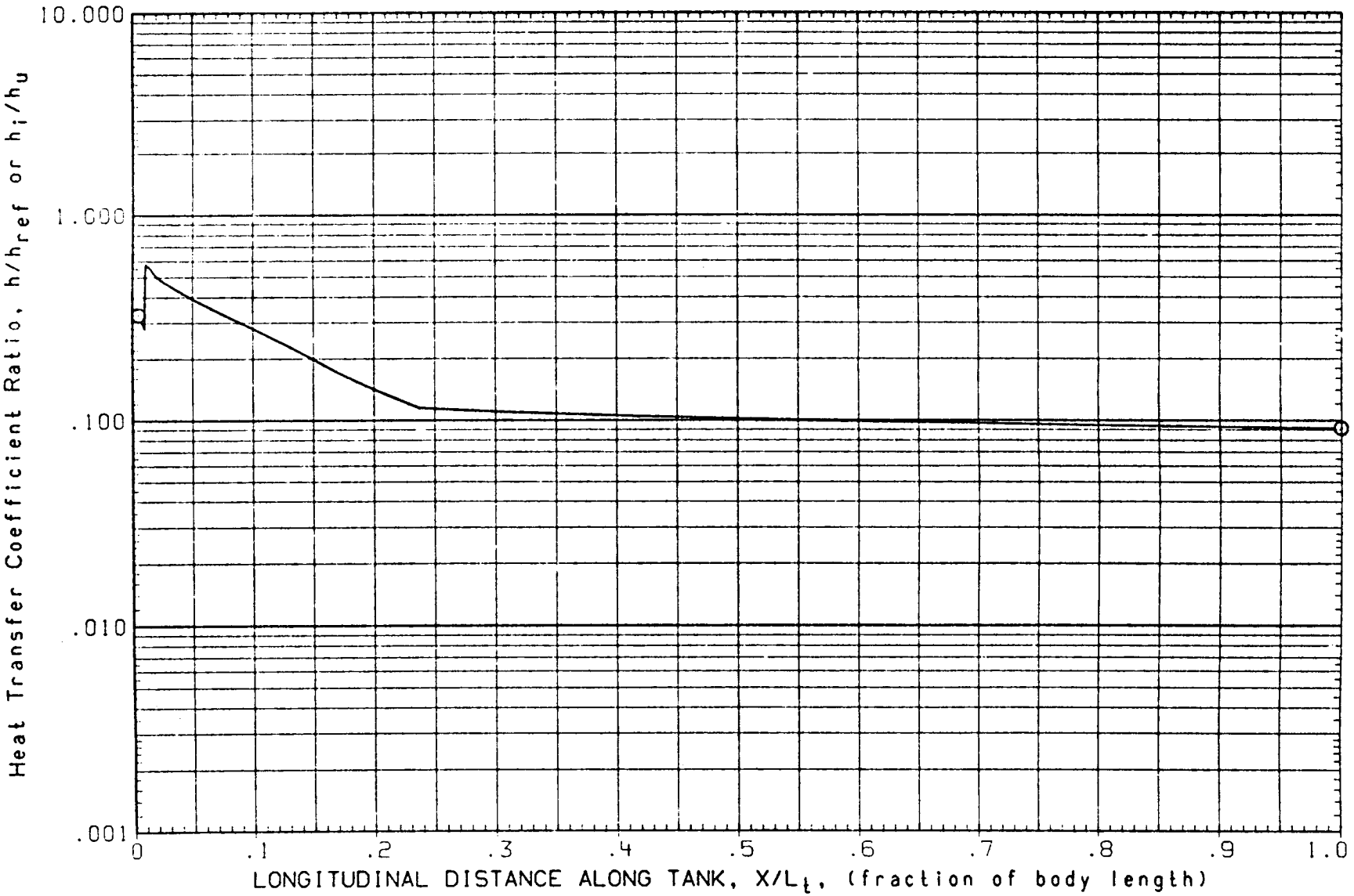

FIG. 4-24 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 235.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT08)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	5.000
(C9NT08)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	5.000
(V4LT16)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	5.000
(X4LT16)	◇	IH85 (W.L. TEST) OT/ET = V4LT16/C9NT08=	HI/HU	3.010	.000	5.000
(Y4LT16)	△	IH85 (W.L. THEORY) OT/ET = V4LT16/A9NT08=	HI/HU	3.010	.000	5.000

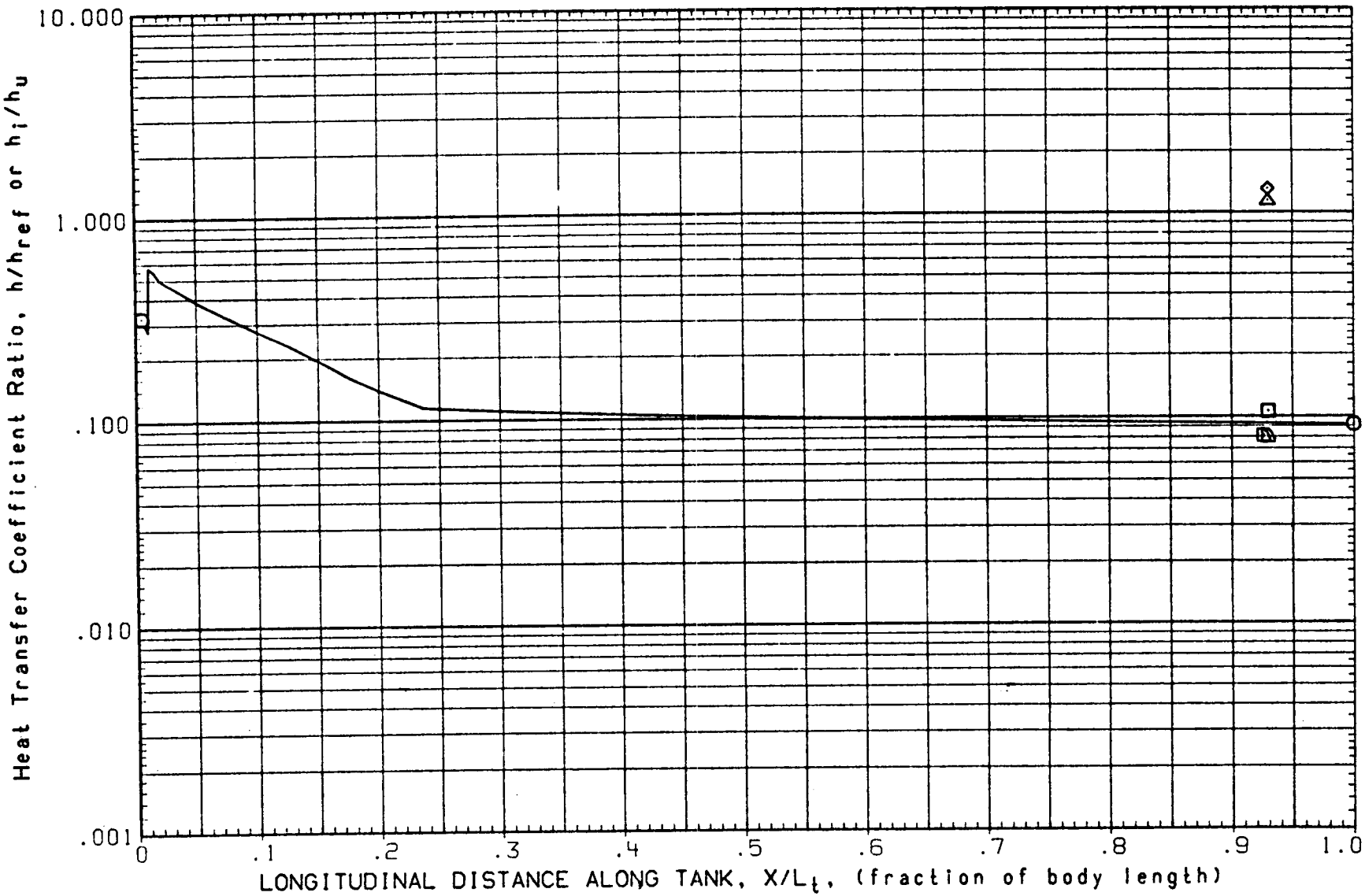

FIG. 4-24 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 247.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT08)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	5.000
(C9NT08)	⌂	DATA NOT AVAILABLE		3.010	.000	5.000
(Y4LT16)	□	DATA NOT AVAILABLE		3.010	.000	5.000
(X4LT16)	◇	DATA NOT AVAILABLE		3.010	.000	5.000
(Y4LT16)	△	DATA NOT AVAILABLE		3.010	.000	5.000

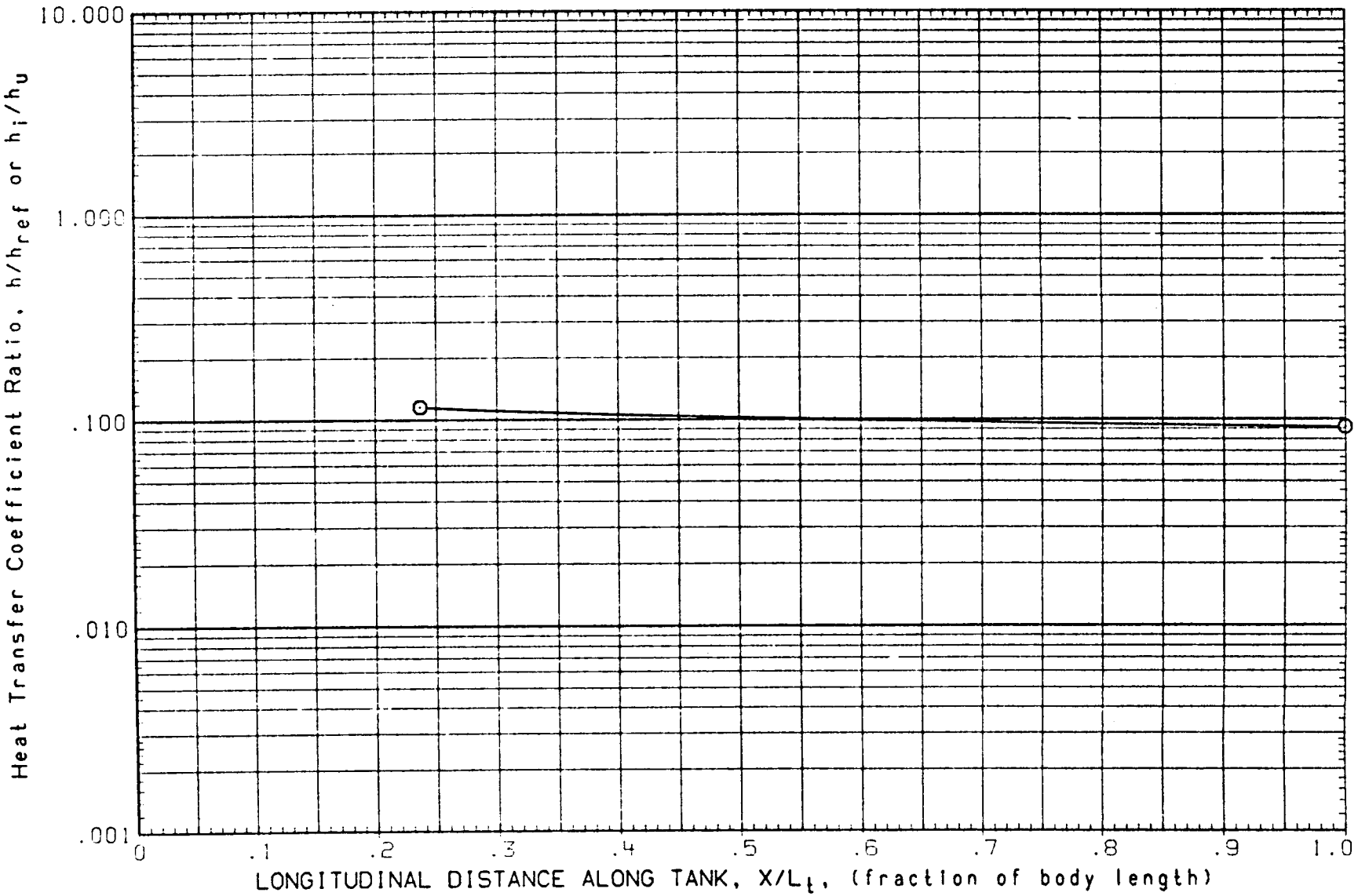

FIG. 4-24 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 247.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT08)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	5.000
(C9NT08)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	5.000
(V4LT16)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	5.000
(X4LT16)	◇	IH85 (W.L. TEST)	OT/ET = V4LT16/C9NT08= HI/HU	3.010	.000	5.000
(Y4LT16)	△	IH85 (W.L. THEORY)	OT/ET = V4LT16/A9NT08= HI/HU	3.010	.000	5.000

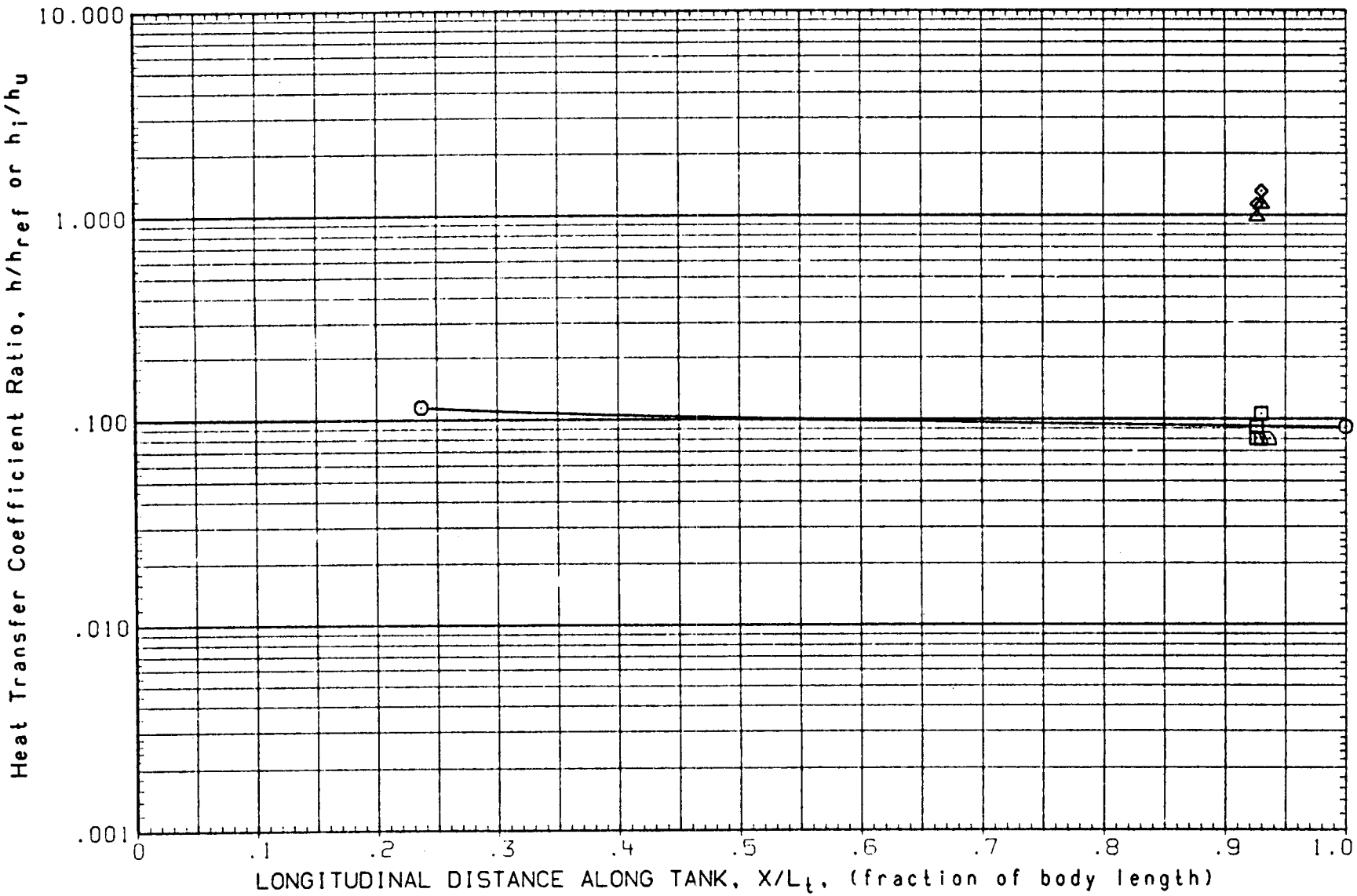

FIG. 4-24 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 250.570

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT08)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	5.000
(C9NT08)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	5.000
(V4LT16)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	5.000
(X4LT16)	◇	IH85 (W.L. TEST) OT/ET = V4LT16/C9NT08=	HI/HU	3.010	.000	5.000
(Y4LT16)	△	IH85 (W.L. THEORY) OT/ET = V4LT16/A9NT08=	HI/HU	3.010	.000	5.000

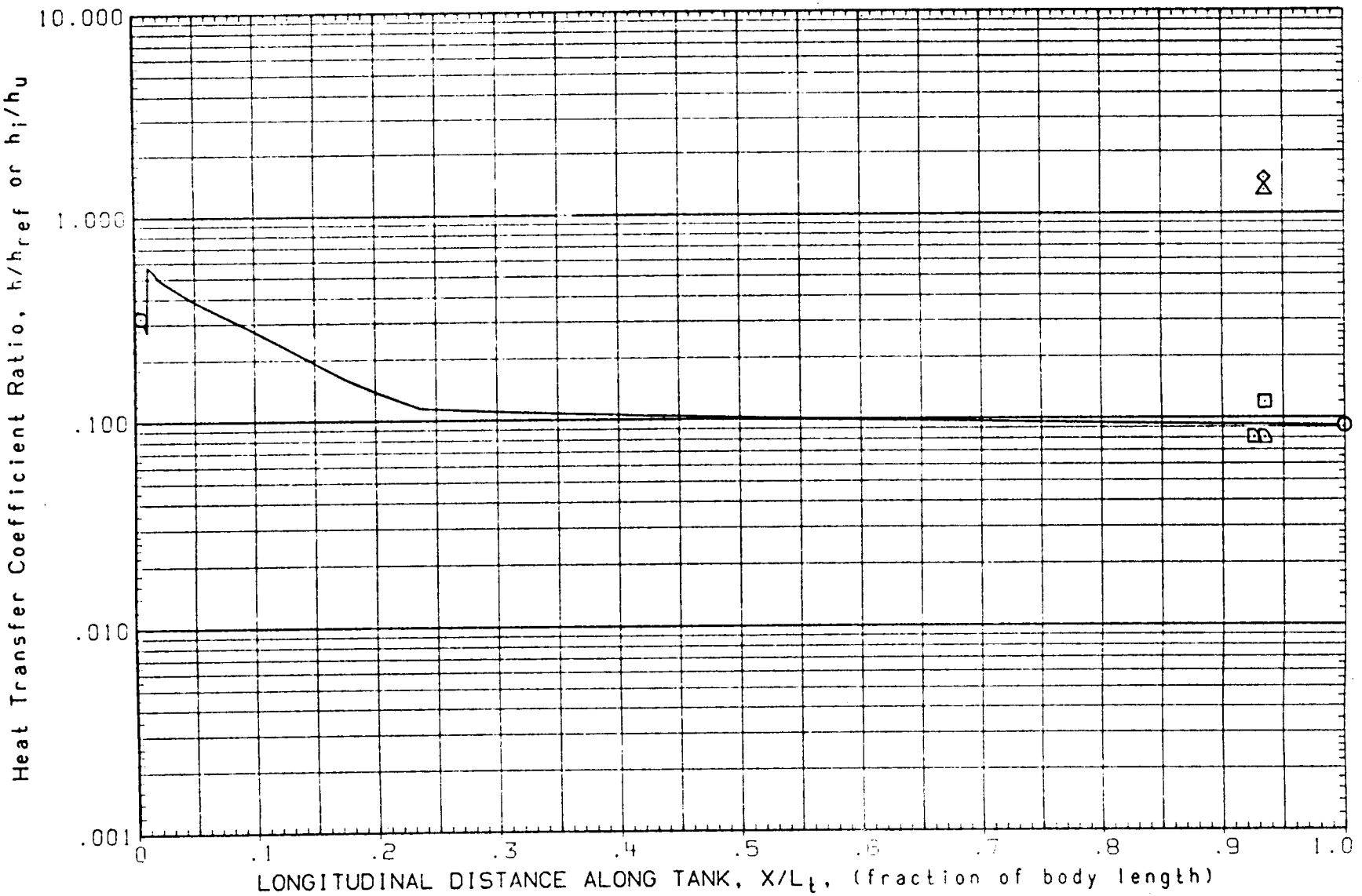

FIG. 4-24 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 258.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT08)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	5.000
(C9NT08)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	5.000
(V4LT16)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	5.000
(X4LT16)	◇	IH85 (W.L. TEST)	OT/ET = V4LT16/C9NT08= HI/HU	3.010	.000	5.000
(Y4LT16)	△	IH85 (W.L. THEORY)	OT/ET = V4LT16/A9NT08= HI/HU	3.010	.000	5.000

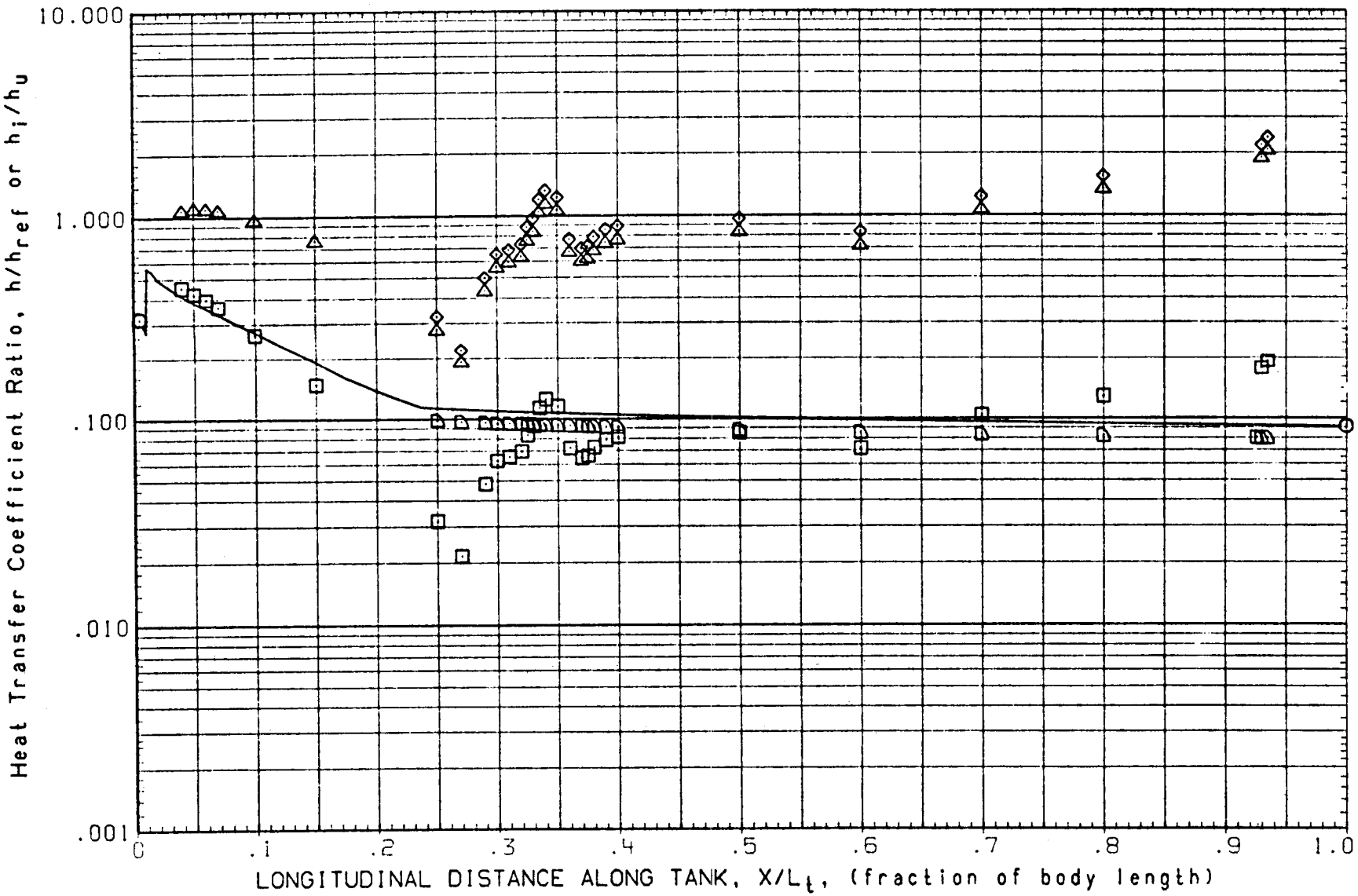

FIG. 4-24 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 270.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT08)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	5.000
(C9NT08)	⬡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	5.000
(V4LT16)	□	IH85, AEDC V4IA-W5, CONFIGURATION 0 (T)		3.010	.000	5.000
(X4LT16)	◇	IH85 (W.L. TEST) OT/ET = V4LT16/C9NT08=	HI/HU	3.010	.000	5.000
(Y4LT16)	△	IH85 (W.L. THEORY) OT/ET = V4LT16/A9NT08=	HI/HU	3.010	.000	5.000

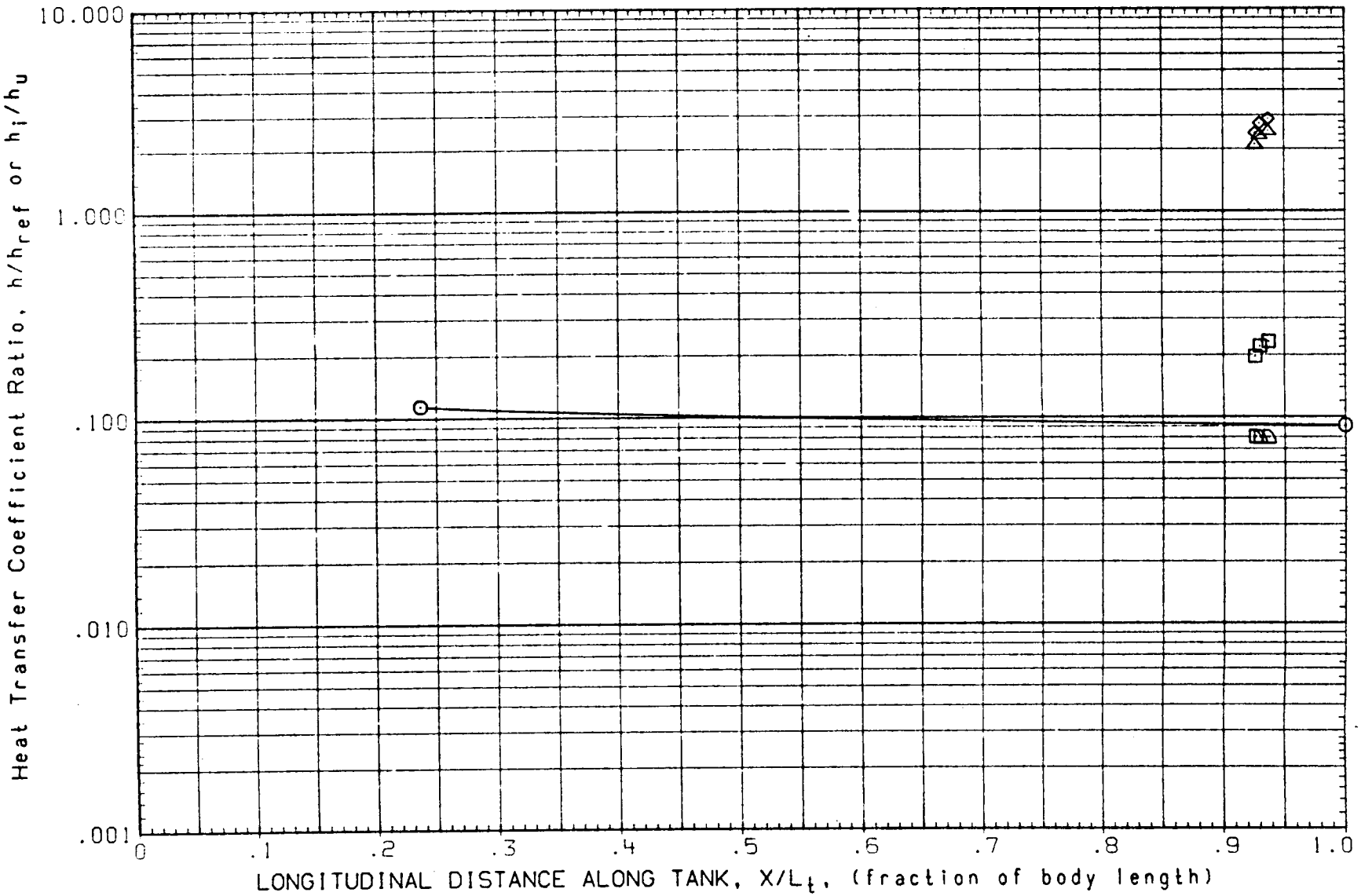

FIG. 4-24 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 289.430

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT08)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	5.000
(C9NT08)	D	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	5.000
(V4LT16)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	5.000
(X4LT16)	◇	IH85 (W.L. TEST)	OT/ET = V4LT16/C9NT08= HI/HU	3.010	.000	5.000
(Y4LT16)	△	IH85 (W.L. THEORY)	OT/ET = V4LT16/A9NT08= HI/HU	3.010	.000	5.000

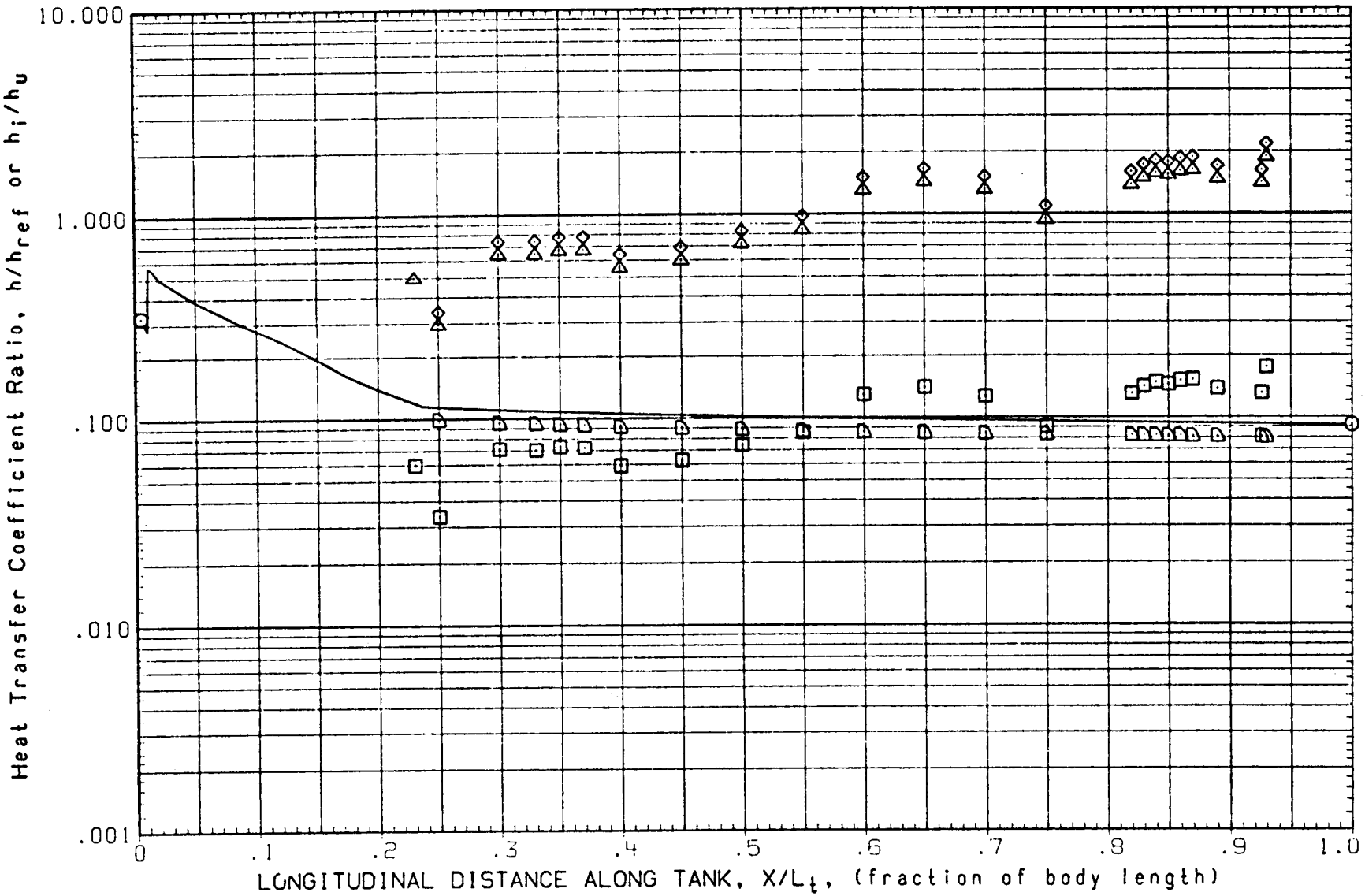

FIG. 4-24 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 292.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT08)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	5.000
(C9NT08)	◐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	5.000
(V4LT16)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	5.000
(X4LT16)	◇	IH85 (W.L. TEST)	OT/ET = V4LT16/C9NT08= HI/HU	3.010	.000	5.000
(Y4LT16)	△	IH85 (W.L. THEORY)	OT/ET = V4LT16/A9NT08= HI/HU	3.010	.000	5.000

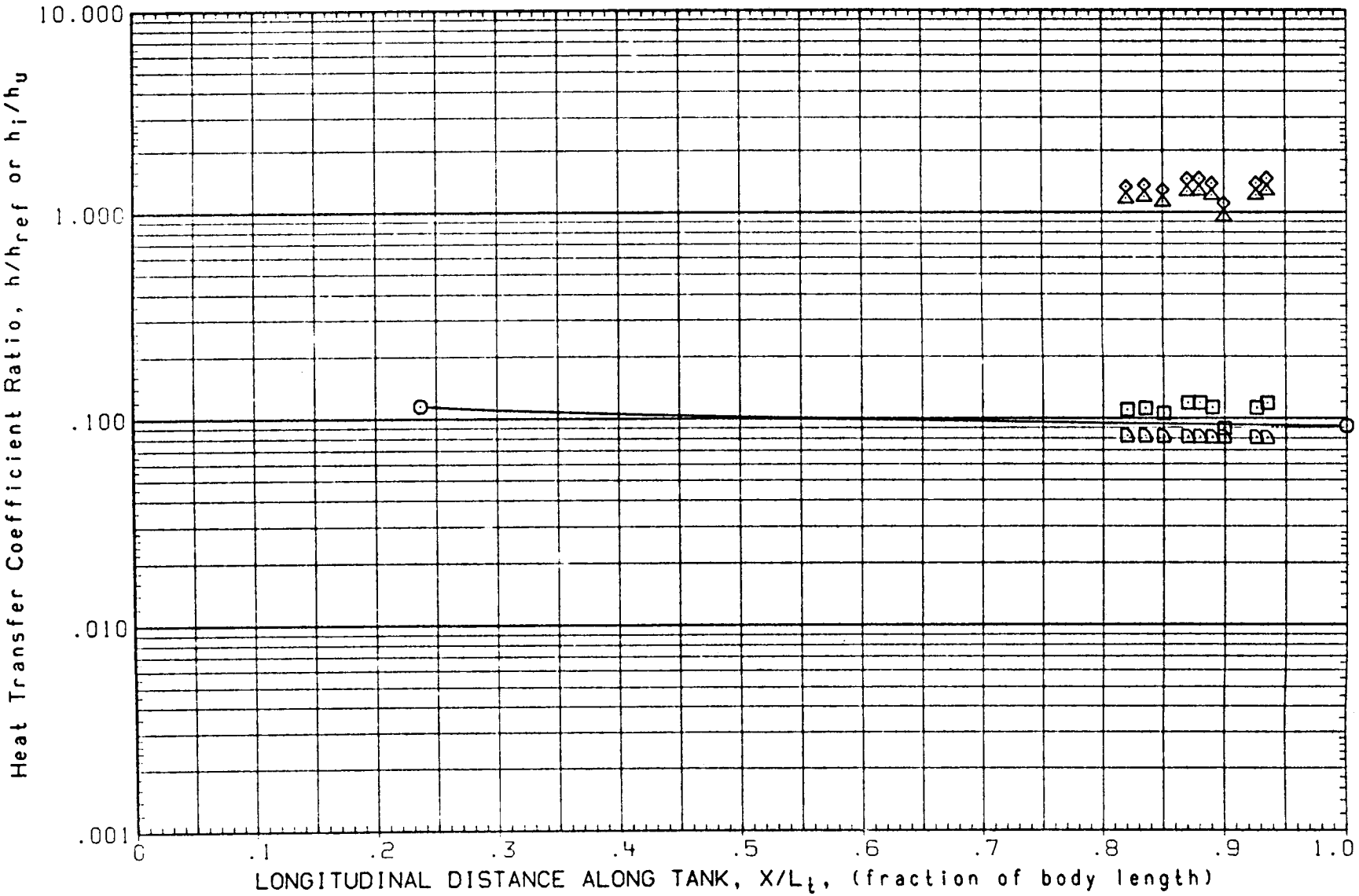

FIG. 4-24 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 301.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT08)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	5.000
(C9NT08)	⊿	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	5.000
(V4LT16)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	5.000
(X4LT16)	◇	IH85 (W.L. TEST) OT/ET = V4LT16/C9NT08=	HI/HU	3.010	.000	5.000
(Y4LT16)	△	IH85 (W.L. THEORY) OT/ET = V4LT16/A9NT08=	HI/HU	3.010	.000	5.000

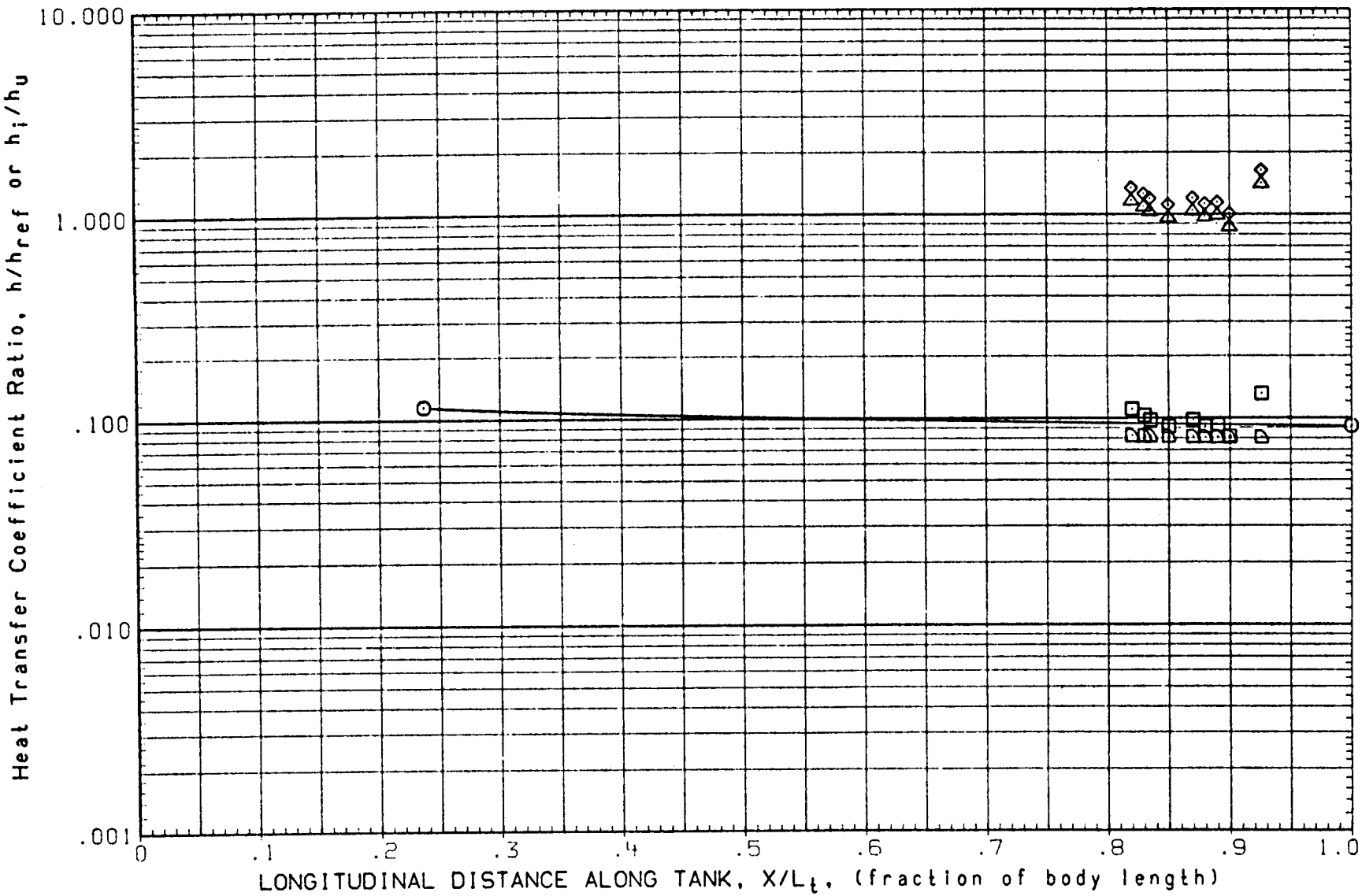

FIG. 4-24 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 305.400

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION	MACH	ALPHA	BETA
(D9NT08)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT HU/HREF	3.010	.000	5.000
(C9NT08)	◗	TANK ALONE CREATED DATA (.87 * THEORY) HU/HREF	3.010	.000	5.000
(V4LT16)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)	3.010	.000	5.000
(X4LT16)	◇	IH85 (W.L. TEST) OT/ET = V4LT16/C9NT08= HI/HU	3.010	.000	5.000
(Y4LT16)	△	IH85 (W.L. THEORY) OT/ET = V4LT16/A9NT08= HI/HU	3.010	.000	5.000

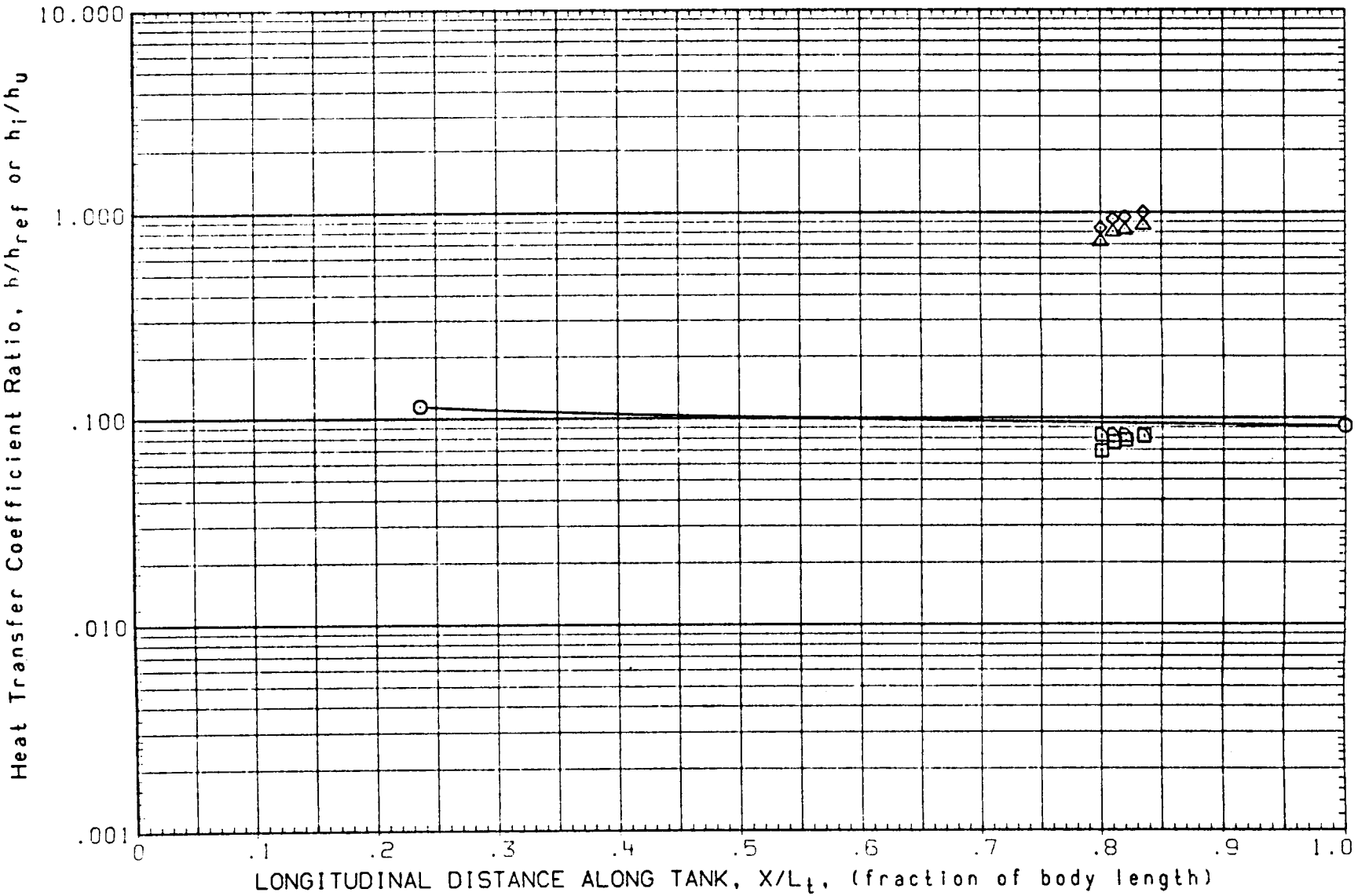

FIG. 4-24 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 309.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT08)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	5.000
(C9NT08)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	5.000
(V4LT16)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	5.000
(X4LT16)	◇	IH85 (W.L. TEST)	OT/ET = V4LT16/C9NT08= HI/HU	3.010	.000	5.000
(Y4LT16)	△	IH85 (W.L. THEORY)	O*/ET = V4LT16/A9NT08= HI/HU	3.010	.000	5.000

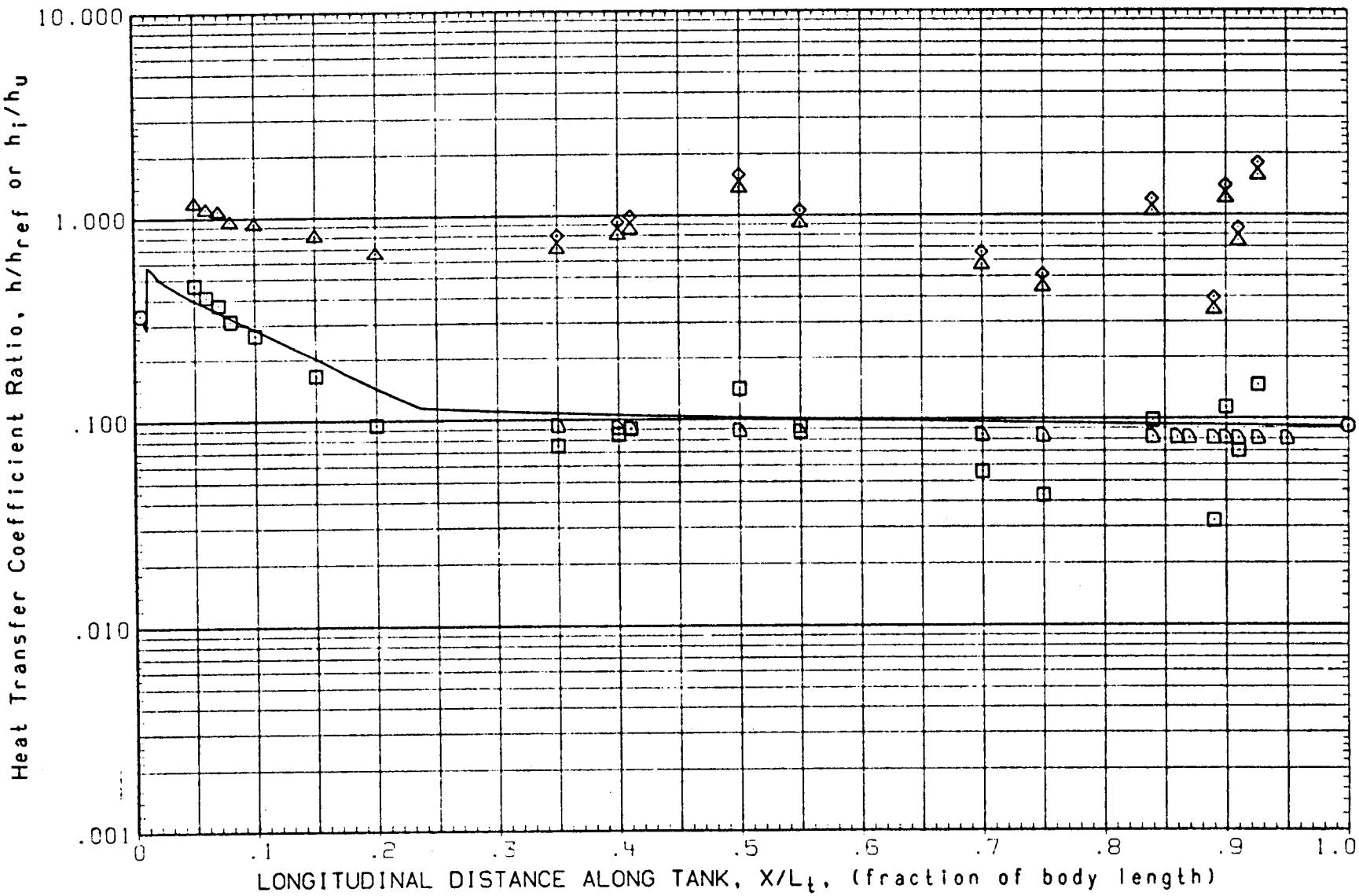

FIG. 4-24 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 315.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT08)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	5.000
(C9NT08)	□	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	5.000
(V4LT16)	□	IH65, AEDC V4TA-W5, CONFIGURATION 0 (T)		3.010	.000	5.000
(X4LT16)	◇	IH65 (W.L. TEST) OT/ET = V4LT16/C9NT08=	HI/HU	3.010	.000	5.000
(Y4LT16)	△	IH65 (W.L. THEORY) OT/ET = V4LT16/A9NT08=	HI/HU	3.010	.000	5.000

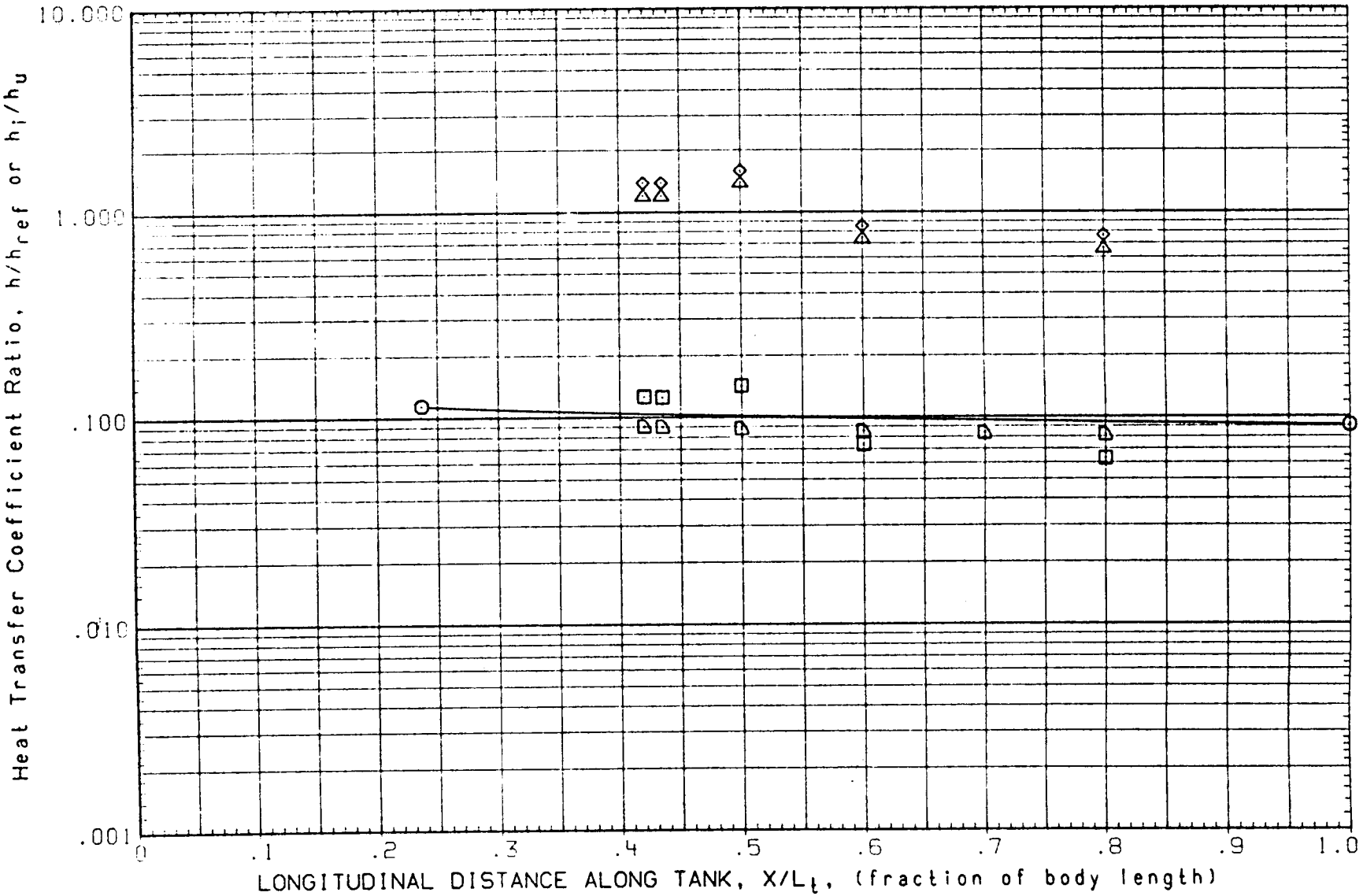

FIG. 4-24 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 322.300

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT08)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	5.000
(C9NT08)	⊳	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	5.000
(V4LT16)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	5.000
(X4LT16)	◇	IH85 (W.L. TEST)	OT/ET = V4LT16/C9NT08= HI/HU	3.010	.000	5.000
(Y4LT16)	△	IH85 (W.L. THEORY)	OT/ET = V4LT16/A9NT08= HI/HU	3.010	.000	5.000

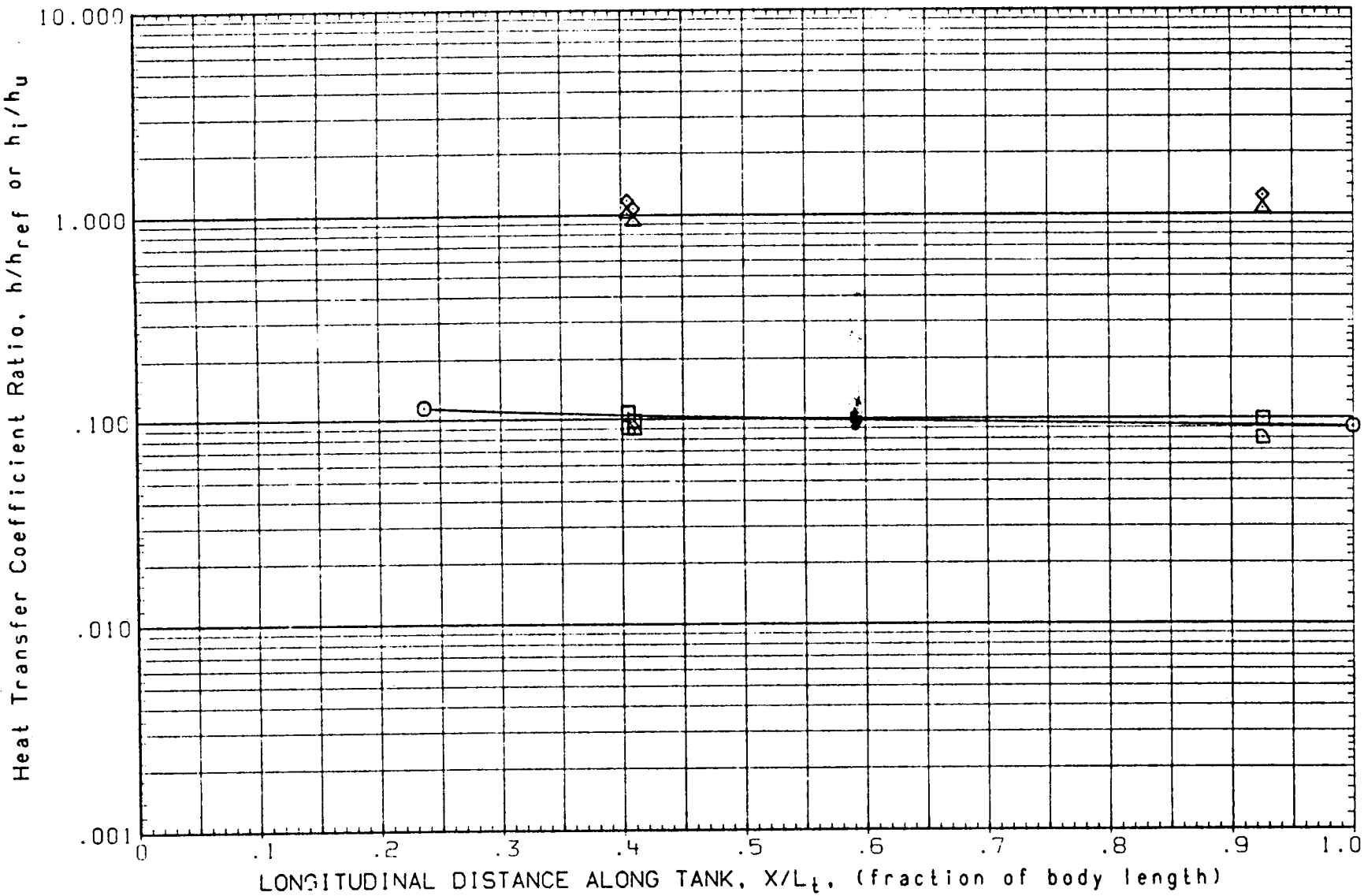

FIG. 4-24 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 324.450

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT08)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	5.000
(C9NT08)	⬚	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	5.000
(V4LT16)	□	IH85, AEDC V4TA-N5, CONFIGURATION 0 (T)		3.010	.000	5.000
(X4LT16)	◇	IH85 (W.L. TEST) OT/ET = V4LT16/C9NT08= HI/HU		3.010	.000	5.000
(Y4LT16)	△	IH85 (W.L. THEORY) OT/ET = V4LT16/A9NT08= HI/HU		3.010	.000	5.000

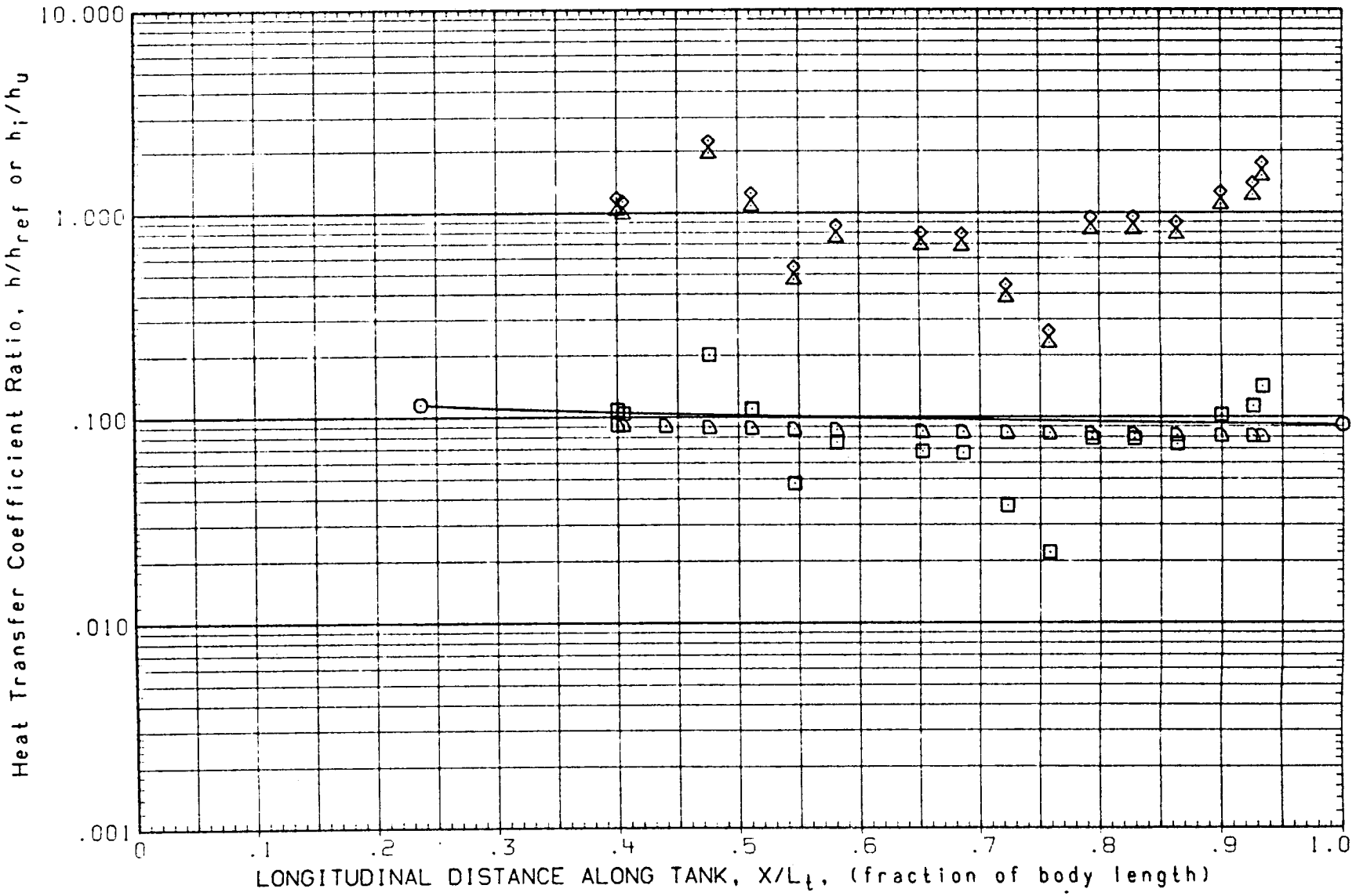

FIG. 4-24 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 326.850

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT08)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	5.000
(C9NT08)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	5.000
(V4LT16)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	5.000
(X4LT16)	◇	IH85 (W.L. TEST) OT/ET = V4LT16/C9NT08=	HI/HU	3.010	.000	5.000
(Y4LT16)	△	IH85 (W.L. THEORY) OT/ET = V4LT16/A9NT08=	HI/HU	3.010	.000	5.000

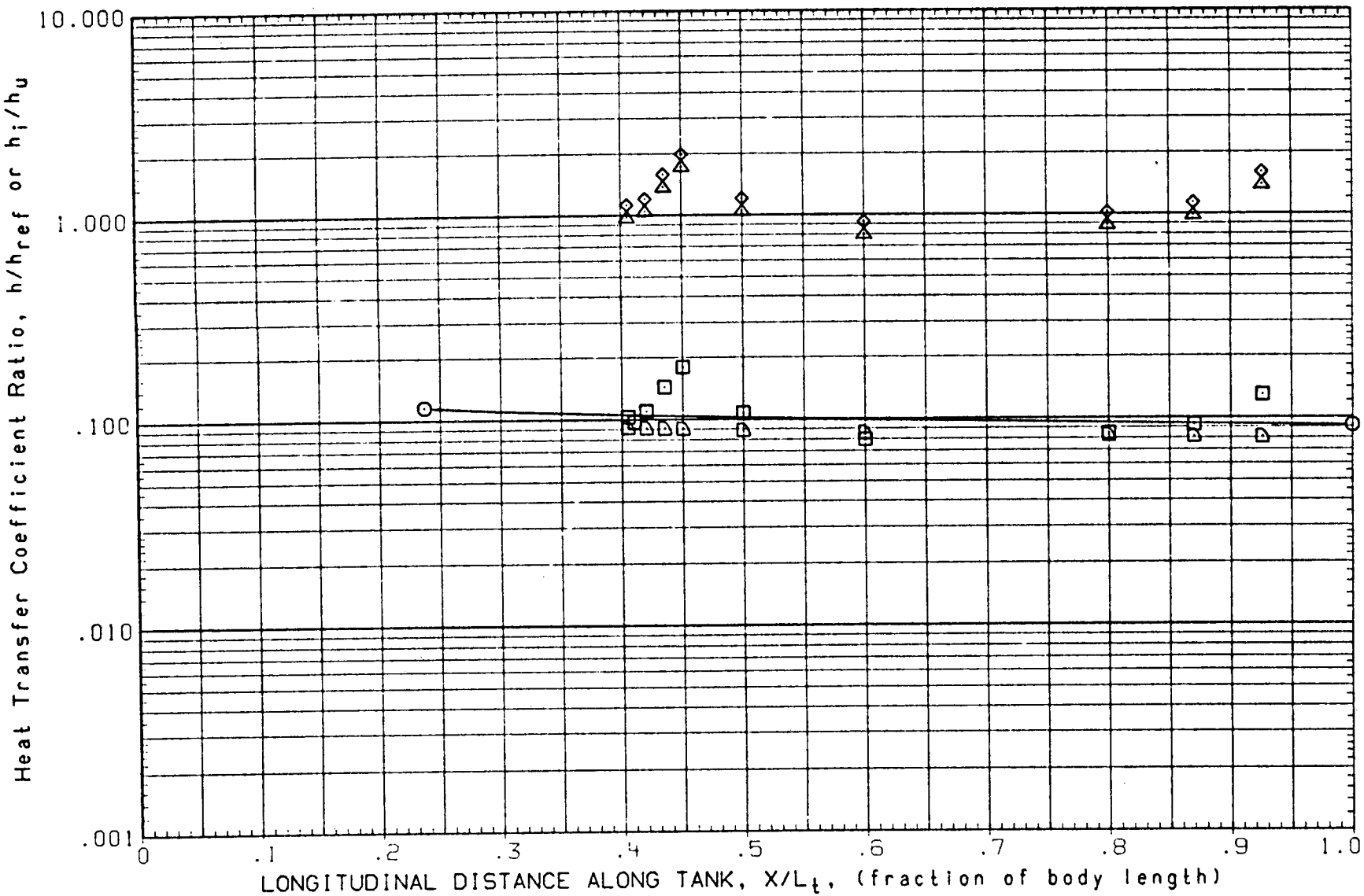

FIG. 4-24 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 330.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT08)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	5.000
(C9NT08)	◗	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	5.000
(V4LT16)	□	IH85, AEDC V4:A-W5, CONFIGURATION 0 (T)		3.010	.000	5.000
(X4LT16)	◇	IH85 (W.L. TEST) OT/ET = V4LT16/C9NT08=	HI/HU	3.010	.000	5.000
(Y4LT16)	△	IH85 (W.L. THEORY) OT/ET = V4LT16/A9NT08=	HI/HU	3.010	.000	5.000

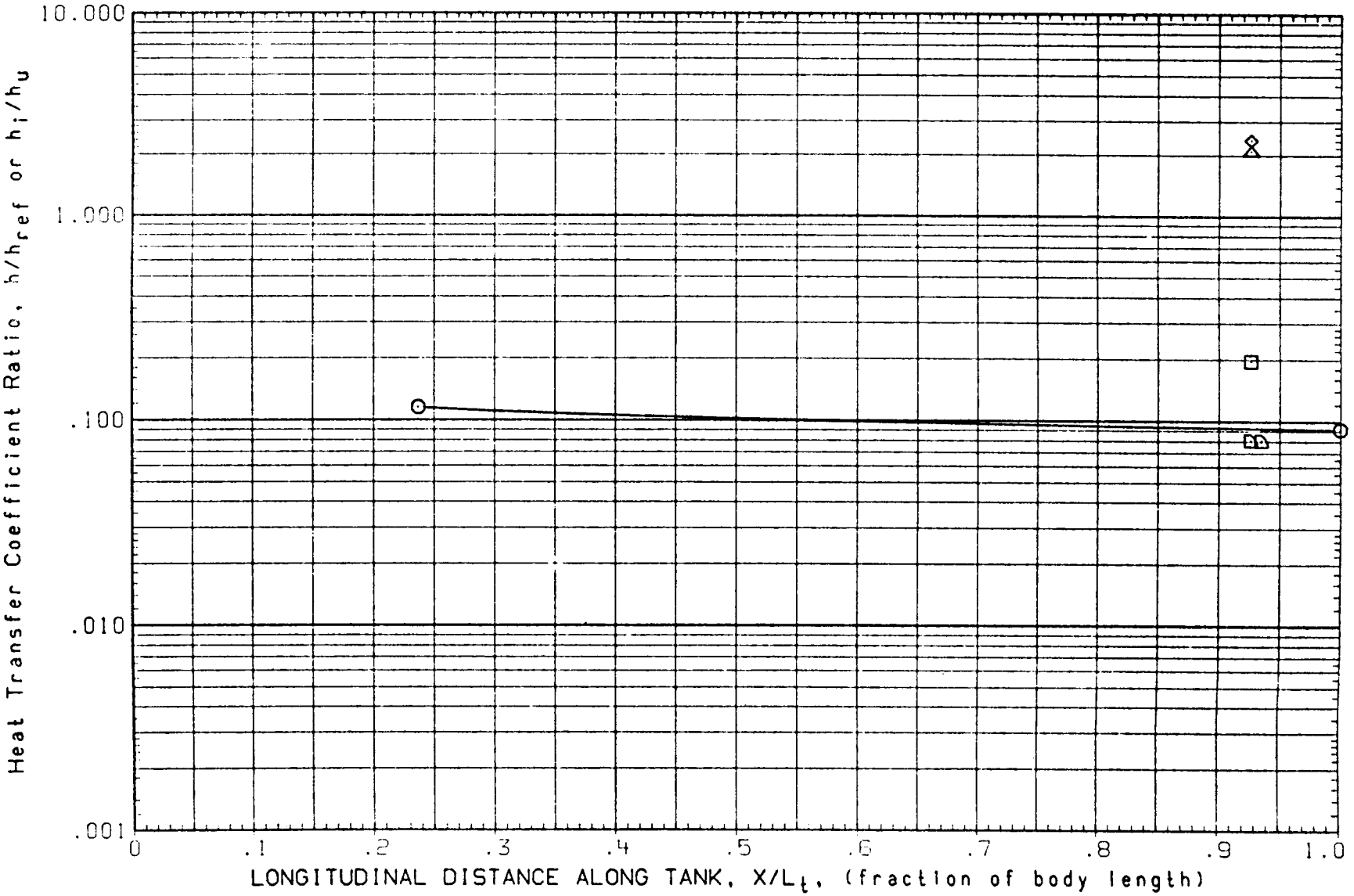

FIG. 4-24 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 334.980

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT08)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	5.000
(C9NT08)	⊐	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	5.000
(V4LT16)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	5.000
(X4LT16)	◇	IH85 (W.L. TEST)	OT/ET = V4LT16/C9NT08= HI/HU	3.010	.000	5.000
(Y4LT16)	△	IH85 (W.L. THEORY)	OT/ET = V4LT16/A9NT08= HI/HU	3.010	.000	5.000

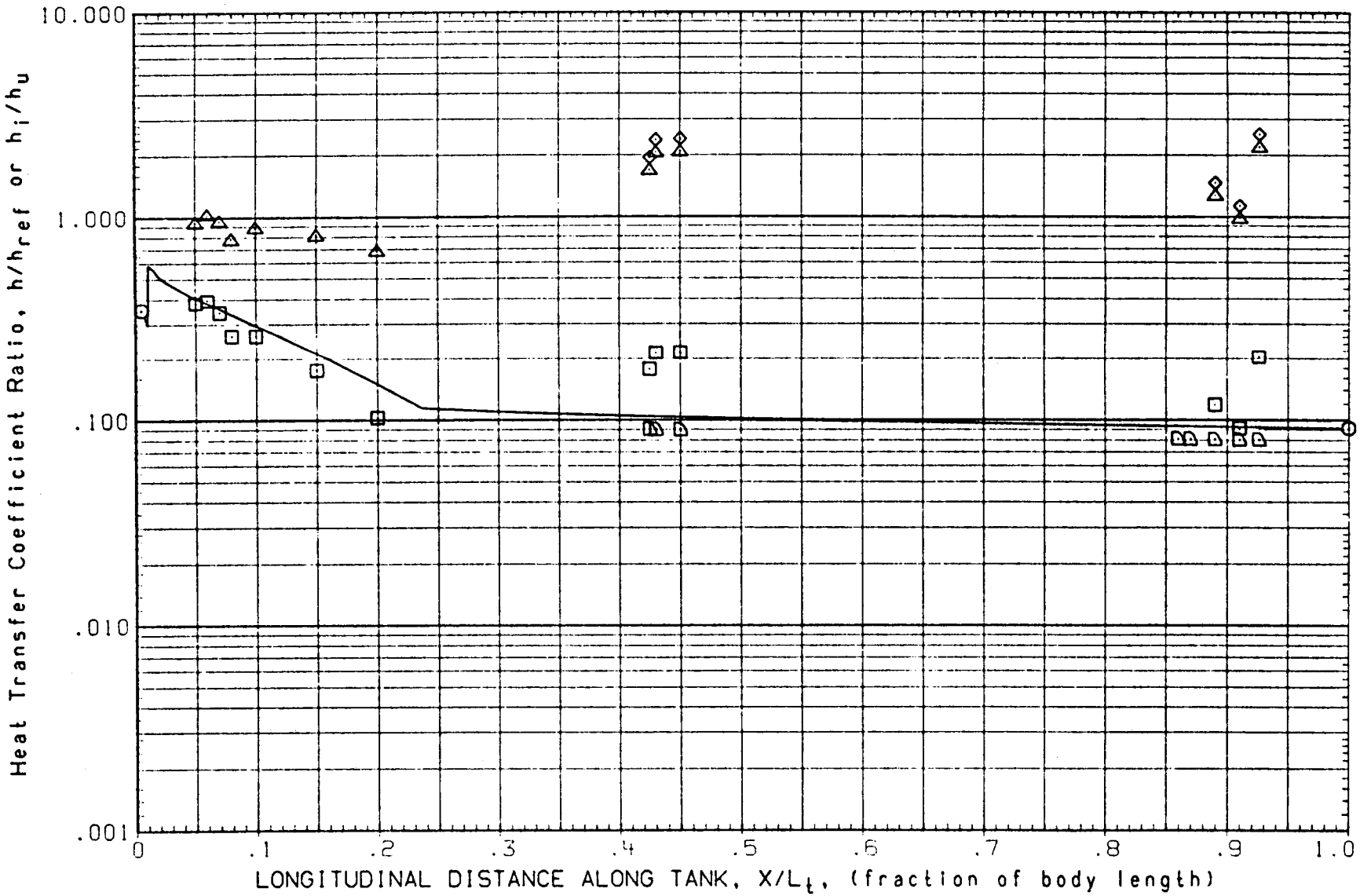

FIG. 4-24 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 337.500

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT08)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	5.000
(C9NT08)	□	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	5.000
(V4LT16)	□	IH85, AEDC V4TA-WS, CONFIGURATION 0 (T)		3.010	.000	5.000
(X4LT16)	◇	IH85 (W.L. TEST) OT ET = V4LT16/C9NT08	HI/HU	3.010	.000	5.000
(Y4LT16)	△	IH85 (W.L. THEORY) OT ET = V4LT16/A9NT08	HI/HU	3.010	.000	5.000

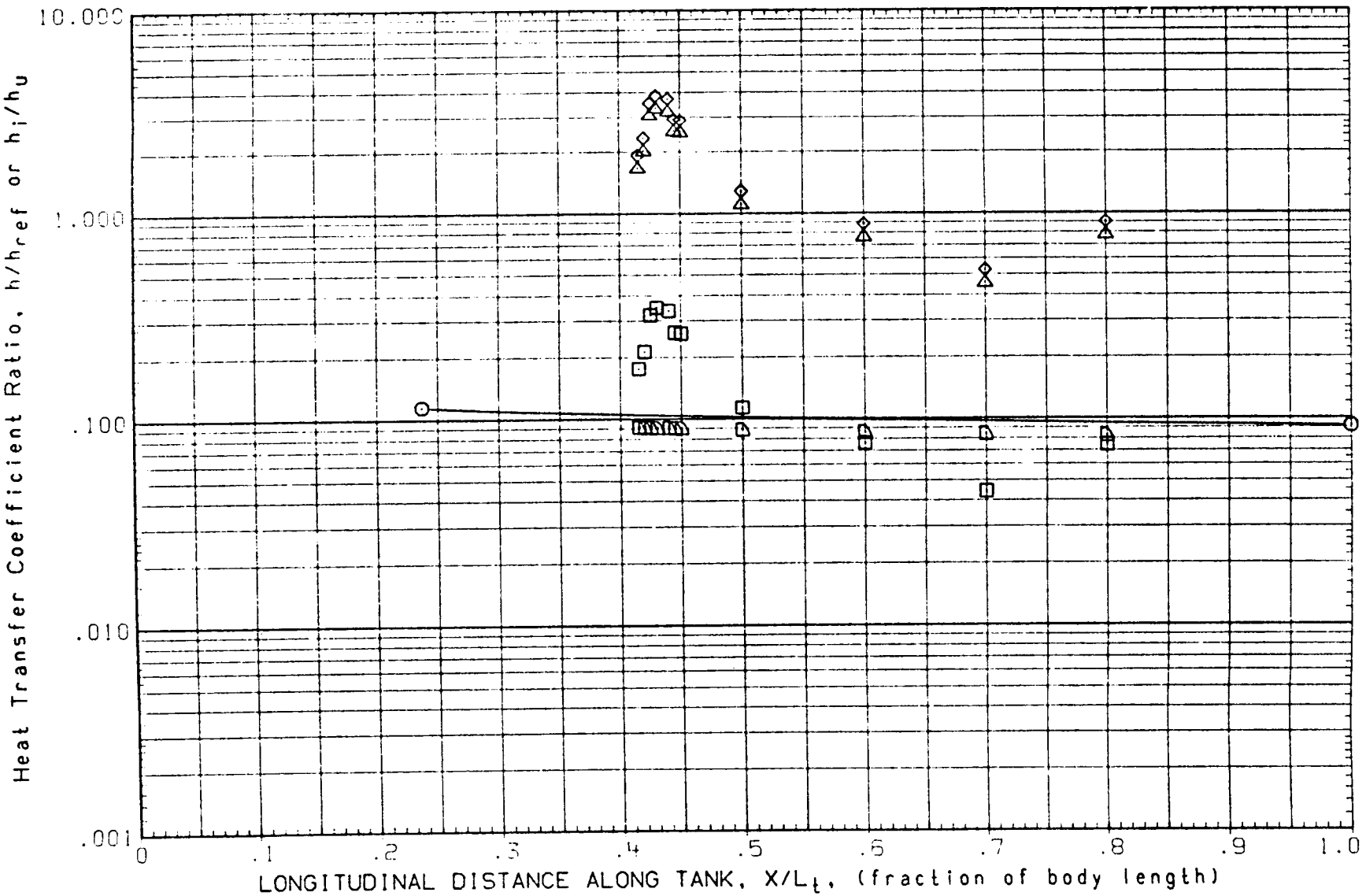

FIG. 4-24 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 HI = 343.120

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DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT08)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	5.000
(C9NT08)	⌂	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	5.000
(V4LT16)	□	IH85, AEDC V41A-N5, CONFIGURATION 0 (T)		3.010	.000	5.000
(X4LT16)	◇	IH85 (W.L. TEST)	OT/ET = V4LT16/C9NT08= HI/HU	3.010	.000	5.000
(Y4LT16)	△	IH85 (W.L. THEORY)	OT/ET = V4LT16/A9NT08= HI/HU	3.010	.000	5.000

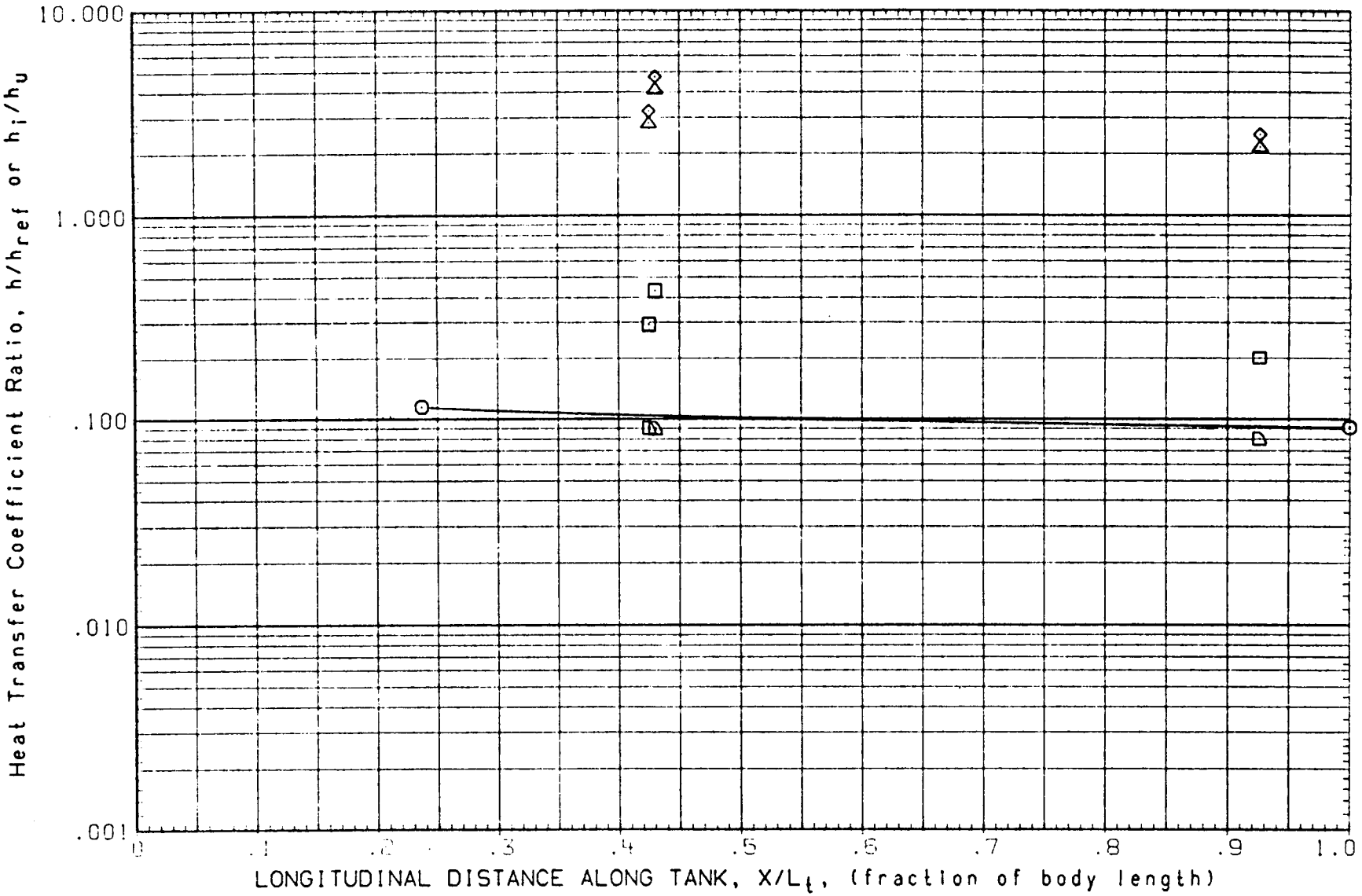

FIG. 4-24 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 345.560

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT08)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	5.000
(C9NT08)	⊡	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	5.000
(V4LT16)	□	IH85, ADOC V4TA-25, CONFIGURATION 9 (T)		3.010	.000	5.000
(X4LT16)	◇	IH85 (W.L. TEST) DT/ET = V4LT16/C9NT08= HI/HU		3.010	.000	5.000
(Y4LT16)	△	IH85 (W.L. THEORY) DT/ET = V4LT16/A9NT09= HI/HU		3.010	.000	5.000

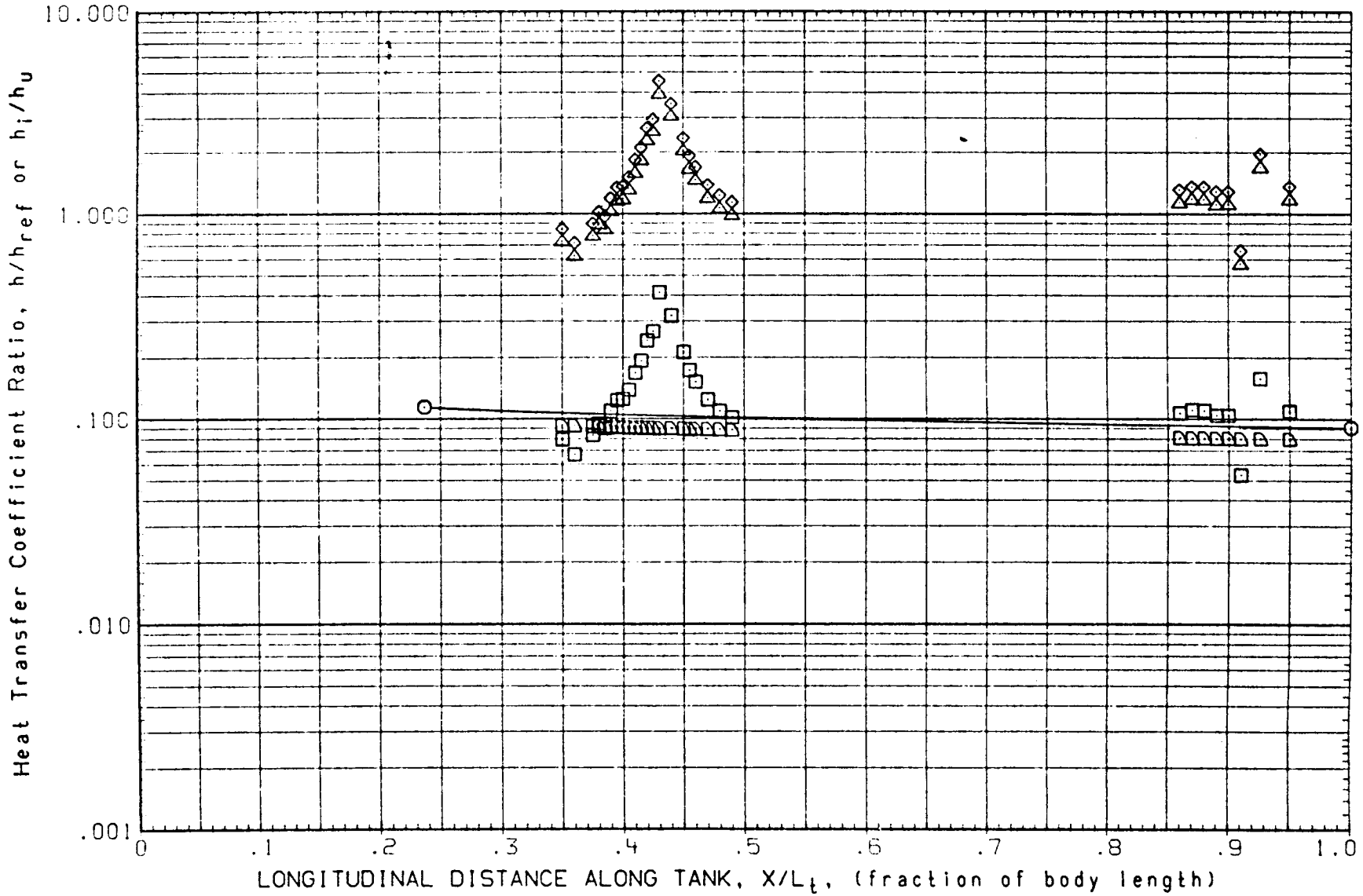

FIG. 4-24 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 348.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT08)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	5.000
(C9NT09)	⬠	TANK ALONE CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	5.000
(V4LT16)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	5.000
(X4LT16)	◇	IH85 (W.L. TEST)	OT/ET = V4LT16/C9NT08= HI/HU	3.010	.000	5.000
(Y4LT16)	△	IH85 (W.L. THEORY)	OT/ET = V4LT16/A9NT08= HI/HU	3.010	.000	5.000

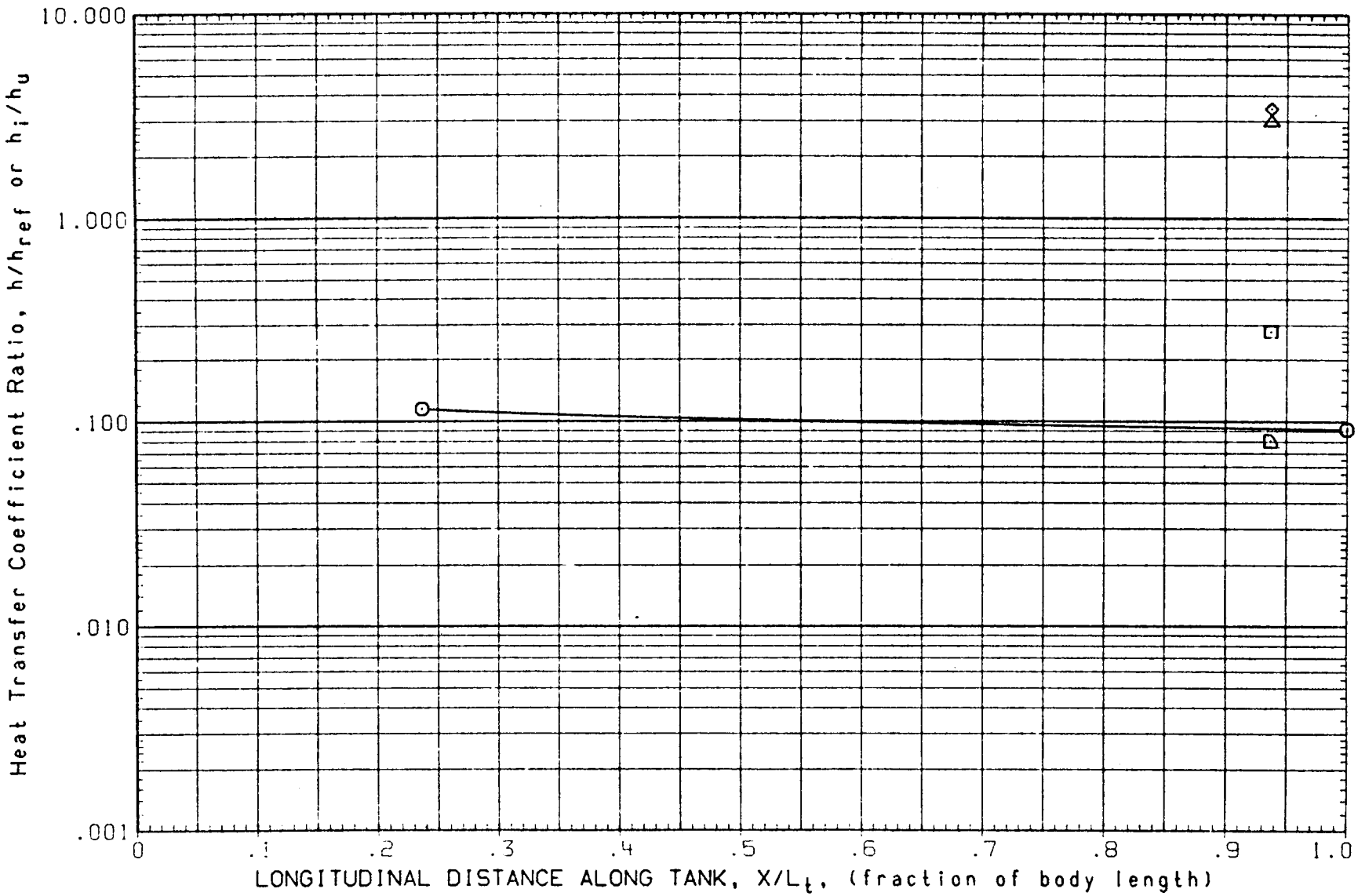

FIG. 4-24 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 352.200

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT08)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	5.000
(C9NT08)	⊐	TANK ALONE (CREATED DATA (.87 * THEORY)	HU/HREF	3.010	.000	5.000
(V4LT16)	□	IH85, AEDC V41A-W5, CONFIGURATION 0 (T)		3.010	.000	5.000
(X4LT16)	◇	IH85 (W.L. TEST)	OT/ET = V4LT15/C9NT08= HI/HU	3.010	.000	5.000
(Y4LT16)	△	IH85 (W.L. THEORY)	OT/ET = V4LT16/A9NT08= HI/HU	3.010	.000	5.000

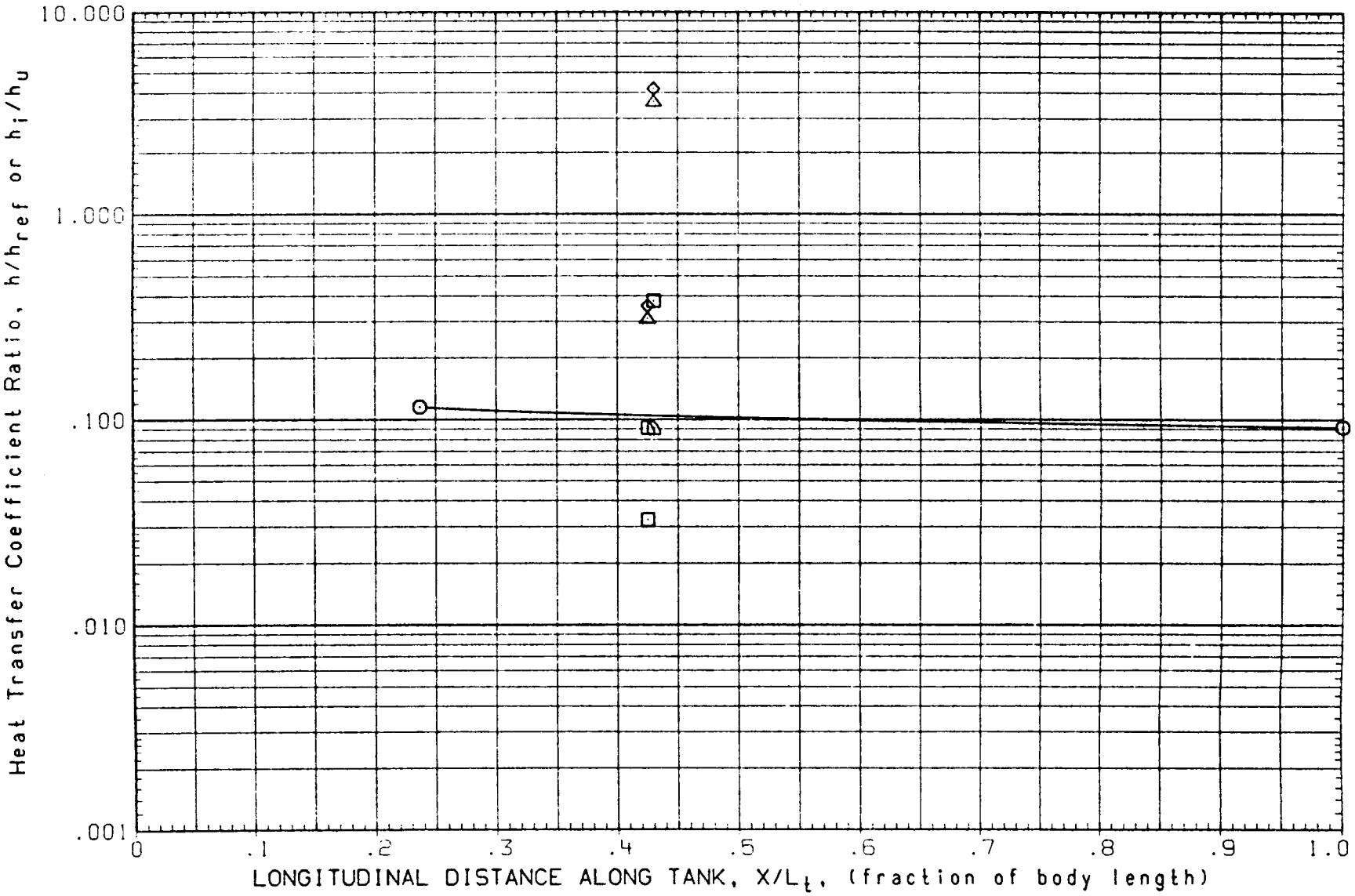

FIG. 4-24 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 354.000

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT08)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	5.000
(C9NT08)	⬠	DATA NOT AVAILABLE		3.010	.000	5.000
(Y4LT16)	□	DATA NOT AVAILABLE		3.010	.000	5.000
(X4LT16)	◇	DATA NOT AVAILABLE		3.010	.000	5.000
(Y4LT16)	△	DATA NOT AVAILABLE		3.010	.000	5.000

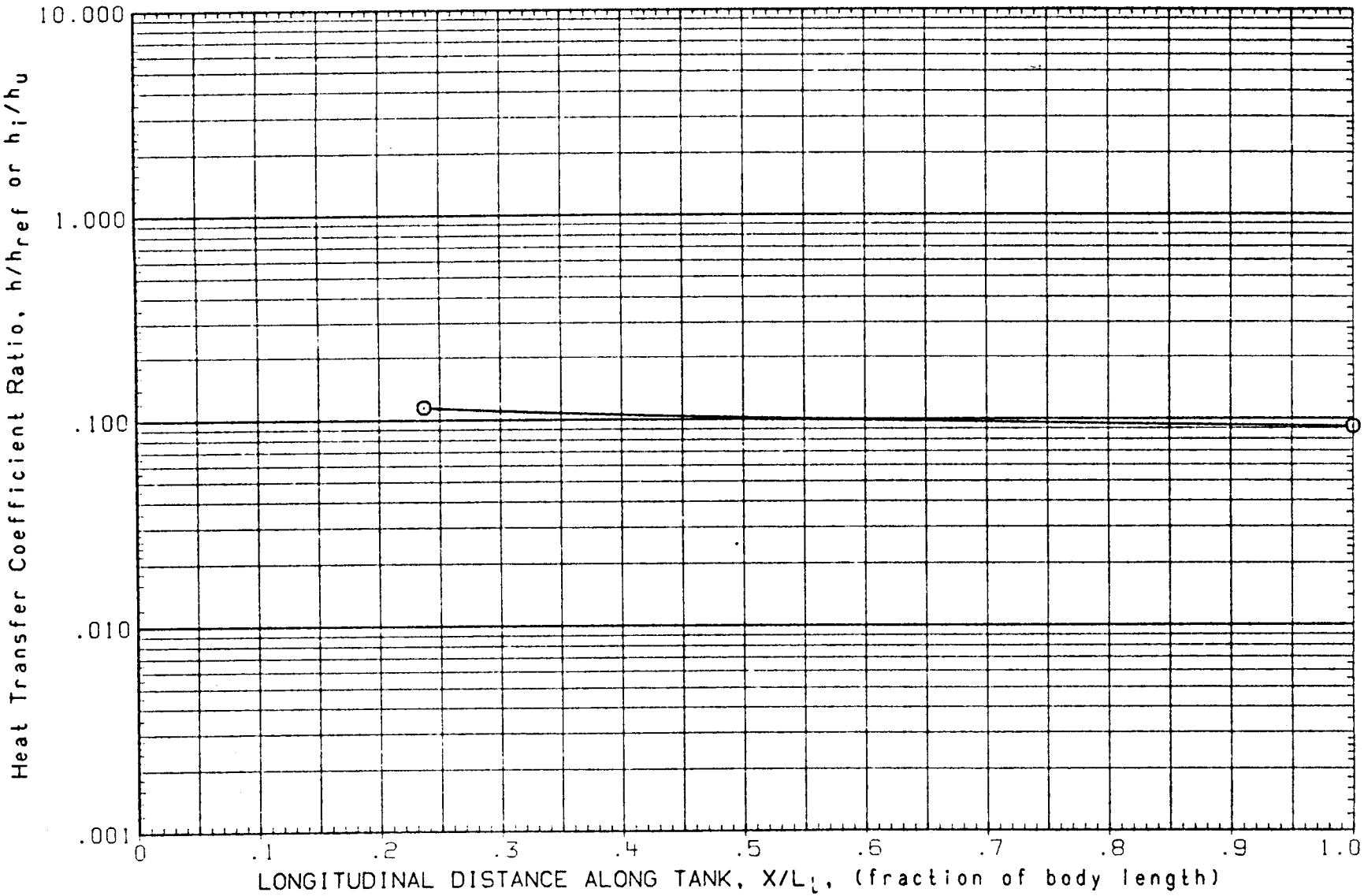

FIG. 4-24 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 355.160

DATA SET	SYMBOL	CONFIGURATION DESCRIPTION		MACH	ALPHA	BETA
(D9NT08)	○	EXTERNAL TANK THEORY, N.S.,TURBULENT	HU/HREF	3.010	.000	5.000
(C9NT08)	◗	DATA NOT AVAILABLE		3.010	.000	5.000
(V4LT16)	□	DATA NOT AVAILABLE		3.010	.000	5.000
(X4LT16)	◇	DATA NOT AVAILABLE		3.010	.000	5.000
(Y4LT16)	△	DATA NOT AVAILABLE		3.010	.000	5.000

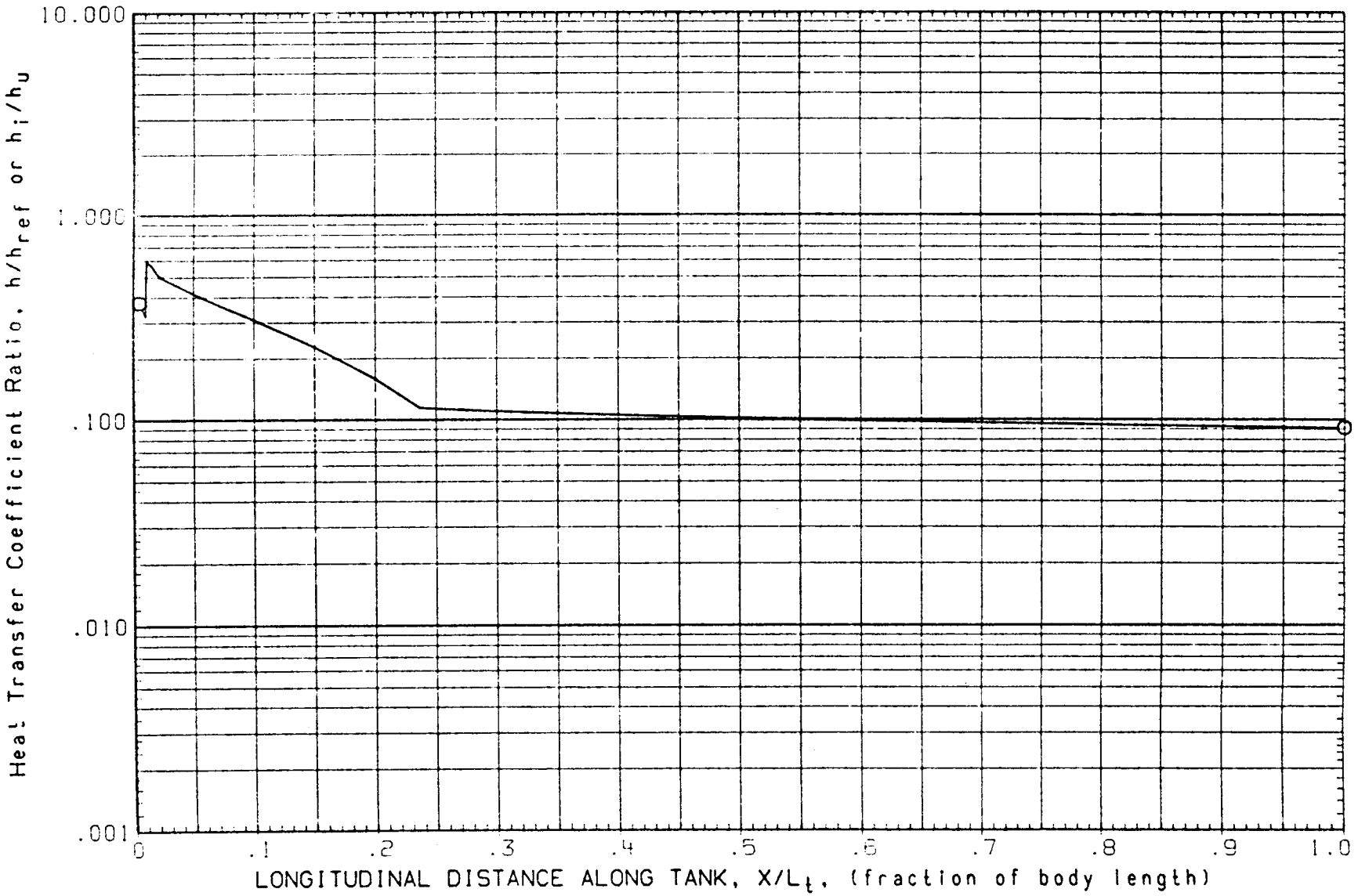

FIG. 4-24 LONG. DISTRIBUTION OF HEATING RATE ON THE ET - ALPHA= 0, BETA= 5
0 < X/LT < 1.0 (LINEAR SCALE)

MACH = 3.010 ALPHA = .000 PHI = 360.000