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TECHNICAL NOTE 3789

THE RESULTS OF WIND-TUNNEL TESTS TO A MACH NUMBER OF 0.90 OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A WING WITH 40° OF SWEEPBACK AND AN ASPECT RATIO OF 10

By George G. Edwards, Jerald K. Dickson, Fred B. Sutton, and Fred A. Demele

Ames Aeronautical Laboratory
Moffett Field, Calif.

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By George G. Edwards, Jerald K. Dickson, Fred B. Sutton, and Fred A. Demele

SUMMARY

A wind-tunnel investigation has been conducted to provide data for the study of the effects of operating propellers on the longitudinal characteristics of a four-engine tractor airplane configuration having a wing with 40° of sweepback and an aspect ratio of 10. A reflection-plane mounting was used and the semispan model represented the right-hand side of a complete hypothetical airplane. Single-rotation, right-hand propellers were operated at values of thrust coefficient ranging from 0 to 0.9 per propeller. The thrust was sufficient to simulate up to 5,000 horsepower per engine at an altitude of 40,000 feet or up to 10,000 horsepower per engine at sea level, assuming the model to be 1/12 scale. The tests were conducted at Mach numbers from 0.082 to 0.90 and Reynolds numbers of 1,000,000 to 8,000,000. Variations in the model included several heights and incidences of the horizontal tail as well as tail removed, two arrangements of extended split flaps, several propeller-blade angles, and independent as well as simultaneous operation of the inboard and outboard propellers.

The coefficients of lift, longitudinal force, pitching moment, propeller thrust, and propeller power are presented in tabular form for various values of advance ratio at constant angles of attack. Selected portions of the data are presented in plotted form for various constant thrust coefficients.

INTRODUCTION

The potentialities of the turbine-propeller propulsion system, particularly with regard to take-off and range characteristics of multi-engine airplanes, have stimulated interest in the long-range turboprop

[1]Supersedes NACA RM A53I28 by George G. Edwards, Donald A. Buell, and Jerald K. Dickson, 1953, and also includes the data from NACA RM A53J23 by Fred B. Sutton and Fred A. Demele, 1954.

airplane designed to fly at high subsonic speeds. A possible airplane configuration for this application appears to be one utilizing a swept-back wing of high aspect ratio in combination with tractor-mounted supersonic propellers. The effects of these highly loaded propellers on the flow over the swept wing and tail surfaces and the consequent effects on the longitudinal characteristics of the airplane cannot be estimated with confidence on the basis of existing experimental data or theoretical methods. Applicable experimental data are meager, and existing theoretical methods, developed for airplanes with low propeller-disc loadings and unswept wings, are of doubtful validity for the arrangement considered.

An investigation was undertaken in the Ames 12-foot pressure wind tunnel for the purpose of evaluating experimentally the effects of operating propellers on the longitudinal aerodynamic characteristics of a representative multiengine airplane configuration with a sweptback wing. The power-off longitudinal characteristics of several combinations of the components of this airplane configuration have been presented in references 1 to 4. The results of power-on force tests of the complete configuration at Mach numbers from 0.082 to 0.90 and Reynolds numbers from 1,000,000 to 8,000,000 are reported herein. An analysis of these data is presented in reference 5.

NOTATION

A upflow angle, average angle of local flow at the 0.7 propeller radius on the horizontal center line of the propeller plane, measured with respect to the thrust axis in a plane parallel to the plane of symmetry

a mean-line designation, fraction of chord over which design load is uniform

$b/2$ wing semispan perpendicular to the plane of symmetry

b' propeller-blade width

C_L lift coefficient, $\frac{\text{lift}}{qS}$

C_m pitching-moment coefficient about the quarter point of the mean aerodynamic chord, $\frac{\text{pitching moment}}{qS\bar{c}}$

C_P power coefficient per propeller, $\frac{P}{\rho n^3 D^5}$

C_X longitudinal-force coefficient, $\frac{X}{qS}$

c local wing chord parallel to the plane of symmetry

c' local wing chord normal to the reference sweep line (see table I)

$\bar{c}$ wing mean aerodynamic chord, $\dfrac{\int_0^{b/2} c^2 dy}{\int_0^{b/2} c\, dy}$

c_{l_i} wing-section design lift coefficient

D propeller diameter

h maximum thickness of propeller-blade section

hp horsepower

i_t incidence of the horizontal tail with respect to the wing-root chord

J propeller advance ratio, $\dfrac{V}{nD}$

l_t tail length, distance between the quarter points of the mean aerodynamic chords of the wing and the horizontal tail, measured parallel to the plane of symmetry

M free-stream Mach number

n propeller rotational speed

P shaft power per motor

q free-stream dynamic pressure, $\dfrac{\rho V^2}{2}$

R Reynolds number, based on wing mean aerodynamic chord

R' propeller-tip radius

r propeller-blade-section radius

S area of the semispan wing, flaps off

T thrust per propeller, parallel to stream

T_c thrust coefficient per propeller, $\dfrac{T}{\rho V^2 D^2}$

t wing-section thickness

V free-stream velocity

X longitudinal force, parallel to stream and positive in a dragwise direction

y lateral distance from the plane of symmetry

α angle of attack of the wing chord at the plane of symmetry (referred to herein as the wing-root chord)

β propeller-blade angle, measured at 0.70 of the tip radius

β' propeller-blade-section angle

δ flap angle, measured relative to the local chord in planes normal to the reference sweep line

η propeller efficiency

ρ mass density of air

φ angle of local wing chord relative to the wing-root chord, positive for washin, measured in planes parallel to the plane of symmetry

Subscripts

av average

t tail

MODEL AND APPARATUS

The model represented the right-hand half of a complete hypothetical airplane. The goemetry of the model is given in figure 1 and in table I. The selection of the geometric properties and the details of the construction of the wing, nacelles, fences, all-movable tail, and fuselage have been discussed in references 1, 2, and 4.

The extended split flaps consisted of 1/8-inch-thick aluminum plates attached to the trailing edge of the wing. (See fig. 1(e).) The flaps were supported by fixed brackets from the lower surface of the wing and had a chord equal to 20 percent of the wing chord measured perpendicular to the reference sweep line. Two arrangements of flaps were used in the tests reported herein, as illustrated in figure 1(e). The arrangement designated "inboard flaps" is the same as that used in the investigation of reference 4, wherein the flaps extended from the fuselage to the outer nacelle. In the second arrangement of flaps, designated "outboard flaps," the flaps extended from the inboard nacelle to 70 percent of the semispan. The gaps between the flaps and the wing trailing edge, nacelles, and fuselage were sealed.

A photograph of the model mounted in the wind tunnel is shown in figure 2. The turntable upon which the model was mounted is directly connected to the balance system.

The propellers used in this investigation each had three blades and right-hand rotation. One set of supersonic propellers, used in the tests at high Mach numbers, were designated NACA 1.167-(0)(03)-058. The other set of propellers, used in the tests at low Mach numbers, were designated NACA 1.167-(0)(05)-058 and were identical to the high-speed propellers except that blade thickness-chord ratios were increased by a factor of five-thirds at all radial stations. The thicker blades were designed to withstand the high blade loadings accompanying low-speed operation in the wind tunnel at an air density corresponding to a pressure of 6 atmospheres. The blade-form curves of both propellers are shown in figure 3.

In each nacelle, a variable-speed motor rated 75 horsepower at 18,000 rpm was coupled with a gearbox to drive the propeller at a rotational speed 2/3 of or 1.5 times that of the motor.

TESTS

Test Conditions and Procedure

The majority of the low-speed tests reported herein were made at a Mach number of 0.082, a Reynolds number of 4,000,000, and a propeller-blade angle β of 26°. The corresponding dynamic pressure q of the air stream was approximately 57 pounds per square foot. Other low-speed tests were made at Mach numbers of 0.082 to 0.165, Reynolds numbers of 4,000,000 to 8,000,000, and with propeller-blade angles from 21° to 36°. The major portion of the high-speed tests was made over a range of Mach numbers from 0.60 to 0.90 at a Reynolds number of 1,000,000 and a blade angle of 51°; however, data were also obtained at a Reynolds number of 2,000,000 and at a blade angle of 41°. The angle-of-attack range was 2° to 18° for the tests at low Mach numbers and 2° to 10° for the tests at the higher Mach numbers. The model was tested both with and without the horizontal tail, flaps, and propellers. The height of the horizontal-tail hinge axis was either 0, 0.05, 0.10, or 0.15 of the wing semispan (see fig. 1(a)). The model was tested with the tail at various angles of incidence. Inboard flaps (fig. 1(e)) were attached at 30° and 60° angles of deflection δ and outboard flaps at 30°. At each angle of attack, Mach number and Reynolds number were held constant while data were obtained for several propeller rotational speeds from windmilling to the maximum attainable, the latter being limited by either the maximum power or the maximum rotational speed of the electric motor.

Measurements of the static pressures on the wind-tunnel walls during the tests at a Mach number of 0.90 indicated the possibility of partial choking of the wind tunnel. It is believed that the force and moment data shown at this Mach number are partially affected by this phenomenon.

Propeller Calibration

The propeller was calibrated on a specially constructed calibration nacelle. With this equipment the thrust and power characteristics of the propeller in the presence of the spinner and nacelle forebody were measured at several angles of attack for the range of test conditions covered in the tests of the complete model.

REDUCTION OF DATA

Thrust Coefficient

The thrust coefficient T_c used herein was determined from the propeller calibration at the same Mach number, Reynolds number, propeller-blade angle, advance ratio, and upflow angle A as for the complete model test. The upflow angle used was the average at the 0.7 propeller radius on the horizontal center line of the propeller plane, determined from the data in reference 6. Typical variations of thrust coefficient T_c with advance ratio J are shown in figure 4 for the NACA 1.167-(0)(05)-058 propeller, and in figure 5 for the NACA 1.167-(0)(03)-058 propeller. Average values of T_c are presented for all cases in which both propellers were operating, since the differences were very small. It is estimated that in the tests at the lowest dynamic pressure (57 lb/sq ft), the experimental error in T_c could amount to as much as 0.005 at low values of T_c, and 0.02 at high values, disregarding scatter. This is considered to be the accuracy of T_c for purposes of comparing data within the report.

Force and Moment Coefficients

The basic data, obtained at various thrust coefficients at a constant angle of attack, were reduced to conventional form, that is, angle of attack, longitudinal-force coefficient, and pitching-moment coefficient as a function of lift coefficient for constant values of T_c, by means of cross plots.

Corrections

The data have been corrected for constriction effects due to the presence of the tunnel walls, for tunnel-wall interference originating from lift on the wing, and for longitudinal force tares caused by aerodynamic forces on the exposed portion of the turntable upon which the model was mounted.

The effects of wind-tunnel-wall constraint on the propeller slipstreams were evaluated by the method of references 7 and 8 and were found to be negligible. The dynamic pressure was corrected for constriction effects due to the presence of the tunnel walls by the method of reference 9. These corrections and the corresponding corrections to the Mach number are listed in the following table:

Corrected Mach number	Uncorrected Mach number	$\frac{q_{corrected}}{q_{uncorrected}}$
0.082	0.082	1.002
.123	.123	1.003
.165	.165	1.005
.60	.597	1.008
.70	.695	1.012
.80	.791	1.015
.83	.818	1.018
.86	.845	1.021
.90	.877	1.027

Corrections for the effects of tunnel-wall interference originating from the lift on the wing were calculated by the method of reference 10. These corrections added to the measured values were as follows:

$$\Delta\alpha = 0.38\ C_{L_W}$$

$$\Delta C_X = 0.0059\ C_{L_W}{}^2$$

$$\Delta C_m = K_1 C_{L_W} \qquad \text{(tail off)}$$

$$\Delta C_m = K_1 C_{L_W} - \left[\left(K_2 C_{L_W} - \Delta\alpha\right)\frac{dC_m}{di_t}\right] \qquad \text{(tail on)}$$

where $C_{L_W} = C_L - C_{L_p}$ and C_{L_p} is the lift coefficient due to propeller thrust and normal force. The direct lift forces due to the propeller were negligible in the high-speed range, and therefore in determining the actual corrections it was assumed that $C_{L_W} = C_L$ for Mach numbers of 0.60 and

Table 1

M	K_1	K_2
0.082	0.0030	0.70
.165	.0030	.70
.60	.0048	.77
.70	.0057	.79
.80	.0069	.81
.83	.0073	.82
.86	.0078	.83
.90	.0087	.85

Table 2

M	$C_{X_{tare}}$
0.082 to 0.165	0.003
.60	.0025
.70	.0026
.80	.0028
.83	.0029
.86	.0030
.90	.0032

above. The values of K_1 and K_2 are dependent upon Mach number and are given in table 1. The constants K_1 and K_2 were computed for power off conditions, and it is estimated that the error in C_m resulting from this assumption could amount to 0.004 at the highest thrust coefficients and the highest angles of attack when the tail is immersed in the slipstream.

A tare correction to longitudinal force was necessary because of the aerodynamic forces on the exposed portion of the turntable. The values given in table 2 were subtracted from the measured longitudinal force coefficients. No attempt has been made to evaluate tares due to interference between the model and the turntable or to compensate for the tunnel-floor boundary layer which, at the turntable, had a displacement thickness of 1/2 inch.

RESULTS

An index to the data is presented in table II. The basic unfaired data are tabulated in tables III through XIV for low-speed conditions and in tables XV through XXIII for high-speed conditions. The coefficients of lift, longitudinal force, and pitching moment, plotted in conventional form for constant values of T_c, are shown for selected configurations and test conditions in figures 6 through 40 for Mach numbers of 0.165 and less and in figures 41 through 49 for Mach numbers from 0.60 to 0.90.

Ames Aeronautical Laboratory
National Advisory Committee for Aeronautics
Moffett Field, Calif., Sept. 28, 1953

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TABLE I.- GEOMETRIC PROPERTIES OF THE MODEL

Wing	
Reference sweep line: Locus of the quarter chords of sections inclined 40° to the plane of symmetry	
Aspect ratio (full-span wing)	10.0
Taper ratio	0.4
Sweepback	40°
Twist	-5°
Reference sections (normal to reference sweep line)	
Root . . . . . NACA 0014, a = 0.8 (modified)	$c_{l_i} = 0.4$
Tip . . . . . NACA 0011, a = 0.8 (modified)	$c_{l_i} = 0.4$
Area (semispan model)	6.944 ft²
Mean aerodynamic chord	1.251 ft
Flaps, extended from trailing edge	0.20 c'
Incidence (measured in the plane of symmetry)	3°
Fences are located at y/b/2 = 0.33, 0.50, 0.70, and 0.85.	
Nacelles	
Frontal area (each)	0.208 ft²
Inclination,	
Inboard	-6.5°
Outboard	-7.0°
Propellers	
Diameter	1.167 ft
Number of blades	3
Propeller-activity factor (per blade)	188.4
Propeller-blade thickness-chord ratio (0.70 radius)	0.05
Solidity (per blade)	0.058
Blade sections	symmetrical NACA 16 series
Horizontal Tail	
Reference sweep line: Locus of quarter chords of sections inclined 40° to the plane of symmetry	
Aspect ratio (full-span tail)	4.5
Taper ratio	0.4
Sweepback	40°

TABLE I.- GEOMETRIC PROPERTIES OF THE MODEL - Concluded

Horizontal Tail (Continued)

Reference section (normal to reference sweep line)	NACA 0010
Tail length, l_t.	$3.25\bar{c}$
Area (semispan model).	1.387 ft^2
Mean aerodynamic chord	0.833 ft
Tail volume, $l_t/\bar{c}$ (S_t/S)	0.65
Tail heights (measured vertically from the fuselage center line to the hinge axis of the horizontal tail in wing semispans (see fig. 1(a))	0, 0.05, 0.10, 0.15

Fuselage

Fineness ratio	12.6
Frontal area (semispan model).	0.273 ft^2

Fuselage coordinates:

Distance from nose, in.	Radius, in.
0	0
1.27	1.04
2.54	1.57
5.08	2.35
10.16	3.36
20.31	4.44
30.47	4.90
39.44	5.00
50.00	5.00
60.00	5.00
70.00	5.00
76.00	4.96
82.00	4.83
88.00	4.61
94.00	4.27
100.00	3.77
106.00	3.03
126.00	0

TABLE II.- INDEX OF TABLES AND FIGURES PRESENTING THE AERODYNAMIC DATA

(a) Low-Speed, NACA 1.167-(0)(05)-058 propeller

Table No.	Figure No.	Tail height	Type flaps	δ, deg	M	R million	β, deg	i_t, deg
III (a)	6	tail off	none	---	0.082	4	21	---
(b)	7			---	.082	4	26	---
(c)[1]	8			---	.082	4	26	---
(d)[2]	9			---	.082	4	26	---
(e)	10			---	.082	4	31	---
(f)				---	.123	4	21	---
(g)	11			---	.123	4	31	---
(h)				---	.123	4	36	---
(i)	12			---	.123	6	31	---
(j)	13			---	.165	8	31	---
(k)				---	.165	8	36	---
IV (a)	14	0	none	---	.082	4	26	0
(b)	15			---	.082	4	26	-4
(c)	16			---	.082	4	26	-8
(d)	17			---	.123	4	31	-4
V (a)		0.05 b/2	none	---	.082	4	21	-4
(b)				---	.082	4	31	-4
(c)				---	.123	4	21	-4
(d)	18			---	.123	4	31	-4
(e)				---	.123	4	36	-4
(f)				---	.123	6	31	-4
(g)				---	.165	8	31	-4
(h)				---	.165	8	36	-4
VI (a)	19	0.10 b/2	none	---	.082	4	26	-4
(b)[3]	19			---	.082	4	26	-4
(c)[1]	20			---	.082	4	26	-4
(d)[2]	21			---	.082	4	26	-4
(e)	22			---	.082	4	26	0
(f)	23			---	.082	4	26	-8
(g)				---	.123	4	26	-4
(h)[3]				---	.123	4	26	-4
(i)				---	.123	4	31	0
(j)	24			---	.123	4	31	-4
(k)				---	.123	4	31	-8

Table No.	Figure No.	Tail height	Type flaps	δ, deg	M	R million	β, deg	i_t, deg
VII	25	0.15 b/2	none	---	0.123	4	31	-4
VIII (a)	26	tail off	Inbd.	30	.082	4	26	---
(b)[1]	27				.082	4	26	---
(c)[2]	28				.082	4	26	---
(d)					.082	4	31	---
(e)					.123	4	31	---
IX (a)	29	0	Inbd.	30	.082	4	26	0
(b)	30				.082	4	26	-2
(c)	31				.082	4	26	-4
X (a)	32	0.10 b/2	Inbd.	30	.082	4	26	0
(b)[1]	33				.082	4	26	0
(c)[2]	34				.082	4	26	0
(d)	35				.082	4	26	-2
(e)	36				.082	4	26	-4
XI	37	tail off	Outbd.	30	.082	4	26	---
XII (a)	38	0.10 b/2	Outbd.	30	.082	4	26	0
(b)[1]					.082	4	26	0
(c)[2]					.082	4	26	0
(d)	39				.082	4	26	-8
XIII (a)	40	tail off	Inbd.	60	.082	4	26	---
(b)					.082	4	31	---
(c)					.123	4	31	---
XIV		0.10 b/2	Inbd.	60	.082	4	26	0

[1]Inboard propeller only.
[2]Outboard propeller only.
[3]Negative thrust.

TABLE II.- INDEX OF TABLES AND FIGURES PRESENTING THE AERODYNAMIC DATA - Concluded

(b) High-speed, NACA 1.167-(0)(03)-058 propeller

Table No.	Figure No.	Tail height	i_t, deg	β, deg	R, million	M, range
XV	41	tail off	--	41	2	0.60 to 0.80
XVI	42	tail off	--	51	1	0.70 to 0.90
XVII	43	tail off	--	51	2	0.70 to 0.90
XVIII	44	0	-4	41	2	0.60 to 0.80
XIX	45	0	-2	51	1	0.70 to 0.90
XX	46	0	-4	51	1	0.70 to 0.90
XXI	47	0	-6	51	1	0.70 to 0.90
XXII	48	0	-4	51	2	0.70 to 0.90
XXIII	49	$0.10 \frac{b}{2}$	-4	51	1	0.70 to 0.90

TABLE III.– LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10. TAIL REMOVED; FLAPS UP

(a) M = 0.082; R = 4,000,000; β = 21°

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]2.04	0.147	0.014	-0.031	- - -	- - -	- - -
2.03	.136	.027	-.034	-0.004	0.829	0.004
2.04	.132	-.009	-.027	.095	.782	.021
2.04	.127	-.060	-.019	.101	.694	.042
2.04	.114	-.165	.004	.236	.568	.067
2.04	.089	-.346	.037	.459	.466	.088
2.03	.033	-.696	.074	.889	.399	.111
[a]4.08	.311	.027	-.030	- - -	- - -	- - -
4.07	.304	.019	-.025	-.004	.847	.002
4.08	.307	-.014	-.023	.040	.764	.024
4.08	.307	-.059	-.001	.095	.693	.043
4.08	.309	-.164	.028	.233	.567	.067
4.08	.302	-.348	.057	.454	.482	.090
4.09	.294	-.646	.099	.877	.400	.110
[a]6.12	.471	.021	-.020	- - -	- - -	- - -
6.12	.469	.023	-.013	.001	.838	.003
6.12	.473	-.009	-.001	.036	.766	.020
6.12	.483	-.057	.013	.089	.689	.042
6.12	.502	-.167	.042	.242	.577	.068
6.13	.518	-.344	.078	.463	.484	.089
6.12	.528	-.649	.126	.574	.400	.111

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]8.16	0.625	0.028	-0.005	- - -	- - -	- - -
8.15	.622	.035	-.005	-0.006	0.860	-0.003
8.16	.637	.002	.009	.038	.773	.023
8.16	.659	-.049	.029	.105	.690	.043
8.17	.692	-.152	.061	.243	.584	.068
8.18	.728	-.327	.100	.478	.488	.089
8.18	.773	-.645	.162	.905	.397	.111
[a]10.19	.773	.026	.002	- - -	- - -	- - -
10.19	.777	.042	.012	-.003	.854	.001
10.19	.797	.014	.027	.038	.775	.021
10.20	.829	-.038	.046	.106	.690	.044
10.22	.881	-.137	.083	.239	.587	.067
10.22	.939	-.314	.126	.481	.488	.089
10.23	1.009	-.618	.188	.862	.400	.111
[a]12.23	.918	.046	.019	- - -	- - -	- - -
12.23	.937	.049	.023	.008	.842	.006
12.23	.960	.022	.029	.037	.775	.023
12.24	.994	-.027	.053	.091	.708	.045
12.26	1.063	-.136	.097	.234	.592	.067
12.26	1.154	-.306	.158	.467	.482	.090
12.28	1.266	-.602	.224	.846	.398	.112
12.30						

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]14.27	- - -	- - -	- - -	- - -	- - -	- - -
14.26	1.073	0.062	0.044	0.003	0.846	0.005
14.27	1.104	.034	.029	.040	.776	.024
14.28	1.132	-.011	.061	.101	.693	.043
14.30	1.156	-.111	.119	.240	.582	.067
14.32	1.192	-.263	.174	.471	.492	.090
14.34	1.282	-.568	.222	.895	.398	.111
[a]16.28	1.157	.097	.024	- - -	- - -	- - -
16.27	1.164	.109	.044	-.011	.892	-.005
16.29	1.224	.073	.060	.026	.835	.010
16.30	1.272	.038	.080	.069	.757	.033
16.33	1.347	-.022	.110	.137	.647	.056
16.35	1.451	-.138	.163	.311	.546	.079
16.37	1.589	-.301	.219	.548	.454	.097
16.39	1.698	-.531	.287	.834	.399	.109
[a]18.30	1.265	.136	.028	- - -	- - -	- - -
18.29	1.284	.151	.071	-.001	.863	.007
18.30	1.294	.194	.087	.042	.779	.032
18.32	1.370	.084	.116	.105	.697	.049
18.36	1.523	-.021	.165	.210	.604	.068
18.38	1.616	-.114	.212	.349	.529	.089
18.41	1.737	-.269	.258	.598	.455	.101
18.43	1.892	-.495	.342	.863	.401	.113

[a]Propellers removed

(b) M = 0.082; R = 4,000,000; β = 26°

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]2.04	0.147	0.014	-0.031	- - -	- - -	- - -
2.03	.130	.010	-.030	0.001	1.023	0.004
2.03	.129	-.016	-.023	.036	.936	.023
2.03	.124	-.064	-.022	.101	.861	.078
2.05	.115	-.159	-.006	.182	.743	.107
2.03	.093	-.337	.009	.317	.644	.136
2.03	.076	-.593	.040	.515	.544	.163
2.05	.072	-.941	.066	.707	.457	.179
2.05	.046	-.846	.097	.841	.465	.187
[a]4.08	.311	.027	-.030	- - -	- - -	- - -
4.07	.298	.019	-.022	-.005	1.068	.005
4.07	.300	-.012	-.023	.033	.961	.022
4.07	.302	-.061	-.008	.097	.844	.038
4.08	.306	-.189	.011	.184	.742	.108
4.08	.296	-.238	.025	.318	.642	.136
4.08	.294	-.395	.061	.526	.552	.164
4.08	.290	-.540	.097	.706	.466	.178
4.08	.287	-.843	.108	.843	.466	.188
[a]6.12	.471	.021	-.020	- - -	- - -	- - -
6.12	.467	.022	-.020	-.003	1.070	.009
6.12	.473	-.007	-.002	.037	.973	.026
6.13	.486	-.055	.014	.097	.845	.079
6.13	.493	-.116	.023	.175	.732	.106
6.13	.510	-.231	.059	.316	.643	.137
6.13	.517	-.391	.092	.533	.570	.164
6.13	.528	-.585	.125	.699	.498	.177
6.13	.532	-.837	.157	.840	.467	.189

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]8.16	0.625	0.026	-0.005	- - -	- - -	- - -
8.15	.621	.031	-.004	-0.005	1.077	0.005
8.16	.636	-.001	.008	.033	.960	.023
8.17	.657	-.046	.024	.093	.848	.078
8.17	.688	-.116	.047	.185	.738	.108
8.18	.727	-.221	.079	.314	.643	.137
8.18	.774	-.377	.118	.519	.553	.164
8.19	.839	-.588	.158	.686	.481	.178
8.19	.775	-.835	.174	.849	.464	.189
[a]10.19	.773	.026	.008	- - -	- - -	- - -
10.19	.774	.032	.010	-.004	1.073	.011
10.19	.796	.007	.026	.036	.978	.028
10.21	.830	-.039	.047	.097	.845	.081
10.22	.884	-.109	.075	.170	.744	.130
10.23	.966	-.204	.109	.307	.647	.137
10.24	.978	-.374	.150	.533	.548	.166
10.24	.989	-.600	.184	.694	.468	.179
10.25	1.018	-.821	.209	.844	.464	.190
[a]12.23	.919	.046	.019	- - -	- - -	- - -
12.23	.938	.049	.032	-.005	1.078	.020
12.23	.964	.017	.046	.034	.955	.048
12.25	1.007	-.027	.071	.082	.840	.081
12.26	1.071	-.087	.097	.168	.748	.111
12.26	1.164	-.183	.131	.295	.650	.137
12.29	1.179	-.344	.188	.513	.551	.165
12.30	1.226	- - -	.222	.671	.500	.183
12.31	1.263	-.599	.251	.829	.464	.192

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]14.27	- - -	- - -	- - -	- - -	- - -	- - -
14.26	1.081	0.062	0.046	-0.003	1.072	0.011
14.27	1.120	.032	.064	.033	.962	.021
14.29	1.174	-.017	.098	.098	.835	.068
14.30	1.224	-.074	.118	.171	.744	.115
14.31	1.298	-.172	.160	.306	.642	.140
14.34	1.395	-.325	.220	.517	.549	.166
14.36	1.549	-.468	.296	.682	.455	.181
14.37	1.720	-.564	.350	.804	.468	.193
[a]16.28	1.167	.097	.024	- - -	- - -	- - -
16.28	1.181	.096	.038	-.004	1.072	.016
16.31	1.227	.048	.061	.034	.977	.036
16.33	1.326	.007	.103	.093	.845	.089
16.33	1.390	-.052	.140	.171	.742	.116
16.35	1.476	-.147	.180	.301	.643	.144
16.38	1.577	-.279	.232	.492	.557	.167
16.40	1.687	-.468	.287	.681	.456	.184
16.42	1.716	-.513	.319	.802	.468	.191
[a]18.30	1.265	.136	.028	- - -	- - -	- - -
18.29	1.266	.143	.079	.003	1.075	.030
18.30	1.308	.119	.088	.040	.949	.054
18.31	1.367	.079	.119	.102	.835	.098
18.34	1.465	.028	.161	.171	.744	.129
18.36	1.601	-.083	.217	.268	.653	.143
18.40	1.748	-.222	.308	.401	.554	.170
18.42	1.825	-.337	.364	.579	.495	.187
18.43	1.892	-.433	.391	.786	.470	.198

[a]Propellers removed

TABLE III.– LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10. TAIL REMOVED; FLAPS UP – Continued

(c) M = 0.082; R = 4,000,000; β = 26°; Inboard propeller only

α	C_L	C_X	C_m	η_p	J	C_P	α	C_L	C_X	C_m	η_p	J	C_P	α	C_L	C_X	C_m	η_p	J	C_P
[a]2.04	0.147	0.014	-0.031	- - -	- - -	- - -	[a]8.16	0.625	0.028	-0.003	- - -	- - -	- - -	[a]14.27	- - -	- - -	- - -	- - -	- - -	- - -
2.03	.137	.017	-.036	-0.002	1.066	0.018	8.15	.629	.029	-.013	-0.002	1.065	0.012	14.26	1.072	0.061	0.083	-0.003	1.066	0.017
2.05	.134	-.007	-.038	.072	.985	.057	8.15	.630	.009	- - -	.049	.986	.039	14.27	1.096	.042	.059	.049	.988	.062
2.03	.130	-.028	-.086	.126	.890	.082	8.16	.644	-.012	.014	.105	.891	.081	14.27	1.121	.022	.076	.108	.892	.087
2.03	.129	-.069	-.021	.198	.731	.110	8.16	.634	-.046	.027	.195	.731	.110	14.26	1.151	-.008	.098	.183	.732	.113
2.02	.117	-.117	-.019	.338	.634	.136	8.17	.656	-.100	.046	.333	.634	.137	14.29	1.188	-.037	.126	.321	.634	.140
2.03	.108	-.206	-.028	.565	.537	.163	8.17	.683	-.188	.069	.568	.536	.163	14.30	1.233	-.141	.164	.724	.537	.167
2.05	.097	-.338	.005	.908	.454	.187	8.17	.697	-.320	.088	.912	.453	.189	14.31	1.285	-.265	.397	.872	.455	.190
[a]4.08	.311	.017	-.030	- - -	- - -	- - -	[a]10.19	.773	.036	.008	- - -	- - -	- - -	[a]16.28	1.167	.037	.084	- - -	- - -	- - -
4.07	.304	.017	-.028	-.001	1.063	.011	10.19	.772	.038	.006	-.003	1.066	.014	16.28	1.173	.096	.048	-.002	1.065	.020
4.08	.306	-.003	-.080	.049	.987	.036	10.19	.787	.018	.022	.049	.986	.037	16.28	1.194	.058	.070	.049	.985	.063
4.08	.306	-.086	-.006	.107	.890	.062	10.20	.802	-.004	.035	.105	.889	.084	16.29	1.221	.060	.088	.103	.890	.091
4.08	.306	-.078	-.006	.195	.731	.108	10.20	.816	-.037	.050	.189	.732	.128	16.30	1.260	.033	.121	.188	.731	.116
4.08	.305	-.111	.003	.330	.633	.134	10.21	.848	-.088	.073	.329	.634	.137	16.30	1.291	-.011	.144	.320	.633	.140
4.08	.301	-.204	.019	.570	.536	.163	10.21	.863	-.173	.097	.559	.537	.164	16.31	1.330	-.048	.166	.418	.535	.154
4.08	.299	-.334	.033	.909	.454	.186	10.22	.895	-.309	.123	.908	.453	.189	16.32	1.397	-.094	.192	.522	.535	.167
														16.34	1.434	-.214	.232	.879	.456	.191
[a]6.12	.471	.021	-.020	- - -	- - -	- - -	[a]12.23	.919	.046	.019	- - -	- - -	- - -							
6.12	.465	.022	-.017	-.001	1.067	.018	12.23	.921	.047	.020	-.003	1.065	.015	[a]18.30	1.269	.136	.088	- - -	- - -	- - -
6.12	.470	.002	-.006	.049	.989	.035	12.23	.941	.028	.036	.049	.986	.029	18.29	1.277	.144	.088	.001	1.066	.024
6.12	.477	-.022	.004	.107	.829	.064	12.23	.968	.007	.053	.101	.890	.056	18.30	1.298	.130	.080	.051	.927	.057
6.12	.463	-.075	.022	.198	.730	.109	12.24	.984	-.024	.072	.184	.731	.112	18.30	1.309	.112	.103	.105	.890	.094
6.12	.450	-.128	.024	.339	.633	.136	12.25	1.018	-.073	.096	.321	.633	.137	18.31	1.336	.085	.129	.184	.731	.119
6.12	.424	-.199	.042	.573	.535	.164	12.26	1.049	-.161	.133	.559	.537	.166	18.31	1.365	.041	.153	.320	.633	.143
6.12	.394	-.327	.057	.911	.454	.187	12.27	1.095	-.285	.166	.886	.454	.187	18.32	1.418	.009	.196	.420	.536	.156
														18.33	1.449	-.055	.205	.546	.536	.170
														18.36	1.553	-.147	.263	.849	.458	.192

[a]Propellers removed

(d) M = 0.082; R = 4,000,000; β = 26°; Outboard propeller only

α	C_L	C_X	C_m	η_p	J	C_P	α	C_L	C_X	C_m	η_p	J	C_P	α	C_L	C_X	C_m	η_p	J	C_P
[a]2.04	0.147	0.014	-0.031	- - -	- - -	- - -	[a]8.16	0.625	0.028	-0.003	- - -	- - -	- - -	[a]14.27	- - -	- - -	- - -	- - -	- - -	- - -
2.03	.133	.015	-.042	-0.001	1.066	0.007	8.16	.624	.029	-.013	0.001	1.065	0.007	14.26	1.076	0.062	0.086	-0.001	1.063	0.013
2.05	.131	-.004	-.034	.046	.988	.048	8.16	.632	.009	-.004	.051	.988	.029	14.27	1.094	.048	.051	.049	.989	.039
2.03	.125	-.028	-.028	.105	.892	.082	8.16	.641	-.012	-.008	.103	.893	.082	14.27	1.114	.028	.035	.103	.892	.088
2.02	.119	-.063	-.018	.191	.733	.111	8.16	.650	-.048	.009	.195	.730	.112	14.26	1.139	-.009	.049	.182	.732	.113
2.01	.112	-.116	-.006	.325	.637	.137	8.16	.657	-.101	.020	.333	.634	.139	14.28	1.168	-.075	.074	.316	.636	.140
2.01	.106	-.207	.022	.565	.536	.164	8.17	.672	-.192	.042	.565	.537	.166	14.29	1.204	-.142	.092	.554	.537	.164
2.00	.094	-.320	.054	.851	.453	.186	8.17	.680	-.304	.058	.852	.453	.186	14.30	1.246	-.250	.089	.843	.454	.187
[a]4.08	.311	.017	-.030	- - -	- - -	- - -	[a]10.19	.773	.036	.008	- - -	- - -	- - -	[a]16.28	1.167	.037	.084	- - -	- - -	- - -
4.08	.305	.017	-.032	.001	1.059	.007	10.19	.776	.038	0	.001	1.065	.008	16.30	1.220	.076	.033	.001	1.065	.018
4.07	.304	-.001	-.083	.047	.993	.048	10.19	.786	.018	.002	.049	.988	.033	16.30	1.239	.058	.057	.049	.988	.061
4.08	.305	-.086	-.017	.107	.888	.082	10.20	.799	-.004	.011	.107	.889	.083	16.31	1.268	.040	.061	.103	.890	.090
4.07	.301	-.099	-.010	.195	.733	.109	10.20	.808	-.037	.018	.190	.734	.113	16.31	1.294	.009	.078	.188	.729	.116
4.07	.299	-.114	.007	.329	.636	.138	10.20	.831	-.088	.031	.325	.636	.137	16.32	1.324	-.034	.088	.316	.636	.141
4.07	.293	-.208	.029	.559	.540	.164	10.21	.851	-.176	.057	.564	.538	.165	16.33	1.374	-.117	.079	.558	.541	.167
4.06	.282	-.318	.041	.855	.463	.187	10.21	.869	-.292	.077	.846	.463	.187	16.34	1.406	-.172	- - -	.877	.537	.161
														16.35	1.431	-.226	.100	.816	.465	.189
[a]6.12	.471	.021	-.020	- - -	- - -	- - -	[a]12.23	.919	.046	.018	- - -	- - -	- - -							
6.12	.467	.022	-.019	.003	1.060	.008	12.23	.927	.048	.013	-.001	1.063	.013	[a]18.30	1.269	.136	.088	- - -	- - -	- - -
6.12	.472	.003	-.018	.049	.992	.030	12.23	.938	.028	.016	.047	.990	.026	18.29	1.247	.156	.046	.001	1.072	.023
6.12	.476	-.020	-.009	.106	.891	.062	12.23	.957	.007	.024	.105	.889	.065	18.30	1.276	.141	.045	.051	.988	.058
6.12	.481	-.095	0	.196	.731	.111	12.24	.979	-.023	.033	.184	.734	.112	18.32	1.325	.099	.048	.106	.827	.093
6.12	.482	-.107	.014	.325	.638	.137	12.24	.999	-.076	.043	.318	.637	.140	18.32	1.379	.064	.070	.188	.729	.120
6.12	.472	-.196	.031	.564	.538	.165	12.25	1.029	-.164	.061	.555	.538	.163	18.33	1.417	.019	.084	.333	.637	.146
6.12	.466	-.319	.045	.858	.463	.186	12.26	1.058	-.273	.076	.858	.464	.187	18.34	1.469	-.054	.083	.543	.538	.170
														18.34	1.490	-.105	.093	.670	.459	.181
														18.35	1.564	-.195	.102	.864	.468	.188

[a]Propellers removed

TABLE III.– LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10. TAIL REMOVED; FLAPS UP – Continued

(e) M = 0.082; R = 4,000,000; β = 31°

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]2.04	0.147	0.014	-0.031	- - -	- - -	- - -
2.03	.146	.020	-.039	-0.006	1.343	0.002
2.03	.143	.002	-.034	.015	1.242	.049
2.03	.140	-.019	-.025	.042	1.139	.083
2.04	.137	-.049	-.019	.082	1.041	.122
2.03	.132	-.088	-.009	.131	.942	.154
2.04	.119	-.185	.017	.277	.794	.201
2.03	.093	-.357	.072	.[illegible]	.[illegible]	.[illegible]
2.03	.070	-.543	.077	.718	.566	.284
[a]4.08	.311	.017	-.030	- - -	- - -	- - -
4.08	.319	.021	-.026	-.003	1.341	.001
4.08	.317	.005	-.018	.016	1.240	.047
4.08	.318	-.016	-.008	.041	1.141	.082
4.08	.320	-.042	-.001	.081	1.043	.118
4.08	.321	-.086	.018	.130	.945	.151
4.09	.320	-.179	.041	.220	.797	.199
4.08	.313	-.367	.076	.409	.644	.253
4.09	.307	-.541	.112	.710	.567	.285
[a]6.12	.471	.021	-.030	- - -	- - -	- - -
6.12	.470	.007	-.018	-.006	1.342	0
6.12	.474	.008	-.006	.017	1.237	.045
6.12	.482	-.011	0	.042	1.140	.083
6.13	.489	-.041	.015	.082	1.042	.119
6.13	.498	-.081	.031	.133	.942	.158
6.14	.517	-.183	.060	.238	.790	.203
6.14	.527	-.361	.105	.499	.643	.256
6.14	.538	-.537	.138	.720	.564	.283

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]8.16	0.825	0.028	-0.009	- - -	- - -	- - -
8.16	.824	.033	-.003	-0.006	1.344	0.001
8.16	.835	.016	.001	.016	1.242	.048
8.16	.845	-.006	.017	.043	1.137	.088
8.17	.861	-.034	.029	.082	1.042	.120
8.17	.877	-.073	.042	.133	.940	.153
8.17	.904	-.166	.077	.254	.794	.200
8.19	.944	-.349	.132	.497	.646	.273
8.19	.969	-.520	.171	.717	.566	.282
[a]10.19	.773	.036	.002	- - -	- - -	- - -
10.19	.779	.042	.016	-.001	1.337	.007
10.19	.789	.035	.024	.017	1.242	.048
10.20	.809	.003	.037	.042	1.139	.089
10.20	.829	-.024	.049	.081	1.039	.121
10.21	.854	-.064	.064	.134	.939	.154
10.22	.897	-.156	.102	.251	.792	.204
10.23	.954	-.338	.160	.493	.645	.256
10.24	.998	-.508	.203	.712	.564	.284
[a]12.23	.919	.046	.019	- - -	- - -	- - -
12.22	.928	.051	.029	-.001	1.347	.007
12.23	.949	.035	.040	.017	1.240	.052
12.24	.970	.015	.051	.042	1.141	.091
12.24	.996	-.022	.063	.082	1.040	.127
12.25	1.027	-.049	.082	.133	.942	.156
12.26	1.084	-.141	.122	- - -	- - -	- - -
12.28	1.167	-.314	.190	.487	.647	.257
12.30	1.230	-.481	.239	.694	.566	.285

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]14.27	- - -	- - -	- - -	- - -	- - -	- - -
14.26	1.074	0.054	0.048	-0.001	1.344	0.014
14.27	1.099	.049	.061	.020	1.241	.058
14.27	1.123	.029	.073	.046	1.143	.092
14.28	1.155	.004	.092	.079	1.044	.129
14.29	1.196	-.035	.111	.133	.940	.163
14.31	1.270	-.127	.150	.220	.786	.211
14.34	1.376	-.300	.229	.489	.643	.261
14.35	1.475	-.477	.265	.705	.567	.289
[a]16.28	1.167	.097	.024	- - -	- - -	- - -
16.28	1.192	.095	.039	-.001	1.352	.018
16.29	1.234	.067	.059	.015	1.249	.060
16.30	1.266	.047	.083	.042	1.145	.098
16.32	1.304	.022	.121	.080	1.042	.134
16.33	1.349	-.013	.224	.129	.944	.166
16.34	1.438	-.096	.169	.247	.799	.213
16.37	1.578	-.279	.257	.495	.637	.267
16.39	1.664	-.418	.309	.671	.568	.289
[a]18.30	1.265	.136	.088	- - -	- - -	- - -
18.28	1.294	.147	.076	0	1.346	.030
18.29	1.288	.136	.092	.023	1.241	.072
18.30	1.319	.117	.101	.047	1.139	.108
18.31	1.351	.098	.115	.077	1.038	.136
18.32	1.403	.061	.133	.133	.940	.172
18.37	1.485	-.054	.216	.233	.789	.220
18.40	1.709	-.199	.316	.489	.645	.266
18.42	1.810	-.338	.389	.643	.570	.290

[a]Propellers removed

(f) M = 0.123; R = 4,000,000; β = 21°

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]2.04	0.121	0.015	-0.031	- - -	- - -	- - -
2.03	.142	.025	-.036	-0.008	0.865	-0.001
2.04	.140	.002	-.031	.022	.805	.015
2.04	.137	-.026	-.024	.056	.747	.029
2.04	.134	-.055	-.017	.096	.699	.041
2.04	.128	-.098	-.009	.159	.649	.054
2.04	.124	-.149	-.003	.228	.602	.065
[a]4.08	.310	.017	-.028	- - -	- - -	- - -
4.08	.309	.028	-.023	-.013	.867	-.003
4.08	.308	.004	-.019	.022	.800	.013
4.08	.307	-.023	-.011	.053	.749	.030
4.08	.312	-.055	-.003	.092	.698	.042
4.08	.312	-.096	.006	.147	.649	.054
4.08	.314	-.147	.013	.226	.602	.066
[a]6.12	.469	.022	-.022	- - -	- - -	- - -
6.12	.465	.031	-.014	-.012	.869	-.001
6.12	.473	.006	-.006	.022	.798	.017
6.12	.478	-.017	0	.052	.749	.029
6.13	.[illegible]	-.040	.013	.091	.698	.042
6.13	.498	-.090	.022	.145	.649	.054
6.13	.506	-.140	.032	.223	.603	.065

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]8.15	0.622	0.029	-0.009	- - -	- - -	- - -
8.15	.624	.041	-.004	-0.012	0.871	-0.003
8.15	.633	.014	.009	.024	.799	.017
8.16	.646	-.011	.018	.055	.748	.030
8.16	.660	-.041	.029	.094	.699	.042
8.17	.674	-.083	.038	.151	.649	.055
8.17	.693	-.133	.050	.226	.602	.066
[a]10.19	.770	.038	.001	- - -	- - -	- - -
10.19	.776	.049	.010	-.007	.866	-.001
10.19	.795	.032	.023	.022	.799	.017
10.20	.808	-.001	.032	.056	.751	.031
10.21	.827	-.031	.045	.097	.701	.042
10.21	.848	-.070	.055	.151	.653	.055
10.22	.876	-.123	.070	.228	.601	.066
[a]12.22	.914	.048	.010	- - -	- - -	- - -
12.22	.922	.057	.023	-.006	.866	-.001
12.23	.943	.039	.036	.028	.799	.019
12.23	.968	.009	.050	.060	.750	.031
12.25	.997	-.022	.063	.103	.698	.043
12.25	1.029	-.062	.076	.159	.646	.057
12.26	1.060	-.109	.095	.227	.602	.068

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]14.26	1.061	0.060	0.026	- - -	- - -	- - -
14.26	1.068	.071	.041	-0.007	0.868	0
14.27	1.095	.043	.055	.029	.797	.021
14.28	1.126	.019	.065	.061	.746	.035
14.28	1.156	-.008	.082	.101	.698	.047
14.30	1.196	-.044	.099	.154	.650	.058
14.30	1.239	-.094	.119	.228	.600	.069
[a]16.28	1.164	.097	.034	- - -	- - -	- - -
16.27	1.171	.107	.051	-.007	.871	.003
16.30	1.218	.082	.071	.030	.798	.022
16.31	1.280	.039	.084	.062	.748	.035
16.32	1.314	.010	.099	.102	.698	.046
16.33	1.357	-.025	.118	.149	.654	.060
16.34	1.410	-.072	.141	.225	.601	.070
[a]18.29	1.229	.140	.034	- - -	- - -	- - -
18.28	1.248	.156	.076	-.005	.876	.004
18.29	1.275	.134	.083	.033	.803	.025
18.31	1.333	.112	.104	.068	.748	.039
18.32	1.379	.086	.123	.107	.698	.051
18.34	1.437	.046	.132	.159	.646	.062
18.35	1.499	.005	.164	.223	.602	.073

[a]Propellers removed

TABLE III.– LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10. TAIL REMOVED; FLAPS UP – Continued

(g) M = 0.123; R = 4,000,000; β = 31°

α	C_L	C_X	C_m	$T_{c_{BP}}$	J_{BP}	$\sigma_{P_{BP}}$
[a]2.04	0.251	0.015	-0.031	---	---	---
2.03	.242	.022	-.045	-0.006	1.344	-0.008
2.04	.243	.024	-.035	.017	1.239	.040
2.04	.238	-.016	-.050	.043	1.140	.078
2.04	.234	-.046	-.023	.082	1.042	.118
2.04	.229	-.089	-.009	.134	.941	.153
2.04	.219	-.145	.005	.210	.842	.186
2.04	.208	-.204	.022	.320	.744	.221
2.03	.095	-.347	.042	.471	.660	.253
[a]4.08	.310	.017	-.028	---	---	---
4.09	.309	.023	-.030	-.004	1.334	-.005
4.08	.311	.006	-.024	.015	1.239	.041
4.08	.318	-.015	-.016	.045	1.135	.082
4.08	.314	-.044	-.005	.080	1.041	.116
4.08	.313	-.085	.006	.133	.943	.152
4.08	.314	-.142	.022	.207	.845	.184
4.08	.312	-.202	.044	.320	.744	.222
4.08	.310	-.342	.068	.463	.661	.253
[a]6.12	.469	.022	-.022	---	---	---
6.12	.465	.028	-.021	-.005	1.337	-.004
6.12	.472	.010	-.010	.014	1.236	.083
6.12	.479	-.010	0	.043	1.140	.080
6.13	.482	-.040	.009	.080	1.041	.118
6.13	.486	-.080	.023	.131	.943	.152
6.13	.505	-.136	.048	.205	.845	.186
6.13	.514	-.226	.064	.322	.744	.221
6.13	.522	-.335	.090	.457	.663	.251

α	C_L	C_X	C_m	$T_{c_{BP}}$	J_{BP}	$\sigma_{P_{BP}}$
[a]8.15	0.622	0.029	-0.009	---	---	---
8.15	.624	.035	-.005	-0.005	1.343	-0.008
8.16	.632	.018	.004	.014	1.241	.042
8.17	.642	-.003	.019	.043	1.141	.080
8.16	.656	-.032	.027	.082	1.043	.118
8.17	.672	-.069	.040	.128	.942	.153
8.17	.693	-.127	.060	.203	.846	.186
8.17	.715	-.215	.086	.319	.745	.222
8.19	.735	-.322	.122	.464	.662	.254
[a]10.19	.770	.038	.001	---	---	---
10.19	.774	.044	.009	-.005	1.348	-.005
10.19	.789	.026	.018	.016	1.241	.041
10.20	.805	.007	.032	.041	1.147	.080
10.21	.828	-.019	.049	.076	1.052	.115
10.21	.854	-.061	.064	.131	.944	.154
10.22	.878	-.117	.084	.209	.845	.187
10.22	.911	-.202	.114	.318	.745	.222
10.23	.946	-.308	.145	.460	.664	.252
[a]12.22	.924	.046	.010	---	---	---
12.22	.924	.054	.026	-.005	1.354	-.001
12.23	.942	.036	.035	.017	1.240	.048
12.24	.965	.016	.047	.042	1.142	.088
12.24	.993	-.010	.062	.080	1.043	.123
12.23	1.026	-.049	.083	.128	.944	.157
12.26	1.062	-.103	.108	.205	.845	.195
12.27	1.109	-.186	.145	.314	.745	.225
12.28	1.161	-.290	.179	.452	.664	.254

α	C_L	C_X	C_m	$T_{c_{BP}}$	J_{BP}	$\sigma_{P_{BP}}$
[a]14.26	1.061	0.060	0.026	---	---	---
14.26	1.072	.069	.043	-0.003	1.361	-0.008
14.27	1.100	.049	.057	.018	1.238	.052
14.28	1.128	.031	.073	.044	1.141	.091
14.28	1.159	.004	.085	.080	1.043	.128
14.30	1.198	-.029	.107	.127	.947	.159
14.31	1.247	-.083	.135	.202	.845	.192
14.32	1.309	-.163	.172	.312	.745	.227
14.33	1.366	-.264	.211	.450	.664	.259
[a]16.28	1.164	.097	.034	---	---	---
16.28	1.167	.101	.055	-.003	1.380	-.001
16.30	1.244	.088	.070	.019	1.242	.057
16.31	1.275	.049	.083	.044	1.147	.094
16.32	1.310	.025	.099	.080	1.047	.129
16.33	1.354	-.020	.122	.132	.946	.165
16.34	1.413	-.060	.150	.200	.845	.197
16.35	1.482	-.139	.191	.309	.746	.231
16.37	1.556	-.232	.232	.432	.667	.257
[a]18.29	1.259	.140	.034	---	---	---
18.28	1.273	.134	.073	-.007	1.380	.010
18.29	1.286	.133	.086	.018	1.249	.063
18.30	1.316	.121	.100	.045	1.148	.103
18.31	1.367	.100	.121	.080	1.048	.136
18.32	1.428	.072	.138	.129	.947	.171
18.37	1.516	-.010	.186	.196	.851	.200
18.38	1.612	-.072	.220	.253	.748	.234
18.40	1.689	-.136	.300	.340	.673	.261

[a]Propellers removed

(h) M = 0.123; R = 4,000,000; β = 36°

α	C_L	C_X	C_m	$T_{c_{BP}}$	J_{BP}	$\sigma_{P_{BP}}$
[a]2.04	0.251	0.015	-0.031	---	---	---
2.05	.241	.018	-.045	-0.005	1.630	-0.008
2.03	.237	-.006	-.032	.022	1.446	.100
2.04	.238	-.032	-.024	.052	1.253	.162
2.03	.234	-.083	-.007	.126	1.051	.243
2.04	.213	-.160	.011	.210	.945	.307
2.03	.095	-.281	.038	.367	.797	.369
[a]4.08	.310	.017	-.028	---	---	---
4.08	.306	.018	-.027	-.004	1.619	.004
4.08	.309	-.003	-.020	.021	1.445	.097
4.08	.312	-.037	-.008	.053	1.300	.154
4.08	.313	-.085	.014	.127	1.051	.243
4.08	.312	-.159	.032	.214	.943	.307
4.08	.309	-.279	.062	.370	.798	.369
[a]6.12	.469	.022	-.022	---	---	---
6.12	.465	.024	-.016	-.005	1.628	-.002
6.12	.470	.001	-.006	.022	1.445	.100
6.12	.482	-.024	.005	.052	1.296	.159
6.13	.494	-.080	.021	.126	1.052	.243
6.13	.506	-.154	.056	.213	.944	.308
6.13	.516	-.273	.088	.372	.797	.370

α	C_L	C_X	C_m	$T_{c_{BP}}$	J_{BP}	$\sigma_{P_{BP}}$
[a]8.15	0.622	0.029	-0.009	---	---	---
8.15	.623	.031	.001	-0.006	1.629	0.008
8.16	.639	.008	.014	.021	1.446	.099
8.16	.651	-.014	.024	.053	1.302	.159
8.17	.674	-.072	.048	.127	1.051	.244
8.18	.695	-.145	.077	.212	.944	.309
8.18	.724	-.263	.114	.368	.799	.372
[a]10.19	.770	.038	.001	---	---	---
10.19	.774	.041	.015	-.006	1.636	.014
10.19	.794	.019	.028	.021	1.447	.100
10.20	.819	-.026	.042	.055	1.254	.164
10.21	.849	-.059	.070	.125	1.055	.246
10.22	.886	-.122	.104	.214	.942	.309
10.23	.928	-.249	.143	.369	.798	.371
[a]12.22	.914	.048	.010	---	---	---
12.23	.922	.050	.040	-.004	1.632	.011
12.23	.947	.028	.054	.024	1.442	.103
12.24	.974	.005	.080	.056	1.253	.170
12.25	1.021	-.047	.092	.126	1.054	.251
12.26	1.069	-.116	.129	.213	.945	.313
12.28	1.125	-.227	.172	.364	.802	.373

α	C_L	C_X	C_m	$T_{c_{BP}}$	J_{BP}	$\sigma_{P_{BP}}$
[a]14.26	1.061	0.060	0.026	---	---	---
14.26	1.071	.063	.037	-0.004	1.633	0.021
14.27	1.096	.043	.078	.023	1.453	.108
14.28	1.132	.020	.092	.055	1.296	.173
14.29	1.192	-.030	.127	.124	1.055	.257
14.31	1.251	-.093	.167	.208	.946	.317
14.32	1.324	-.201	.212	.356	.802	.372
[a]16.28	1.164	.097	.034	---	---	---
16.28	1.189	.093	.078	-.007	1.664	.013
16.29	1.222	.077	.094	.024	1.449	.117
16.30	1.254	.053	.106	.059	1.293	.165
16.33	1.319	-.008	.143	.121	1.096	.261
16.34	1.419	-.070	.188	.206	.944	.319
16.36	1.525	-.172	.239	.341	.804	.376
[a]18.29	1.259	.140	.034	---	---	---
18.29	1.248	---	---	---	---	---
18.29	1.288	.131	.110	.002	1.775	-.001
18.30	1.325	.114	.137	.023	1.444	.134
18.32	1.401	.071	.167	.058	1.298	.193
18.35	1.508	.017	.217	.095	1.094	.273
18.38	1.630	-.091	.300	.157	.923	.366
				.209	.749	.376

[a]Propellers removed

TABLE III.– LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10. TAIL REMOVED; FLAPS UP – Continued

(i) M = 0.123; R = 6,000,000; β = 31°

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$	α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$	α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]2.03	0.142	0.015	-0.034	- - -	- - -	- - -	[a]8.15	0.624	0.028	-0.015	- - -	- - -	- - -	[a]14.26	1.071	0.059	0.023	- - -	- - -	- - -
2.03	.137	.020	-.044	-0.007	1.349	-0.006	8.15	.621	.033	-.011	-0.006	1.347	-0.006	14.26	1.073	.064	.039	-0.005	1.345	0.005
2.04	.138	.008	-.038	.008	1.262	.029	8.16	.629	.020	-.004	.022	1.251	.033	14.26	1.093	.090	.047	.015	1.248	.045
2.04	.136	-.014	-.030	.037	1.149	.070	8.15	.640	.001	.008	.037	1.154	.070	14.27	1.115	.031	.058	.041	1.147	.084
2.04	.130	-.045	-.022	.076	1.045	.111	8.16	.654	-.026	.020	.075	1.050	.106	14.28	1.147	.006	.073	.075	1.051	.117
2.03	.124	-.061	-.013	.124	.953	.144	8.17	.671	-.070	.037	.130	.946	.147	14.29	1.187	-.030	.095	.127	.948	.134
2.03	.116	-.141	-.001	.200	.850	.182	8.17	.689	-.123	.056	.199	.853	.181	14.30	1.235	-.082	.122	.198	.850	.189
2.03	.104	-.231	.019	.311	.748	.220	8.17	.710	-.210	.082	.310	.750	.219	14.31	1.293	-.159	.159	.298	.753	.225
[a]4.08	.309	.017	-.029	- - -	- - -	- - -	[a]10.19	.776	.037	-.005	- - -	- - -	- - -	[a]16.28	1.158	.098	.026	- - -	- - -	- - -
4.07	.304	.026	-.033	-.008	1.373	-.018	10.18	.771	.044	.002	-.008	1.358	-.013	16.28	1.178	.096	.048	-.005	1.353	.006
4.08	.306	.010	-.027	.010	1.264	.026	10.19	.783	.027	.014	.013	1.244	.037	16.28	1.185	.091	.060	.018	1.247	.052
4.08	.308	-.010	-.019	.038	1.151	.068	10.19	.800	.008	.022	.039	1.147	.075	16.29	1.241	.060	.080	.044	1.141	.092
4.08	.309	-.039	-.008	.076	1.048	.105	10.20	.822	-.018	.039	.075	1.050	.110	16.30	1.265	.045	.092	.076	1.052	.123
4.08	.311	-.080	.003	.127	.951	.143	10.21	.844	-.055	.052	.124	.952	.145	16.33	1.347	-.022	.116	.130	.944	.160
4.08	.310	-.139	.017	.202	.851	.182	10.21	.872	-.115	.076	.200	.849	.184	16.34	1.401	-.059	.144	.196	.850	.193
4.08	.309	-.226	.040	.312	.750	.220	10.22	.906	-.200	.107	.311	.749	.222	16.35	1.463	-.124	.177	.284	.762	.223
[a]6.12	.472	.021	-.018	- - -	- - -	- - -	[a]12.23	.925	.047	.007	- - -	- - -	- - -	[a]18.29	1.249	.137	.036	- - -	- - -	- - -
6.12	.466	.027	-.022	-.005	1.347	-.008	12.22	.925	.054	.020	-.007	1.361	-.010	18.29	1.260	.137	.071	.001	1.358	.029
6.12	.470	.012	-.014	.014	1.245	.036	12.23	.939	.039	.028	.013	1.254	.038	18.29	1.288	.128	.064	.019	1.253	.071
6.12	.476	-.007	-.007	.040	1.147	.070	12.23	.962	.018	.040	.041	1.147	.078	18.31	1.327	.109	.099	.047	1.162	.105
6.12	.484	-.035	.006	.075	1.052	.107	12.24	.989	-.005	.055	.074	1.054	.112	18.31	1.356	.086	.115	.079	1.045	.139
6.13	.493	-.077	.018	.132	.945	- - -	12.25	1.021	-.045	.075	.127	.949	.150	18.32	1.418	.057	.137	.133	.941	.173
6.13	.500	-.131	.037	.201	.853	.181	12.26	1.058	-.103	.100	.204	.845	.188	18.35	1.505	.004	.170	.203	.845	.204
6.13	.509	-.221	.058	.314	.749	.220	12.26	1.105	-.180	.131	.305	.752	.222	18.39	1.635	-.096	.199	.282	.764	.233

[a]Propellers removed

(j) M = 0.165; R = 8,000,000; β = 31°

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$	α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$	α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]2.03	0.136	0.015	-0.033	- - -	- - -	- - -	[a]8.15	0.617	0.028	-0.014	- - -	- - -	- - -	[a]14.26	1.062	0.059	0.014	- - -	- - -	- - -
2.03	.134	.020	-.044	-0.007	1.359	-0.003	8.15	.614	.033	-.012	-0.006	1.354	-0.009	14.25	1.067	.063	.035	-0.001	1.335	0.001
2.04	.133	.007	-.040	.008	1.267	.035	8.15	.622	.019	-.006	.018	1.253	.038	14.26	1.080	.091	.041	.015	1.255	.037
2.04	.130	-.014	-.033	.036	1.157	.075	8.15	.630	.001	.003	.038	1.155	.068	14.27	1.109	.031	.054	.044	1.144	.079
2.04	.127	-.043	-.025	.073	1.057	.113	8.16	.645	-.027	.017	.078	1.050	.106	14.27	1.140	.005	.070	.078	1.045	.116
2.03	.123	-.083	-.014	.124	.959	.151	8.16	.662	- - -	.033	.122	.964	.146	14.29	1.180	-.031	.090	.128	.946	.153
2.03	.118	-.120	-.006	.171	.893	.179	8.17	.674	-.103	.047	.176	.890	.173	14.29	1.203	-.058	.104	.171	.892	.174
[a]4.07	.301	.017	-.031	- - -	- - -	- - -	[a]10.19	.771	.036	-.002	- - -	- - -	- - -	[a]16.28	1.161	.097	.025	- - -	- - -	- - -
4.07	.301	.022	-.035	-.004	1.348	-.009	10.18	.771	.041	.003	-.004	1.358	-.002	16.28	1.179	.092	.047	-.001	1.334	.008
4.07	.301	.007	-.026	.013	1.249	.033	10.19	.784	.028	.012	.013	1.256	.032	16.28	1.186	.087	.063	.018	1.246	.046
4.07	.304	-.012	-.021	.040	1.149	.070	10.19	.800	.008	.022	.040	1.153	.072	16.29	1.225	.064	.073	.044	1.145	.085
4.08	.305	-.039	-.013	.076	1.056	.106	10.20	.818	-.019	.033	.078	1.054	.110	16.30	1.263	.041	.093	.078	1.046	.122
4.08	.306	-.079	.001	.128	.957	.145	10.21	.841	-.059	.051	.129	.952	.150	16.31	1.304	0	.111	.124	.952	.157
4.08	.307	-.139	.010	.181	.887	.173	10.21	.860	-.093	.066	.174	.890	.175	16.32	1.342	-.023	.127	.162	.900	.176
[a]6.11	.464	.021	-.023	- - -	- - -	- - -	[a]12.23	.918	.046	.005	- - -	- - -	- - -	[a]18.29	1.254	.135	.038	- - -	- - -	- - -
6.11	.460	.027	-.022	-.005	1.354	-.011	12.22	.920	.050	.016	-.001	1.343	-.001	18.28	1.253	.140	.077	-.008	1.353	.002
6.12	.465	.013	-.015	.022	1.258	.031	12.22	.934	.037	.027	.015	1.257	.037	18.29	1.279	.127	.091	.020	1.244	.055
6.12	.469	-.005	-.011	.058	1.157	.067	12.23	.972	.019	.035	.040	1.161	.073	18.30	1.314	.102	.095	.044	1.150	.091
6.12	.477	-.033	.001	.076	1.057	.104	12.23	.981	-.007	.050	.075	1.059	.112	18.30	1.347	.087	.114	.079	1.052	.127
6.13	.487	-.076	.017	.131	.953	.146	12.25	1.010	-.043	.069	.122	.964	.148	18.32	1.391	.060	.129	.118	.967	.158
6.13	.493	-.112	.028	.181	.888	.172	12.25	1.054	-.076	.083	.171	.894	.177	18.33	1.436	.036	.150	.155	.908	.180

[a]Propellers removed

TABLE III.– LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10. TAIL REMOVED; FLAPS UP – Concluded

(k) M = 0.165; R = 8,000,000; β = 36°

α	C_L	C_X	C_m	$T_{c_{eff}}$	J_{eff}	$C_{P_{eff}}$	α	C_L	C_X	C_m	$T_{c_{eff}}$	J_{eff}	$C_{P_{eff}}$	α	C_L	C_X	C_m	$T_{c_{eff}}$	J_{eff}	$C_{P_{eff}}$
[a]2.03	0.136	0.015	-0.033	- - -	- - -	- - -	[a]6.15	0.617	0.088	-0.014	- - -	- - -	- - -	[a]14.26	1.052	0.039	0.014	- - -	- - -	- - -
2.03	.132	.018	-.043	-0.006	1.654	-0.005	6.15	.615	.030	-.007	-0.007	1.666	-0.008	14.26	1.068	.052	.040	-0.008	1.673	0
2.03	.133	.009	-.037	.004	1.358	.042	6.15	.621	.082	-.002	.003	1.372	.036	14.26	1.061	.032	.047	.006	1.378	.061
2.03	.131	-.006	-.031	.020	1.147	.097	6.16	.626	.008	.002	.020	1.149	.093	14.27	1.097	.037	.056	.024	1.141	.116
2.04	.127	-.028	-.024	.046	1.320	.156	6.15	.639	-.014	.016	.046	1.322	.153	14.27	1.126	.018	.071	.051	1.314	.173
2.03	.123	-.055	-.027	.077	1.214	.207	6.16	.653	-.037	.027	.073	1.223	.201	14.28	1.151	-.004	.086	.082	1.207	.218
2.03	.120	-.095	-.008	.123	1.097	.258	6.17	.666	-.077	.047	.126	1.093	.255	14.28	1.184	-.033	.105	.119	1.112	.264
[a]4.07	.301	.017	-.031	- - -	- - -	- - -	[a]10.19	.771	.086	-.002	- - -	- - -	- - -	[a]16.28	1.161	.097	.025	- - -	- - -	- - -
4.07	.300	.021	-.034	-.008	1.630	-.017	10.19	.775	.059	.006	-.003	1.655	-.003	16.27	1.176	.095	.059	-.009	1.685	.004
4.07	.300	.010	-.029	.034	1.358	.042	10.19	.781	.030	.022	.006	1.358	.046	16.27	1.185	.091	.064	.001	1.603	.048
4.07	.301	-.003	-.022	.019	1.450	.094	10.19	.794	.012	.021	.024	1.438	.101	16.28	1.198	.081	.071	.015	1.493	.102
4.07	.308	-.025	-.013	.047	1.321	.153	10.20	.809	-.004	.032	.047	1.324	.153	16.28	1.220	.067	.081	.029	1.413	.141
4.07	.305	-.048	-.005	.074	1.230	.195	10.21	.827	-.028	.047	.079	1.216	.203	16.29	1.241	.054	.093	.050	1.317	.189
4.07	.304	-.091	.007	.126	1.096	.258	10.21	.847	-.066	.066	.123	1.101	.259	16.30	1.273	.029	.108	.083	1.207	.229
[a]6.11	.464	.021	-.023	- - -	- - -	- - -	[a]12.23	.918	.046	.005	- - -	- - -	- - -	16.31	1.318	.005	.127	.114	1.119	.269
6.11	.460	.023	-.019	-.007	1.670	-.010	12.22	.922	.030	.021	-.008	1.697	-.006	[a]18.29	1.234	.135	.058	- - -	- - -	- - -
6.11	.463	.016	-.015	.005	1.373	.035	12.22	.928	.010	.028	.008	1.569	.049	18.28	1.246	.137	.062	-.010	1.703	.033
6.12	.468	.001	-.006	.019	1.452	.093	12.23	.949	.006	.038	.026	1.446	.107	18.29	1.263	.126	.090	.005	1.566	.083
6.12	.473	-.022	.008	.047	1.320	.154	12.24	.969	.005	.051	.055	1.314	.165	18.29	1.292	.114	.095	.020	1.473	.132
6.12	.479	-.042	.011	.075	1.230	.195	12.24	.992	-.019	.065	.082	1.208	.211	18.31	1.328	.103	.117	.040	1.381	.174
6.13	.487	-.085	.029	.126	1.099	.255	12.25	1.021	-.051	.083	.125	1.100	.259	18.31	1.345	.089	.124	.064	1.261	.215
														18.32	1.375	.072	.138	.093	1.172	.258
														18.32	1.400	.063	.151	.111	1.066	.272

[a]Propellers removed

TABLE IV.– LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10. TAIL HEIGHT, 0; FLAPS UP

(a) M = 0.082; R = 4,000,000; β = 26°; i_t = 0°

α	C_L	C_X	C_m	$T_{c_{eff}}$	J_{eff}	$C_{P_{eff}}$	α	C_L	C_X	C_m	$T_{c_{eff}}$	J_{eff}	$C_{P_{eff}}$	α	C_L	C_X	C_m	$T_{c_{eff}}$	J_{eff}	$C_{P_{eff}}$
[a]2.03	0.139	0.014	-0.070	- - -	- - -	- - -	[a]6.17	0.661	0.033	-0.189	- - -	- - -	- - -	[a]14.30	1.163	0.075	-0.308	- - -	- - -	- - -
2.03	.143	.020	-.067	-0.006	1.084	0.005	6.18	.678	.036	-.189	-0.006	1.081	0.005	14.30	1.185	.077	-.288	-0.005	1.078	0.010
2.03	.148	-.021	-.056	.043	.937	.072	6.19	.702	0	-.185	.042	.940	.050	14.32	1.233	.040	-.268	.042	.940	.039
2.04	.135	-.066	-.053	.104	.837	.060	6.19	.725	-.046	-.179	.096	.842	.080	14.33	1.281	0	-.245	.097	.840	.087
2.04	.129	-.133	-.052	.185	.737	.109	6.20	.773	-.113	-.177	.186	.738	.111	14.34	1.339	-.060	-.220	.175	.739	.114
2.04	.127	-.233	-.045	.311	.644	.134	6.20	.792	-.213	-.181	.314	.644	.137	14.36	1.411	-.196	-.187	.306	.643	.140
2.03	.099	- - -	-.031	.543	.544	.162	6.22	.841	-.383	-.178	.543	.545	.164	14.38	1.511	-.318	-.148	.538	.544	.168
2.03	.073	-.651	-.017	.842	.464	.186	6.23	.890	-.622	-.174	.843	.465	.188	14.41	1.629	-.530	-.118	.800	.469	.189
[a]4.08	.320	.018	-.132	- - -	- - -	- - -	[a]10.22	.836	.049	-.240	- - -	- - -	- - -	[a]16.33	1.392	.113	-.343	- - -	- - -	- - -
4.08	.328	.023	-.103	-.005	1.080	.004	10.22	.850	.049	-.219	-.006	1.082	.006	16.33	1.309	.116	-.320	-.008	1.086	.047
4.09	.335	-.017	-.097	.045	.937	.051	10.22	.879	.011	-.203	.046	.939	.021	16.36	1.399	.060	-.297	.042	.939	.063
4.09	.341	-.060	-.096	.100	.840	.079	10.24	.913	-.033	-.188	.102	.838	.083	16.37	1.494	.023	-.273	.098	.838	.091
4.10	.348	-.127	-.095	.188	.742	.108	10.24	.975	-.097	-.178	.185	.742	.110	16.38	1.516	-.034	-.243	.171	.742	.116
4.10	.351	-.233	-.102	.315	.642	.135	10.26	1.025	-.200	-.186	.319	.642	.137	16.40	1.602	-.186	-.203	.304	.643	.143
4.10	.357	-.412	-.102	.547	.543	.162	10.27	1.065	-.372	-.168	.538	.544	.166	16.41	1.661	-.194	-.179	.404	.543	.159
4.11	.359	-.647	-.098	.846	.465	.188	10.30	1.144	-.608	-.168	.844	.465	.189	16.43	1.786	-.283	-.152	.534	.543	.188
[a]6.13	.493	.024	-.160	- - -	- - -	- - -	[a]12.26	1.009	.079	-.271	- - -	- - -	- - -	16.47	1.858	-.491	-.104	.791	.470	.190
6.13	.502	.029	-.155	-.005	1.088	-.001	12.26	1.023	.082	-.252	-.005	1.078	.008	[a]18.34	1.390	.165	-.412	- - -	- - -	- - -
6.14	.520	-.009	-.153	.043	.940	.049	12.27	1.059	.055	-.234	.044	.942	.054	18.34	1.434	.170	-.361	-.006	1.081	.018
6.14	.536	-.055	-.154	.100	.840	.080	12.29	1.101	-.016	-.214	.101	.839	.083	18.35	1.449	.141	-.337	.041	.940	.066
6.15	.557	-.129	-.157	.188	.740	.107	12.30	1.147	-.080	-.195	.185	.741	.111	18.40	1.591	.068	-.296	.096	.840	.092
6.15	.580	-.236	-.163	.317	.643	.137	12.32	1.209	-.182	-.189	.316	.643	.139	18.42	1.668	.019	-.260	.171	.743	.112
6.16	.603	-.397	-.168	.548	.544	.164	12.33	1.287	-.349	-.175	.544	.543	.166	18.43	1.747	-.061	-.194	.305	.642	.145
6.17	.627	-.634	-.158	.844	.466	.187	12.36	1.380	-.554	-.144	.845	.468	.187	18.44	1.808	-.122	-.164	.400	.593	.152
														18.46	1.888	-.212	-.119	.527	.544	.173
														18.49	2.019	-.401	-.053	.779	.472	.192

[a]Propellers removed

TABLE IV.– LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10. TAIL HEIGHT, 0; FLAPS UP – Continued

(b) M = 0.082; R = 4,000,000; β = 26°; i_t = –4°

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]2.02	0.096	0.037	0.044	- - -	- - -	- - -
2.02	.105	.021	.038	-0.006	1.078	0
2.00	.100	-.002	.055	.045	.934	.058
2.00	.089	-.065	.077	.100	.837	.081
2.00	.079	-.135	.100	.191	.734	.110
2.00	.058	-.234	.123	.319	.640	.134
2.00	.035	-.415	.132	.520	.542	.166
2.00	0	-.647	.215	.833	.463	.186
[a]4.06	.174	.019	.007	- - -	- - -	- - -
4.07	.189	.022	.009	-.008	1.069	.005
4.06	.193	-.019	.023	.046	.934	.038
4.08	.193	-.054	.038	.104	.833	.081
4.08	.194	-.128	.058	.188	.739	.108
4.08	.189	-.233	.071	.323	.639	.134
4.08	.186	-.411	.108	.537	.540	.163
4.08	.178	-.633	.135	.835	.463	.187
[a]6.11	.460	.023	-.026	- - -	- - -	- - -
6.12	.468	.026	-.027	-.001	1.069	.006
6.12	.477	-.013	-.016	.046	.936	.032
6.13	.490	-.058	-.009	.104	.835	.079
6.13	.507	-.121	.001	.190	.738	.108
6.14	.523	-.225	.010	.324	.643	.135
6.14	.542	-.407	.032	.526	.540	.163
6.14	.558	-.640	.039	.837	.462	.184

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]8.15	0.828	0.031	-0.074	- - -	- - -	- - -
8.16	.840	.033	-.054	-0.003	1.071	0.007
8.17	.852	-.006	-.096	.046	.933	.033
8.17	.857	-.050	-.049	.102	.835	.080
8.18	.712	-.115	-.042	.188	.739	.109
8.19	.746	-.227	-.029	.327	.637	.134
8.20	.763	-.399	-.007	.525	.541	.165
8.21	.827	-.631	.020	.848	.462	.187
[a]10.20	.791	.041	-.106	- - -	- - -	- - -
10.21	.810	.044	-.096	-.003	1.074	.009
10.21	.841	.006	-.080	.046	.933	.034
10.22	.876	-.039	-.068	.105	.834	.083
10.23	.911	-.100	-.053	.189	.740	.113
10.24	.958	-.207	-.041	.319	.640	.138
10.25	1.021	-.374	-.024	.532	.541	.165
10.25	1.087	-.589	-.005	.835	.464	.188
[a]12.24	.951	.094	-.146	- - -	- - -	- - -
12.24	.982	.096	-.131	-.005	1.071	.012
12.26	1.021	.039	-.114	.043	.938	.037
12.26	1.060	-.023	-.094	.102	.838	.088
12.28	1.107	-.087	-.077	.182	.737	.122
12.28	1.189	-.186	-.053	.314	.639	.139
12.31	1.247	-.356	-.032	.543	.541	.166
12.34	1.345	-.575	-.002	.838	.464	.190

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]14.28	1.120	0.069	-0.177	- - -	- - -	- - -
14.29	1.142	.073	-.164	-0.006	1.084	0.008
14.30	1.191	.094	-.147	.043	.936	.027
14.31	1.241	-.002	-.124	.094	.843	.058
14.33	1.297	-.066	-.096	.176	.738	.114
14.34	1.372	-.188	-.067	.312	.641	.140
14.36	1.473	-.387	-.031	.534	.542	.167
14.40	1.588	-.543	.006	.818	.465	.188
[a]16.32	1.272	.089	-.216	- - -	- - -	- - -
16.32	1.292	.108	-.198	-.003	1.082	.014
16.34	1.337	.075	-.177	.042	.941	.038
16.35	1.410	.016	-.146	.094	.840	.090
16.37	1.461	-.038	-.127	.172	.741	.115
16.39	1.573	-.135	-.085	.320	.639	.142
16.40	1.632	-.203	-.067	.404	.542	.154
16.42	1.690	-.296	-.040	.532	.542	.170
16.44	1.788	-.447	-.007	.729	.463	.186
16.45	1.819	-.501	.005	.798	.467	.190
[a]18.32	1.331	.153	-.268	- - -	- - -	- - -
18.33	1.376	.163	-.224	-.001	1.080	.019
18.34	1.425	.130	-.199	.045	.936	.067
18.36	1.564	.061	-.159	.094	.840	.093
18.40	1.615	.016	-.116	.173	.739	.139
18.42	1.709	-.070	-.076	.300	.643	.143
18.43	1.773	-.136	-.046	.403	.591	.157
18.45	1.847	-.223	-.004	.532	.541	.171
18.48	1.969	-.412	.069	.781	.469	.194

[a]Propellers removed

(c) M = 0.082; R = 4,000,000; β = 26°; i_t = –8°

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]2.00	0.063	0.018	0.166	- - -	- - -	- - -
2.00	.066	.021	.132	-0.003	1.063	0.005
2.01	.098	-.018	.194	.050	.934	.050
2.00	.096	-.065	.222	.107	.825	.079
2.00	.087	-.132	.263	.194	.729	.108
2.00	.001	-.245	.316	.332	.633	.138
1.99	-.037	-.422	.389	.573	.534	.163
1.97	-.073	-.639	.469	.837	.465	.185
[a]4.03	.245	.019	.132	- - -	- - -	- - -
4.05	.251	.022	.134	-.002	1.063	.005
4.05	.250	-.018	.155	.051	.922	.031
4.05	.247	-.062	.185	-.108	.836	- - -
4.06	.242	-.128	.218	.195	.731	.107
4.05	.231	-.238	.268	.338	.631	.134
4.05	.211	-.422	.334	.583	.532	.161
4.05	.196	-.648	.391	.842	.465	.186
[a]6.10	.423	.023	.085	- - -	- - -	- - -
6.10	.433	.024	.103	0	1.076	.009
6.11	.439	-.015	.122	.051	.928	.042
6.11	.438	-.061	.145	.110	.825	.080
6.11	.430	-.128	.178	.201	.727	.107
6.11	.403	-.234	.203	.337	.632	.135
6.11	.370	-.408	.236	.537	.541	.164
6.11	.474	-.629	.302	.844	.469	.184

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]8.14	0.292	0.029	0.045	- - -	- - -	- - -
8.15	.297	.031	.063	-0.001	1.077	0.011
8.15	.324	-.007	.079	.050	.934	.038
8.16	.345	-.054	.096	.105	.835	.081
8.16	.369	-.117	.122	.193	.730	.109
8.17	.395	-.220	.135	.330	.640	.136
8.18	.727	-.391	.177	.546	.543	.163
8.18	.736	-.620	.236	.841	.465	.186
[a]10.19	.758	.038	.008	- - -	- - -	- - -
10.19	.776	.041	.027	-.003	1.078	.006
10.20	.805	.003	.043	.047	.934	.038
10.21	.838	-.041	.059	.102	.835	.084
10.22	.865	-.099	.075	.179	.743	.108
10.22	.927	-.209	.099	.316	.641	.138
10.24	.970	-.361	.136	.542	.544	.168
10.25	1.020	-.608	.189	.850	.467	.189
[a]12.23	.923	.049	-.087	- - -	- - -	- - -
12.23	.942	.052	-.004	-.003	1.074	.011
12.24	.981	.013	.012	.046	.936	.037
12.25	1.023	-.029	.029	.098	.837	.083
12.26	1.069	-.091	.051	.176	.736	.113
12.28	1.129	-.197	.082	.309	.641	.141
12.29	1.202	-.362	.116	.536	.543	.167
12.32	1.280	-.592	.159	.814	.467	.186

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]14.27	1.089	0.064	-0.068	- - -	- - -	- - -
14.27	1.104	.065	-.041	-0.005	1.074	0.012
14.28	1.154	.089	-.020	.045	.936	.029
14.30	1.205	-.013	.002	.097	.837	.057
14.31	1.257	-.074	.024	.173	.740	.115
14.32	1.333	-.178	.057	.307	.641	.142
14.33	1.429	-.334	.096	.534	.543	.168
14.38	1.530	-.535	.141	.804	.468	.186
[a]16.29	1.206	.102	-.105	- - -	- - -	- - -
16.30	1.228	.105	-.073	-.003	1.073	.029
16.32	1.322	.047	-.052	.043	.937	.061
16.34	1.375	.009	-.030	.097	.837	.091
16.35	1.438	-.050	-.008	.179	.739	.118
16.37	1.535	-.150	.033	.314	.638	.146
16.40	1.631	-.301	.080	.529	.544	.169
16.43	1.714	-.402	.105	.865	.501	.180
16.44	1.773	-.500	.128	.796	.469	.189
[a]18.31	1.305	.147	-.151	- - -	- - -	- - -
18.32	1.338	.154	-.093	-.004	1.072	.024
18.32	1.359	.119	-.088	.043	.938	.071
18.37	1.526	.050	-.046	.098	.837	.097
18.38	1.578	.005	.007	.176	.738	.122
18.40	1.679	-.084	.033	.315	.637	.146
18.43	1.808	-.228	.110	.532	.543	.170
18.44	1.877	-.317	.147	.682	.501	.178
18.46	1.939	-.408	.173	.779	.472	.188

[a]Propellers removed

TABLE IV.– LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10. TAIL HEIGHT, 0; FLAPS UP – Concluded

(d) $M = 0.123$; $R = 4{,}000{,}000$; $\beta = 31^\circ$; $i_t = -4^\circ$

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$\eta_{p_{av}}$	α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$\eta_{p_{av}}$	α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$\eta_{p_{av}}$
[a]2.03	0.116	0.017	0.054	---	---	---	[a]8.16	0.629	0.020	-0.020	---	---	---	[a]14.28	1.126	0.033	-0.178	---	---	---
2.03	.116	.023	.054	-0.007	1.345	-0.011	8.16	.642	.037	-.032	-0.007	1.346	-0.011	14.28	1.143	.073	-.155	-0.005	1.338	0.004
2.03	.114	.007	.057	.014	1.247	.024	8.17	.652	.021	-.047	.013	1.249	.024	14.29	1.162	.059	-.147	.016	1.246	.046
2.03	.109	-.016	.070	.043	1.144	.079	8.17	.656	-.001	-.060	.043	1.143	.078	14.29	1.192	.038	-.135	.043	1.143	.086
2.03	.109	-.043	.083	.081	1.042	.116	8.17	.691	-.043	-.058	.101	.998	.130	14.31	1.235	.014	-.119	.078	1.049	.122
2.03	.096	-.088	.100	.131	.946	.150	8.18	.704	-.071	-.030	.133	.941	.159	14.32	1.255	-.025	-.101	.130	.948	.159
2.02	.084	-.141	.121	.205	.848	.184	8.19	.734	-.126	-.023	.207	.844	.184	14.33	1.316	-.077	-.076	.203	.843	.192
2.02	.071	-.207	.146	.318	.746	.220	8.19	.749	-.211	-.011	.337	.746	.221	14.34	1.379	-.156	-.049	.311	.746	.227
2.01	.053	-.341	.178	.470	.652	.252	8.20	.778	-.383	.008	.464	.652	.254	14.36	1.446	-.254	-.022	.440	.655	.260
[a]4.07	.254	.018	.018	---	---	---	[a]10.20	.804	.040	-.075	---	---	---	[a]16.31	1.253	.107	-.214	---	---	---
4.07	.256	.026	.019	-.006	1.348	-.012	10.21	.809	.045	-.052	-.006	1.338	-.008	16.31	1.268	.113	-.192	-.008	1.343	.012
4.07	.257	.007	.026	.014	1.239	.026	10.20	.820	.026	-.077	.015	1.249	.041	16.31	1.288	.099	-.178	.015	1.246	.033
4.07	.250	-.014	.036	.042	1.141	.078	10.21	.839	.009	-.069	.043	1.141	.081	16.32	1.311	.085	-.155	.043	1.142	.055
4.07	.251	-.043	.043	.079	1.043	.113	10.22	.860	-.018	-.059	.079	1.046	.118	16.34	1.367	.058	-.133	.078	1.050	.127
4.08	.251	-.084	.056	.130	.944	.150	10.23	.890	-.056	-.048	.130	.946	.153	16.36	1.446	0	-.134	.131	.943	.164
4.08	.252	-.140	.069	.205	.847	.184	10.23	.907	-.087	-.042	.172	.846	.171	16.38	1.506	-.051	-.107	.202	.844	.197
4.08	.252	-.230	.090	.317	.745	.221	10.24	.962	-.201	-.021	.343	.742	.221	16.39	1.578	-.124	-.073	.306	.748	.230
4.08	.237	-.341	.112	.460	.652	.252	10.25	1.005	-.307	-.009	.464	.652	.254	16.40	1.653	-.221	-.043	.436	.655	.257
[a]6.12	.468	.024	-.022	---	---	---	[a]12.24	.966	.052	-.134	---	---	---	[a]18.33	1.365	.149	-.229	---	---	---
6.12	.468	.030	-.017	-.007	1.344	-.011	12.24	.977	.058	-.119	-.005	1.339	0	18.32	1.351	.126	-.228	-.001	1.343	.019
6.12	.476	.013	-.011	.012	1.247	.024	12.25	.992	.042	-.111	.015	1.248	.041	18.32	1.377	.153	-.216	.029	1.245	.036
6.12	.469	-.008	-.003	.040	1.145	.074	12.26	1.015	.022	-.100	.042	1.143	.083	18.34	1.413	.136	-.205	.046	1.142	.100
6.13	.454	-.055	.006	.079	1.041	.115	12.26	1.047	-.005	-.086	.077	1.049	.118	18.34	1.454	.119	-.192	.080	1.047	.136
6.13	.503	-.078	.013	.129	.948	.150	12.27	1.081	-.043	-.071	.130	.945	.155	18.36	1.518	.084	-.160	.130	.944	.169
6.14	.516	-.133	.020	.204	.845	.185	12.28	1.120	-.097	-.053	.205	.845	.189	18.39	1.628	.040	-.131	.200	.846	.201
6.14	.530	-.224	.031	.317	.744	.221	12.29	1.172	-.176	-.028	.314	.747	.223	18.42	1.722	-.051	-.090	.306	.747	.234
6.14	.520	-.337	.045	.459	.651	.253	12.30	1.228	-.287	-.013	.459	.653	.255	18.44	1.800	-.148	-.016	.421	.672	.261

[a]Propellers removed

TABLE V.– LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10. TAIL HEIGHT, 0.05 b/2; FLAPS UP

(a) $M = 0.082$; $R = 4{,}000{,}000$; $\beta = 21^\circ$; $i_t = -4^\circ$

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$\eta_{p_{av}}$	α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$\eta_{p_{av}}$	α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$\eta_{p_{av}}$
[a]2.02	0.099	0.017	0.071	---	---	---	[a]6.16	0.626	0.031	-0.046	---	---	---	[a]14.28	1.120	0.069	-0.153	---	---	---
2.04	.098	.027	.071	-0.008	0.860	0.004	6.16	.629	.042	-.029	-0.011	0.865	0	14.28	1.127	.073	-.136	0.005	0.864	0.004
2.04	.098	-.004	.069	.021	.788	.022	6.16	.643	---	-.017	.035	.790	.020	14.29	1.158	.046	-.127	.034	.786	.025
2.03	.086	-.058	.105	.057	.697	.044	6.17	.668	-.043	.004	.058	.694	.044	14.31	1.206	-.003	-.114	.059	.694	.048
2.02	.069	-.152	.129	.128	.596	.066	6.18	.697	-.137	.032	.123	.597	.068	14.33	1.306	-.098	-.105	.126	.591	.069
2.02	.043	-.328	.167	.206	.495	.088	6.19	.737	-.307	.074	.195	.495	.090	14.35	1.464	-.252	-.090	.112	.495	.092
2.01	-.012	-.649	.250	.289	.400	.112	6.19	.779	-.657	.129	.289	.400	.113	14.38	1.593	-.550	-.049	.241	.400	.114
[a]4.06	.273	.018	.029	---	---	---	[a]10.20	.787	.041	-.088	---	---	---	[a]16.31	1.241	.107	-.187	---	---	---
4.07	.278	.026	.041	-.009	.862	.002	10.20	.796	.049	-.066	-.008	.867	.002	16.30	1.247	.110	-.171	0	.860	.007
4.07	.281	.002	.055	.027	.788	.021	10.20	.818	.020	-.056	.031	.788	.022	16.33	1.268	.066	-.161	.026	.788	.025
4.07	.281	-.035	.073	.055	.695	.043	10.22	.858	-.052	-.043	.058	.695	.045	16.36	1.289	.016	-.149	.104	.694	.049
4.07	.277	-.134	.108	.118	.594	.067	10.23	.906	-.121	-.028	.123	.596	.068	16.37	1.321	-.052	-.130	.182	.595	.071
4.07	.264	-.322	.163	.197	.496	.089	10.24	.974	-.286	-.009	.193	.498	.089	16.40	1.424	-.216	-.110	.298	.497	.092
4.07	.241	-.635	.255	.282	.399	.112	10.28	1.085	-.612	.047	.283	.400	.113	16.44	1.615	-.520	-.063	.387	.400	.116
[a]6.11	.455	.023	-.010	---	---	---	[a]12.24	.996	.053	-.121	---	---	---	[a]18.33	1.347	.151	-.246	---	---	---
6.11	.455	.031	.007	-.010	.863	0	12.24	.994	.060	-.106	-.010	.869	.002	18.32	1.346	.189	-.193	0	.869	.010
6.11	.454	.003	.017	.023	.785	.021	12.25	.992	.031	-.096	.031	.786	.024	18.33	1.361	.141	-.189	.038	.788	.029
6.12	.452	-.069	.041	.111	.673	.046	12.26	1.042	-.019	-.067	.058	.694	.045	18.36	1.428	.095	-.169	.127	.699	.051
6.13	.456	-.145	.076	.212	.558	.067	12.28	1.120	-.109	-.032	.217	.596	.068	18.40	1.637	-.017	-.124	.221	.597	.073
6.14	.502	-.311	.189	.443	.497	.088	12.30	1.210	-.272	-.022	.438	.497	.091	18.43	1.776	-.181	-.092	.442	.497	.094
6.14	.508	-.635	.313	.874	.400	.112	12.32	1.331	-.586	-.020	.837	.400	.114	18.48	2.011	-.443	-.058	.893	.400	.116

[a]Propellers removed

TABLE V.– LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10. TAIL HEIGHT, 0.05 b/2; FLAPS UP – Continued

(b) M = 0.082; R = 4,000,000; β = 31°; i_t = –4°

α	C_L	C_X	C_m	$T_{c_{BV}}$	J_{BV}	$C_{P_{BV}}$
[a]2.02	0.099	0.017	0.071	---	---	---
2.01	.091	.021	.064	-0.005	1.339	-0.004
2.01	.088	-.007	.079	.025	1.190	.057
2.02	.081	-.048	.100	.082	1.040	.119
2.01	.064	-.147	.133	.208	.840	.185
2.01	.025	-.299	.186	.401	.689	.235
1.99	-.006	-.354	.250	.716	.367	.281
[a]4.06	.273	.018	.029	---	---	---
4.07	.276	.022	.027	-.005	1.336	-.003
4.07	.279	-.005	.046	.030	1.185	.050
4.07	.279	-.051	.064	.057	1.026	.120
4.07	.274	-.154	.109	.218	.827	.187
4.07	.259	-.294	.166	.398	.690	.231
4.07	.244	-.530	.248	.707	.569	.282
[a]6.11	.439	.025	-.010	---	---	---
6.11	.437	.025	-.006	-.003	1.328	0
6.11	.434	.001	.011	.028	1.187	.059
6.12	.475	-.043	.028	.083	1.033	.121
6.13	.489	-.147	.075	.217	.831	.188
6.12	.495	-.297	.137	.406	.685	.235
6.13	.507	-.521	.181	.708	.570	.281

α	C_L	C_X	C_m	$T_{c_{BV}}$	J_{BV}	$C_{P_{BV}}$
[a]8.16	0.626	0.031	-0.046	---	---	---
8.16	.625	.034	-.036	-0.005	1.340	-0.003
8.15	.622	.029	-.026	.027	1.195	.060
8.16	.622	-.034	-.010	.083	1.038	.119
8.18	.702	-.139	.025	.219	.827	.189
8.18	.732	-.273	.065	.395	.693	.232
8.19	.777	-.515	.115	.712	.568	.285
[a]10.20	.787	.041	-.082	---	---	---
10.20	.796	.043	-.073	-.005	1.343	-.004
10.20	.819	.019	-.066	.026	1.197	.062
10.22	.855	-.022	-.051	.062	1.036	.120
10.23	.914	-.124	-.035	.213	.831	.191
10.25	.975	-.258	-.014	.390	.694	.235
10.25	1.039	-.451	.052	.702	.569	.282
[a]12.24	.956	.073	-.121	---	---	---
12.24	.957	.056	-.109	-.005	1.343	-.001
12.25	.995	.032	-.103	.028	1.197	.063
12.26	1.047	-.007	-.120	.082	1.037	.124
12.28	1.123	-.103	-.088	.207	.834	.190
12.31	1.228	-.241	-.052	.398	.690	.236
12.33	1.309	-.466	-.025	.696	.569	.282

α	C_L	C_X	C_m	$T_{c_{BV}}$	J_{BV}	$C_{P_{BV}}$
[a]14.28	1.120	0.069	-0.157	---	---	---
14.29	1.127	.071	-.144	0.005	1.330	0.007
14.29	1.165	.045	-.132	.032	1.188	.073
14.30	1.222	.009	-.124	.083	1.035	.129
14.33	1.319	-.084	-.107	.209	.833	.196
14.35	1.432	-.225	-.088	.403	.686	.244
14.38	1.549	-.432	-.052	.677	.571	.284
[a]16.31	1.241	.107	-.197	---	---	---
16.31	1.266	.103	-.168	-.001	1.348	.010
16.33	1.314	.075	-.164	.022	1.241	.055
16.33	1.348	.055	-.162	.062	1.141	.093
16.35	1.389	.030	-.149	.082	1.033	.134
16.36	1.472	-.033	-.151	.173	.878	.184
16.39	1.578	-.128	-.137	.301	.744	.227
16.41	1.676	-.258	-.086	.480	.645	.262
16.43	1.776	-.389	-.056	.656	.573	.285
[a]18.33	1.347	.151	-.246	---	---	---
18.32	1.340	.161	-.205	-.004	1.354	.023
18.32	1.373	.150	-.192	.022	1.243	.063
18.33	1.393	.133	-.188	.059	1.150	.099
18.35	1.458	.110	-.167	.074	1.052	.134
18.37	1.547	.093	-.145	.165	.883	.184
18.41	1.714	-.062	-.082	.296	.747	.230
18.44	1.828	-.175	-.055	.499	.648	.263
18.47	1.948	-.310	-.013	.696	.574	.287

[a]Propellers removed

(c) M = 0.123; R = 4,000,000; β = 21°; i_t = –4°

α	C_L	C_X	C_m	$T_{c_{BV}}$	J_{BV}	$C_{P_{BV}}$
[a]2.02	0.112	0.017	0.080	---	---	---
2.02	.093	.027	.070	-0.021	0.900	-0.013
2.02	.097	.020	.081	.001	.845	.004
2.02	.095	-.023	.096	.055	.749	.030
2.02	.087	-.058	.105	.099	.696	.044
2.02	.080	-.099	.120	.156	.647	.055
2.02	.074	-.156	.132	.219	.598	.068
[a]4.07	.294	.019	.040	---	---	---
4.07	.279	.041	.031	-.019	.906	-.014
4.07	.282	.020	.044	.001	.842	.005
4.07	.281	-.015	.057	.045	.738	.027
4.07	.283	-.058	.073	.094	.695	.044
4.07	.283	-.096	.088	.147	.649	.055
4.07	.282	-.156	.103	.221	.596	.068
[a]6.11	.466	.023	-.002	---	---	---
6.11	.454	.043	.001	-.019	.897	-.011
6.11	.458	.025	.007	-.001	.849	.004
6.12	.478	-.009	.024	.046	.760	.027
6.12	.476	-.049	.037	.091	.701	.043
6.12	.484	-.094	.056	.149	.647	.056
6.13	.489	-.149	.070	.225	.593	.068

α	C_L	C_X	C_m	$T_{c_{BV}}$	J_{BV}	$C_{P_{BV}}$
[a]8.16	0.637	0.030	-0.096	---	---	---
8.15	.629	.031	-.034	-0.019	0.901	-0.011
8.16	.633	.023	-.065	-.001	.846	.005
8.16	.649	-.001	-.015	.048	.766	.026
8.17	.670	-.049	.001	.098	.695	.043
8.17	.688	-.082	.025	.151	.649	.056
8.17	.705	-.140	.025	.227	.597	.068
[a]10.20	.798	.040	-.065	---	---	---
10.20	.789	.051	-.037	-.014	.903	-.012
10.20	.799	.044	-.054	.003	.849	.005
10.21	.828	.004	-.032	.055	.737	.029
10.22	.879	-.051	-.046	.101	.699	.045
10.22	.886	-.076	-.039	.161	.645	.058
10.23	.907	-.120	-.032	.226	.603	.067
[a]12.24	.963	.051	-.110	---	---	---
12.24	.962	.072	-.105	-.013	.896	-.009
12.25	.972	.059	-.100	.003	.845	.007
12.25	1.013	.013	-.091	.059	.750	.033
12.26	1.046	-.019	-.087	.106	.694	.045
12.27	1.079	-.058	-.087	.157	.648	.057
12.28	1.122	-.110	-.079	.225	.598	.071

α	C_L	C_X	C_m	$T_{c_{BV}}$	J_{BV}	$C_{P_{BV}}$
[a]14.29	1.196	0.067	-0.147	---	---	---
14.28	1.218	.066	-.139	-0.018	0.900	-0.009
14.28	1.241	.058	-.130	.004	.840	.009
14.30	1.287	.030	-.119	.057	.751	.024
14.31	1.224	.001	-.118	.098	.701	.047
14.33	1.274	-.040	-.108	.157	.647	.060
14.34	1.321	-.089	-.101	.228	.599	.071
[a]16.31	1.250	.104	-.184	---	---	---
16.30	1.227	.133	-.174	-.018	.903	-.007
16.31	1.277	.101	-.164	.005	.846	.011
16.34	1.351	.052	-.151	.056	.737	.035
16.35	1.399	.016	-.140	.105	.695	.050
16.36	1.439	-.017	-.133	.151	.652	.061
16.38	1.500	-.069	-.120	.229	.595	.074
[a]18.33	1.354	.149	-.237	---	---	---
18.32	1.332	.175	-.204	-.021	.900	-.004
18.32	1.351	.160	-.192	.011	.841	.015
18.34	1.410	.133	-.182	.055	.766	.035
18.36	1.475	.098	-.162	.105	.700	.052
18.38	1.534	.065	-.150	.157	.650	.063
18.40	1.602	.016	-.122	.227	.599	.075

[a]Propellers removed

TABLE V.– LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10. TAIL HEIGHT, 0.05 b/2; FLAPS UP – Continued

(d) M = 0.123; R = 4,000,000; β = 31°; i_t = –4°

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$	α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$	α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]2.02	0.112	0.017	0.080	---	---	---	[a]8.16	0.637	0.030	-0.036	---	---	---	[a]14.29	1.186	0.067	-0.147	---	---	---
2.02	.106	.023	.071	-0.007	1.346	-0.008	8.16	.632	.039	-.028	-0.002	1.333	-0.003	14.28	1.133	.071	-.187	-0.003	1.333	0.011
2.03	.102	---	.077	.001	1.252	.034	8.16	.642	.019	-.021	.016	1.236	.021	14.29	1.196	.056	-.122	.020	1.235	.052
2.03	.098	-.014	.069	.041	1.149	.076	8.16	.653	.001	-.015	.043	1.140	.079	14.29	1.181	.039	-.117	.043	1.149	.087
2.02	.092	-.044	.101	.080	1.044	.119	8.17	.669	-.030	-.001	.080	1.042	.118	14.30	1.223	-.009	-.107	.084	1.037	.187
2.02	.086	-.083	.115	.133	.943	.152	8.17	.687	-.071	.011	.134	.940	.153	14.31	1.265	-.026	-.105	.134	.939	.188
2.03	.076	-.141	.135	.205	.847	.183	8.18	.709	-.126	.032	.207	.844	.184	14.33	1.322	-.078	-.096	.203	.841	.184
2.02	.061	-.213	.171	.323	.743	.221	8.18	.738	-.217	.067	.323	.742	.223	14.35	1.389	-.159	-.057	.316	.742	.229
2.01	.040	-.341	.232	.465	.663	.252	8.19	.748	-.319	.083	.460	.664	.251	14.36	1.457	-.259	-.063	.453	.662	.258
[a]4.07	.094	.019	.040	---	---	---	[a]10.20	.798	.040	-.065	---	---	---	[a]16.31	1.250	.104	-.189	---	---	---
4.07	.087	.027	.023	-.007	1.359	.018	10.19	.808	.047	-.068	-.006	1.349	-.005	16.31	1.271	.104	-.156	-.001	1.342	.012
4.07	.086	.007	.046	.014	1.239	.037	10.20	.817	.029	-.056	.018	1.233	.044	16.32	1.261	.098	-.152	.020	1.239	.056
4.07	.087	-.013	.055	.043	1.138	.077	10.21	.833	.007	-.052	.045	1.137	.065	16.34	1.325	.057	-.143	.050	1.133	.096
4.07	.089	-.044	.070	.080	1.041	.125	10.22	.856	-.019	-.047	.080	1.041	.118	16.35	1.387	.032	-.137	.082	1.037	.131
4.08	.089	-.084	.081	.130	.943	.150	10.22	.883	-.058	-.039	.131	.942	.152	16.37	1.439	-.005	-.128	.135	.934	.167
4.08	.088	-.142	.106	.207	.843	.184	10.23	.915	-.114	-.028	.203	.844	.186	16.37	1.497	-.051	-.114	.204	.842	.196
4.07	.079	-.231	.147	.317	.744	.219	10.24	.958	-.204	-.014	.325	.740	.225	16.39	1.582	-.132	-.099	.315	.740	.239
4.07	.070	-.338	.181	.454	.664	.250	10.25	.996	-.309	.005	.466	.661	.253	16.41	1.666	-.221	-.083	.437	.666	.260
[a]6.11	.166	.023	-.002	---	---	---	[a]12.24	.963	.051	-.110	---	---	---	[a]18.33	1.354	.149	-.235	---	---	---
6.11	.161	.029	0	-.007	1.342	-.007	12.23	.964	.060	-.099	-.008	1.363	-.009	18.32	1.351	.161	-.188	.001	1.333	.026
6.12	.165	.014	.007	.011	1.238	.034	12.25	.990	.039	-.095	.020	1.237	.052	18.32	1.358	.150	-.186	.022	1.238	.063
6.12	.171	-.007	.018	.039	1.147	.076	12.25	1.012	.021	-.091	.042	1.138	.084	18.34	1.409	.133	-.175	.048	1.135	.106
6.12	.180	-.039	.031	.081	1.037	.117	12.26	1.047	-.006	-.088	.088	1.039	.123	18.35	1.464	.111	-.151	.083	1.040	.137
6.13	.188	-.081	.049	.132	.939	.153	12.28	1.085	-.044	-.086	.131	.942	.159	18.36	1.506	.083	-.141	.133	.940	.170
6.13	.197	-.135	.076	.205	.845	.183	12.28	1.128	-.097	-.078	.205	.844	.190	18.40	1.637	.005	-.095	.206	.840	.201
6.13	.200	-.228	.117	.320	.746	.222	12.30	1.189	-.181	-.068	.318	.743	.227	18.42	1.729	-.068	-.078	.315	.740	.235
6.12	.201	-.335	.156	.459	.661	.252	12.31	1.239	-.266	-.061	.458	.662	.257	18.44	1.807	-.147	-.046	.456	.669	.262

[a]Propellers removed

(e) M = 0.123; R = 4,000,000; β = 36°; i_t = –4°

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$	α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$	α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]2.02	0.112	0.017	0.080	---	---	---	[a]8.16	0.637	0.030	-0.036	---	---	---	[a]14.29	1.186	0.067	-0.147	---	---	---
2.02	.100	.019	.067	-0.006	1.626	0.007	8.16	.635	.032	-.037	-0.004	1.610	0.010	14.28	1.198	.076	-.165	-0.007	1.643	0.019
2.02	.093	-.003	.082	.088	1.440	.104	8.17	.645	.010	-.016	.021	1.446	.102	14.29	1.164	.049	-.117	.025	1.439	.115
2.02	.089	-.029	.097	.052	1.302	.161	8.17	.659	-.017	-.009	.056	1.268	.169	14.30	1.196	.087	-.109	.075	1.296	.178
2.02	.079	-.084	.118	.124	1.098	.243	8.17	.685	-.071	.016	.131	1.094	.246	14.32	1.256	-.016	-.097	.120	1.305	.251
2.01	.067	-.261	.149	.213	.942	.308	8.17	.699	-.142	.034	.212	.944	.308	14.33	1.328	-.084	-.087	.205	.950	.315
2.01	.049	-.373	.195	.368	.800	.370	8.19	.738	-.257	.073	.362	.803	.371	14.36	1.427	-.188	-.069	.356	.801	.378
[a]4.07	.094	.019	.040	---	---	---	[a]10.20	.798	.040	-.066	---	---	---	[a]16.31	1.230	.104	-.185	---	---	---
4.07	.084	.021	.032	-.007	1.630	.001	10.20	.803	.042	-.060	-.004	1.626	.020	16.31	1.280	.119	-.151	-.004	1.639	.089
4.07	.083	-.002	.047	.021	1.449	.101	10.21	.815	.020	-.054	.028	1.448	.104	16.32	1.299	.091	-.141	.020	1.466	.112
4.07	.087	-.027	.061	.053	1.299	.163	10.21	.842	-.003	-.049	.077	1.289	.173	16.31	---	.083	---	.034	1.385	.150
4.07	.085	-.081	.085	.123	1.101	.243	10.22	.883	-.055	-.033	.125	1.098	.245	16.32	1.324	.073	-.134	.052	1.305	.181
4.06	.089	-.154	.117	.209	.949	.303	10.24	.925	-.131	-.017	.218	.939	.313	16.35	1.421	.014	-.128	.166	1.133	.246
4.05	.071	-.275	.176	.366	.802	.369	10.25	.979	-.240	.008	.369	.799	---	16.37	1.489	-.036	-.105	.273	.993	.302
														16.39	1.571	-.086	-.094	.347	.893	.344
[a]6.11	.166	.023	-.002	---	---	---	[a]12.24	.963	.051	-.110	---	---	---	16.40	1.616	-.136	-.079	.339	.807	.376
6.11	.162	.026	.003	-.007	1.631	-.022	12.24	.964	.054	-.093	-.005	1.638	.012							
6.12	.170	.001	.016	.025	1.435	.104	12.25	.993	.032	-.088	.025	1.439	.111	[a]18.33	1.354	.149	-.235	---	---	---
6.12	.172	-.022	.027	.053	1.300	.159	12.26	1.024	.011	-.083	.054	1.308	.170	18.32	1.338	.158	-.182	.003	1.693	.060
6.13	.166	-.077	.038	.126	1.096	.244	12.27	1.083	-.040	-.077	.123	1.099	.249	18.32	1.354	.148	-.172	.016	1.494	.113
6.13	.164	-.152	.058	.214	.944	.308	12.29	1.135	-.105	-.067	.210	.950	.311	18.33	1.357	.137	-.167	.034	1.325	.129
6.13	.503	-.269	.141	.367	.801	.372	12.31	1.210	-.219	-.046	.359	.805	.374	18.34	1.430	.122	-.169	.059	1.277	.203
														18.35	1.477	.099	-.139	.103	1.135	.260
														18.37	1.564	.058	-.118	.167	.990	.311
														18.40	1.658	.005	-.069	.241	.890	.346
														18.42	1.739	-.064	-.059	.326	.800	.379

[a]Propellers removed

TABLE V.– LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10. TAIL HEIGHT, 0.05 b/2; FLAPS UP – Continued

(f) $M = 0.123$; $R = 6{,}000{,}000$; $\beta = 31^\circ$; $i_t = -4^\circ$

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]2.02	0.101	0.017	0.084	- - -	- - -	- - -
2.02	.098	.020	.077	-0.004	1.330	0
2.02	.093	-.005	.091	.027	1.183	.057
2.02	.086	-.044	.107	.083	1.030	- - -
2.02	.074	-.113	.129	.166	.890	.166
2.02	.055	-.223	.170	.309	.750	.224
[a]4.07	.284	.019	.041	- - -	- - -	- - -
4.07	.283	.021	.037	-.003	1.330	-.004
4.07	.287	-.001	.052	.027	1.190	.050
4.07	.286	-.042	.069	.080	1.039	.109
4.08	.286	-.111	.095	.171	.887	.164
4.07	.277	-.224	.141	.314	.748	.216
[a]6.11	.461	.023	-.002	- - -	- - -	- - -
6.11	.459	.026	.003	-.002	1.332	-.006
6.12	.467	.003	.015	.029	1.185	.053
6.12	.478	-.039	.034	.084	1.032	.110
6.13	.488	-.107	.063	.174	.885	.165
6.12	.496	-.219	.110	.314	.747	.217
[a]8.16	0.629	0.031	-0.041	- - -	- - -	- - -
8.16	.629	.033	-.029	-0.003	1.326	-0.001
8.15	.643	.011	-.021	.026	1.189	.054
8.16	.662	-.032	-.004	.065	1.026	.112
8.17	.688	-.100	.019	.170	.886	.167
8.18	.721	-.210	.053	.314	.747	.219
[a]10.20	.796	.040	-.075	- - -	- - -	- - -
10.19	.799	.043	-.064	-.004	1.334	-.002
10.20	.822	.018	-.056	.029	1.180	.059
10.21	.852	-.020	-.045	.081	1.036	.113
10.22	.896	-.087	-.036	.166	.891	.171
10.24	.947	-.194	-.017	.311	.749	.219
[a]12.24	.963	.052	-.117	- - -	- - -	- - -
12.24	.969	.054	-.102	-.001	1.326	.004
12.25	.998	.030	-.058	.031	1.181	.063
12.26	1.046	-.006	-.091	.082	1.035	.115
12.27	1.097	-.068	-.088	.166	.890	.170
12.29	1.167	-.172	-.072	.307	.751	.221
[a]14.28	1.188	0.067	-0.157	- - -	- - -	- - -
14.28	1.189	.070	-.136	-0.005	1.346	0
14.28	1.164	.047	-.127	.029	1.192	.052
14.30	1.216	.008	-.118	.082	1.036	.122
14.32	1.285	-.051	-.107	.168	.888	.175
14.34	1.373	-.146	-.092	.296	.755	.221
[a]16.30	1.231	.110	-.197	- - -	- - -	- - -
16.30	1.245	.106	-.164	-.006	1.365	-.008
16.31	1.266	.095	-.155	.020	1.236	.053
16.32	1.317	.074	-.150	.046	1.136	.090
16.33	1.330	.045	-.137	.083	1.034	.128
16.35	1.430	-.005	-.129	.135	.936	.161
16.37	1.489	-.055	-.118	.208	.839	.196
16.38	1.561	-.116	-.105	.290	.757	.223
[a]18.32	1.337	.151	-.231	- - -	- - -	- - -
18.30	1.343	.155	-.202	-.002	1.365	.007
18.30	1.371	.135	-.190	.025	1.228	.065
18.34	1.414	.117	-.179	.049	1.133	.099
18.34	1.450	.099	-.167	.081	1.042	.133
18.35	1.506	.066	- - -	.134	.938	.167
18.38	1.594	.017	-.139	.205	.842	.200
18.42	1.729	-.058	-.129	.283	.763	.228

[a]Propellers removed

(g) $M = 0.165$; $R = 8{,}000{,}000$; $\beta = 31^\circ$; $i_t = -4^\circ$

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]2.02	0.098	0.017	0.089	- - -	- - -	- - -
2.02	.095	.037	.081	-0.004	1.344	-0.006
2.02	.092	.007	.088	.012	1.246	.033
2.02	.091	-.014	.099	.038	1.146	.072
2.02	.085	-.044	.112	.079	1.044	.112
2.02	.079	-.082	.124	.127	.954	.148
2.02	.076	-.114	.132	.168	.896	.170
[a]4.07	.282	.018	.043	- - -	- - -	- - -
4.07	.279	.022	.040	-.007	1.363	-.007
4.07	.280	.009	.047	.009	1.268	.032
4.07	.280	-.012	.058	.038	1.153	.073
4.07	.282	-.042	.069	.075	1.060	.113
4.07	.282	-.083	.085	.126	.962	.151
4.07	.279	-.113	.095	.164	.907	.175
[a]6.11	.456	.023	-.002	- - -	- - -	- - -
6.11	.453	.024	.003	-.008	1.349	-.001
6.11	.457	.014	.009	.010	1.267	.030
6.12	.465	-.008	.018	.039	1.154	.072
6.12	.471	-.036	.031	.077	1.057	.111
6.12	.478	-.074	.047	.125	.965	.147
6.13	.485	-.109	.061	.171	.900	.173
[a]8.16	0.630	0.030	-0.042	- - -	- - -	- - -
8.15	.623	.033	-.030	-0.008	1.356	-0.006
8.16	.631	.019	-.025	.010	1.282	.036
8.15	.643	0	-.020	.037	1.155	.073
8.16	.658	-.028	-.007	.074	1.058	.111
8.17	.673	-.067	.006	.123	.962	.149
8.17	.686	-.099	.018	.164	.902	.173
[a]10.20	.800	.039	-.080	- - -	- - -	- - -
10.20	.795	.042	-.064	-.003	1.348	-.002
10.20	.807	.028	-.061	.015	1.254	.036
10.20	.822	.011	-.057	.036	1.166	.072
10.21	.846	-.018	-.049	.075	1.057	.114
10.22	.872	-.057	-.040	.125	.959	.153
10.22	.889	-.086	-.037	.163	.904	.175
[a]12.25	.967	.050	-.123	- - -	- - -	- - -
12.24	.967	.054	-.102	-.003	1.352	-.002
12.24	.980	.042	-.099	.018	1.267	.038
12.25	1.008	.020	-.094	.043	1.152	.081
12.26	1.035	-.004	-.094	.072	1.067	.116
12.27	1.074	-.042	-.090	.125	.959	.155
12.28	1.093	-.063	-.088	.157	.913	- - -
[a]14.29	1.198	0.065	-0.166	- - -	- - -	- - -
14.28	1.195	.068	-.137	-0.002	1.340	0.008
14.29	1.145	.053	-.131	.018	1.241	.047
14.29	1.168	.035	-.126	.043	1.149	.083
14.30	1.206	.008	-.117	.079	1.043	.124
14.32	1.248	-.026	-.116	.126	.950	.160
14.32	1.270	-.048	-.108	.158	.906	.175
[a]16.30	1.236	.107	-.171	- - -	- - -	- - -
16.31	1.256	.101	-.160	-.003	1.351	.009
16.31	1.258	.099	-.153	.021	1.249	.050
16.32	1.303	.072	-.147	.045	1.146	.090
16.33	1.343	.047	-.135	.079	1.047	.128
16.34	1.394	.008	-.122	.126	.955	.165
16.35	1.417	-.012	-.118	.153	.918	.179
[a]18.33	1.349	.147	-.234	- - -	- - -	- - -
18.31	1.319	.151	-.195	-.003	1.357	.015
18.32	1.362	.136	-.177	.014	1.254	.057
18.34	1.407	.114	-.167	.041	1.154	.096
18.34	1.442	.092	-.157	.077	1.047	.135
18.36	1.499	.063	-.142	.121	.955	.169
18.37	1.528	.048	-.132	.144	.921	.182

[a]Propellers removed

TABLE V.– LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10. TAIL HEIGHT, 0.05 b/2; FLAPS UP – Concluded

(h) M = 0.165; R = 8,000,000; β = 36°; i_t = –4°

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$	α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$	α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]2.08	0.098	0.017	0.089	- - -	- - -	- - -	[a]8.16	0.630	0.030	-0.042	- - -	- - -	- - -	[a]14.29	1.288	0.065	-0.166	- - -	- - -	- - -
2.01	.092	.022	.075	-0.009	1.686	-0.018	8.15	.623	.033	-.029	-0.008	1.676	-0.020	14.28	1.284	.070	-.132	-0.009	1.690	-0.006
2.01	.091	.011	.065	.003	1.566	.043	8.16	.627	.026	-.027	.001	1.558	.052	14.28	1.135	.060	-.129	.004	1.521	.052
2.02	.087	-.002	.052	.017	1.463	.091	8.15	.631	.012	-.022	.015	1.480	.085	14.29	1.152	.049	-.124	.019	1.485	.100
2.02	.096	-.022	.102	.042	1.338	.147	8.16	.647	-.012	-.012	.045	1.326	.154	14.30	1.184	.028	-.116	.047	1.335	.166
2.01	.081	-.051	.118	.076	1.218	.202	8.17	.660	-.037	-.002	.075	1.221	.202	14.30	1.212	.007	-.120	.074	1.229	.213
2.01	.074	-.088	.127	.121	1.109	.256	8.17	.675	-.073	.013	.121	1.103	.256	14.32	1.248	-.025	-.103	.115	1.118	.252
[a]4.07	.282	.018	.043	- - -	- - -	- - -	[a]10.20	.800	.039	-.060	- - -	- - -	- - -	[a]16.30	1.236	.107	-.201	- - -	- - -	- - -
4.07	.276	.023	.034	-.010	1.690	-.009	10.20	.792	.044	-.063	-.009	1.692	-.017	16.30	1.241	.106	-.163	-.008	1.677	.014
4.07	.278	.013	.042	.002	1.578	.037	10.20	.808	.034	-.060	.003	1.578	.040	16.31	1.257	.096	-.138	.004	1.589	.064
4.07	.279	0	.051	.017	1.470	.086	10.20	.807	.022	-.057	.017	1.476	.091	16.32	1.279	.086	-.149	.018	1.488	.110
4.07	.280	-.014	.066	.046	1.324	.153	10.21	.828	-.001	-.048	.046	1.328	.156	16.32	1.301	.073	-.141	.038	1.376	.159
4.07	.277	-.049	.072	.088	1.217	.200	10.21	.852	-.026	-.042	.077	1.220	.208	16.33	1.332	.056	-.132	.060	1.263	.199
4.07	.280	-.085	.086	.124	1.103	.252	10.22	.876	-.060	-.033	.121	1.105	.257	16.33	1.353	.038	-.125	.080	1.208	.231
[a]6.11	.456	.023	-.002	- - -	- - -	- - -	[a]12.25	.967	.050	-.123	- - -	- - -	- - -	16.34	1.388	.017	-.116	.118	1.124	.264
6.11	.455	.026	.001	-.008	1.673	-.010	12.24	.959	.056	-.100	-.010	1.702	-.016	[a]18.33	1.349	.147	-.234	- - -	- - -	- - -
6.11	.455	.018	.007	.008	1.579	.036	12.24	.974	.044	-.097	.006	1.771	.052	18.31	1.329	.149	-.187	-.010	1.706	.016
6.11	.458	.007	.013	.014	1.482	.082	12.25	.990	.032	-.093	.022	1.465	.102	18.32	1.357	.141	-.182	.005	1.574	.079
6.12	.465	-.018	.022	.045	1.329	.152	12.26	1.019	.010	-.089	.051	1.320	.166	18.32	1.373	.129	-.176	.020	1.475	.128
6.12	.478	-.041	.032	.074	1.231	.195	12.26	1.040	-.010	-.086	.077	1.223	.208	18.33	1.401	.115	-.168	.039	1.371	.173
6.12	.479	-.081	.051	.123	1.104	.253	12.27	1.077	-.044	-.081	.121	1.107	.260	18.34	1.423	.104	-.164	.059	1.282	.210
														18.34	1.446	.095	-.157	.078	1.212	.240
														18.35	1.458	.074	-.158	.107	1.134	.272

[a]Propellers removed

TABLE VI.– LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10. TAIL HEIGHT, 0.10 b/2; FLAPS UP

(a) M = 0.082; R = 4,000,000; β = 26°; i_t = –4°

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$	α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$	α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]2.01	0.098	0.016	0.091	- - -	- - -	- - -	[a]8.12	0.620	0.050	-0.035	- - -	- - -	- - -	[a]14.28	1.280	0.067	-0.143	- - -	- - -	- - -
2.02	.092	.015	.087	-0.001	1.077	0.009	8.16	.627	.031	-.019	-0.003	1.070	0.006	14.29	1.146	.065	-.213	0	1.063	0.016
2.02	.089	-.027	.095	.036	.954	.046	8.16	.643	-.004	-.005	.036	.949	.047	14.30	1.198	.035	-.116	.037	.952	.054
2.02	.083	-.064	.108	.097	.843	.079	8.17	.664	-.045	.021	.094	.847	.078	14.31	1.238	-.003	-.122	.091	.848	.095
2.01	.078	-.128	.128	.175	.748	.109	8.17	.685	-.113	.044	.176	.748	.105	14.33	1.297	-.060	-.090	.163	.751	.111
2.02	.055	-.241	.154	.320	.640	.137	8.18	.709	-.220	.085	.311	.645	.135	14.34	1.379	-.157	-.083	.296	.649	.140
2.02	.032	-.414	.191	.541	.545	.166	8.18	.728	-.360	.143	.520	.553	.165	14.37	1.476	-.321	-.041	.530	.552	.167
2.01	.020	-.535	.215	.691	.468	.179	8.18	.747	-.515	.194	.689	.500	.180	14.39	1.537	-.441	-.003	.673	.499	.181
2.01	.005	-.647	.227	.830	.407	.190	8.19	.755	-.623	.223	.832	.468	.189	14.39	1.203	-.539	.027	.797	.469	.191
[a]4.07	.282	.018	.030	- - -	- - -	- - -	[a]10.20	.793	.040	-.070	- - -	- - -	- - -	[a]16.30	1.230	.106	-.178	- - -	- - -	- - -
4.07	.278	.017	.024	-.003	1.065	.007	10.20	.802	.036	-.059	-.001	1.055	.014	16.32	1.280	.102	-.151	-.008	1.061	.022
4.07	.280	-.015	.063	.040	.948	.047	10.21	.827	.007	-.042	.057	.949	.049	16.34	1.339	.054	-.161	.038	.949	.058
4.07	.281	-.057	.080	.092	.852	.076	10.22	.855	-.037	-.026	.094	.844	.081	16.36	1.420	.019	-.197	.091	.850	.087
4.07	.277	-.125	.099	.177	.748	.107	10.22	.892	-.096	-.002	.167	.752	.108	16.37	1.488	-.037	-.153	.164	.751	.114
4.07	.276	-.226	.132	.301	.651	.134	10.24	.929	-.203	.047	.306	.647	.137	16.40	1.592	-.188	-.135	.292	.648	.142
4.07	.265	-.411	.179	.490	.546	.166	10.24	.972	-.367	.127	.522	.551	.165	16.42	1.714	-.279	-.110	.506	.552	.169
4.07	.260	-.527	.200	.673	.504	.177	10.25	1.004	-.497	.182	.678	.501	.181	16.45	1.793	-.397	-.076	.658	.502	.184
4.07	.256	-.650	.222	.834	.467	.190	10.26	1.027	-.604	.183	.823	.468	.189	16.46	1.847	-.488	-.051	.779	.472	.192
[a]6.11	.455	.022	.011	- - -	- - -	- - -	[a]12.24	.958	.051	-.112	- - -	- - -	- - -	[a]18.32	1.331	.134	-.225	- - -	- - -	- - -
6.11	.456	.020	.018	-.001	1.056	.011	12.25	.976	.038	-.094	-.004	1.067	.011	18.33	1.365	.139	-.183	.003	1.068	.024
6.12	.465	-.006	.033	.036	.956	.043	12.25	1.008	.021	-.082	.054	.955	.050	18.33	1.400	.135	-.171	.026	.959	.061
6.12	.474	-.050	.051	.067	.852	.073	12.26	1.046	-.018	-.066	.087	.854	.080	18.35	1.466	.104	-.171	.088	.854	.090
6.12	.483	-.121	.076	.119	.748	.109	12.28	1.095	-.082	-.042	.164	.750	.111	18.40	1.627	.018	-.148	.165	.750	.118
6.12	.495	-.227	.113	.309	.647	.136	12.28	1.150	-.188	-.002	.304	.645	.140	18.43	1.789	-.065	-.117	.293	.648	.145
6.12	.500	-.400	.168	.493	.548	.165	12.30	1.217	-.346	.052	.527	.547	.166	18.48	1.874	-.210	-.082	.509	.550	.178
6.11	.502	-.530	.202	.654	.498	.179	12.31	1.267	-.473	.093	.671	.501	.182	18.48	1.964	-.320	-.053	.662	.501	.186
	.502	-.640	.227	.831	.466	.189	12.32	1.301	-.574	.118	.797	.471	.191	18.49	2.023	-.404	-.032	.778	.474	.198

[a]Propellers removed

TABLE VI.– LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10. TAIL HEIGHT, 0.10 b/2; FLAPS UP – Continued

(b) M = 0.082; R = 4,000,000; β = 26°; i_t = –4°; Negative thrust

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]2.01	0.092	0.016	0.071	- - -	- - -	- - -
2.02	.100	.083	.076	-0.010	1.066	-0.001
2.02	.100	.039	.072	-.029	1.166	-.028
2.02	.101	.054	.062	-.046	1.269	-.067
2.02	.101	.068	.054	-.064	1.375	-.115
2.02	.102	.081	.048	-.079	1.499	-.171
2.02	.104	.090	.041	-.092	1.641	-.237
2.02	.102	.101	.033	-.107	1.839	-.346
2.02	.104	.103	.032	-.110	2.051	-.478
2.02	.101	.103	.042	-.107	2.437	-.596
[a]4.07	.282	.018	.050	- - -	- - -	- - -
4.07	.282	.025	.030	-.009	1.084	-.004
4.07	.280	.041	.029	-.026	1.169	-.014
4.07	.279	.056	.023	-.046	1.260	-.032
4.07	.276	.070	.018	-.064	1.373	-.150
4.06	.271	.080	.003	-.079	1.496	-.169
4.06	.271	.093	-.002	-.093	1.633	-.235
4.06	.270	.100	-.012	-.105	1.830	-.355
4.06	.273	.106	-.011	-.110	2.081	-.476
4.06	.271	.104	-.009	-.107	2.473	-.657
[a]6.11	.459	.022	.011	- - -	- - -	- - -
6.11	.458	.029	.006	-.009	1.087	.002
6.11	.452	.046	-.007	-.028	1.168	-.022
6.11	.451	.061	-.017	-.046	1.257	-.070
6.11	.443	.074	-.029	-.064	1.373	-.115
6.11	.440	.084	-.036	-.078	1.493	-.167
6.10	.433	.097	-.046	-.094	1.638	-.239
6.10	.430	.108	-.055	-.106	1.836	-.374
6.10	.428	.110	-.055	-.110	2.065	-.460
6.10	.429	.110	-.052	-.107	2.414	-.602
6.10	.427	.106	-.051	-.104	2.677	-.704
6.10	.430	.101	-.046	-.096	3.070	-.793
6.11	.443	.087	-.039	-.080	3.960	-.920
6.11	.440	.081	-.039	-.074	5.439	-1.214

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]8.15	0.620	0.030	-0.035	- - -	- - -	- - -
8.16	.631	.038	-.029	-0.011	1.090	0
8.15	.618	.053	-.039	-.029	1.169	-.033
8.15	.612	.065	-.047	-.045	1.258	-.087
8.15	.601	.081	-.060	-.063	1.372	-.115
8.14	.594	.091	-.069	-.079	1.500	-.166
8.14	.585	.102	-.079	-.093	1.648	-.242
8.14	.576	.112	-.082	-.105	1.840	-.350
8.14	.576	.116	-.085	-.112	2.050	-.455
8.14	.577	.113	-.081	-.107	2.414	- - -
[a]10.20	.793	.040	-.070	- - -	- - -	- - -
10.20	.799	.046	-.065	-.010	1.084	.003
10.20	.786	.061	-.074	-.029	1.168	-.024
10.19	.774	.076	-.081	-.046	1.257	-.060
10.19	.760	.088	-.090	-.064	1.376	-.118
10.18	.754	.100	-.094	-.078	1.494	-.160
10.18	.741	.110	-.104	-.093	1.647	-.241
10.18	.727	.120	-.109	-.105	1.835	-.347
10.18	.723	.124	-.112	-.118	2.056	-.467
10.18	.729	.123	-.115	-.107	2.454	-.633
[a]12.24	.932	.051	-.122	- - -	- - -	- - -
12.24	.940	.058	-.095	-.007	1.085	.002
12.24	.948	.073	-.098	-.029	1.169	-.029
12.23	.931	.087	-.103	-.047	1.263	-.066
12.23	.917	.100	-.110	-.064	1.378	-.109
12.22	.908	.111	-.114	-.077	1.493	-.169
12.22	.891	.120	-.122	-.091	1.643	-.239
12.21	.878	.129	-.130	-.104	1.826	-.336
12.21	.871	.133	-.135	-.110	2.076	-.455
12.21	.871	.133	-.141	-.109	2.411	-.605

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]14.28	1.189	0.067	-0.143	- - -	- - -	- - -
14.29	1.184	.078	-.130	-0.006	1.088	0.005
14.27	1.203	.085	-.127	-.026	1.167	-.024
14.27	1.189	.102	-.134	-.045	1.266	-.068
14.26	1.172	.112	-.141	-.064	1.379	-.107
14.26	1.156	.124	-.146	-.079	1.501	-.165
14.25	1.142	.133	-.154	-.087	1.645	-.234
14.25	1.128	.143	-.163	-.099	1.833	-.334
14.24	1.118	.146	-.173	-.107	2.050	-.467
14.24	1.123	.146	-.182	-.104	2.429	-.607
[a]16.30	1.230	.106	-.178	- - -	- - -	- - -
16.32	1.227	.111	-.143	-.003	1.086	.010
16.31	1.240	.118	-.174	-.040	1.261	-.060
16.30	1.220	.130	-.183	-.057	1.376	-.108
16.30	1.209	.139	-.194	-.071	1.498	-.156
16.29	1.196	.153	-.196	-.084	1.647	-.231
16.28	1.184	.162	-.208	-.096	1.833	-.321
16.28	1.174	.167	-.222	-.103	2.078	-.496
16.28	1.177	.167	-.223	-.104	2.432	-.597
[a]18.32	1.331	.154	-.225	- - -	- - -	- - -
18.32	1.329	.159	-.191	0	1.090	.014
18.31	1.310	.166	-.200	-.020	1.171	-.020
18.31	1.305	.179	-.201	-.037	1.258	-.051
18.31	1.291	.184	-.212	-.054	1.368	-.092
18.33	1.346	.164	-.239	-.070	1.498	-.148
18.32	1.338	.173	-.241	-.082	1.637	-.212
18.32	1.332	.178	-.247	-.094	1.836	-.319
18.32	1.326	.189	-.260	-.101	2.071	-.426
18.32	1.320	.189	-.260	-.102	2.460	-.592

[a]Propellers removed

(c) M = 0.082; R = 4,000,000; β = 26°; i_t = –4°; Inboard propeller only

α	C_L	C_X	C_m	T_c	J	C_P
[a]2.01	0.092	0.045	0.021	- - -	- - -	- - -
2.02	.089	.017	.087	-0.008	1.088	0.004
2.02	.087	-.002	.091	.037	.952	.049
2.01	.084	-.022	.100	.091	.871	.076
2.01	.079	-.038	.110	.121	.770	.105
2.01	.072	-.112	.118	.159	.646	.138
2.01	.063	-.197	.138	.240	.545	.164
2.01	.049	-.282	.147	.299	.497	.178
2.01	.043	-.321	.149	.328	.463	.190
[a]4.07	.282	.018	.050	- - -	- - -	- - -
4.06	.272	.018	.044	-.005	1.080	.008
4.06	.272	.028	.036	.033	.961	.047
4.06	.272	-.022	.071	.096	.849	.080
4.07	.269	-.055	.079	.175	.750	.107
4.07	.268	-.120	.101	.315	.644	.137
4.06	.262	-.187	.130	.324	.554	.163
4.07	.256	-.252	.138	.398	.497	.179
4.07	.253	-.318	.143	.352	.464	.187
[a]6.11	.459	.022	.011	- - -	- - -	- - -
6.11	.447	.033	.013	-.005	1.079	.004
6.11	.430	.005	.022	.039	.949	.070
6.11	.426	-.017	.044	.098	.849	.097
6.11	.427	-.049	.060	.173	.770	.106
6.11	.421	-.101	.081	.305	.646	.134
6.11	.420	-.180	.109	.319	.554	.151
6.11	.421	-.291	.131	.359	.500	.177
6.11	.421	-.332	.146	.380	.464	.190

α	C_L	C_X	C_m	T_c	J	C_P
[a]8.15	0.620	0.030	-0.035	- - -	- - -	- - -
8.17	.618	.030	-.027	-0.006	1.084	0.004
8.16	.626	.015	-.025	.036	.964	.044
8.15	.633	-.010	.009	.087	.847	.080
8.15	.644	-.040	.024	.171	.775	.107
8.16	.657	-.077	.055	.323	.640	.137
8.16	.664	-.164	.103	.331	.545	.160
8.16	.666	-.242	.132	.390	.500	.179
8.16	.669	-.305	.150	.423	.464	.192
[a]10.20	.793	.040	-.070	- - -	- - -	- - -
10.20	.789	.043	-.062	-.007	1.092	-.001
10.20	.801	.055	-.050	.056	.953	.014
10.21	.817	.001	-.052	.097	.846	.079
10.21	.830	-.033	-.006	.186	.741	.109
10.21	.844	-.092	.022	.309	.649	.135
10.21	.858	-.167	.079	.331	.547	.162
10.22	.876	-.232	.106	.396	.495	.180
10.22	.885	-.287	.118	.349	.465	.191
[a]12.24	.932	.051	-.122	- - -	- - -	- - -
12.23	.934	.049	-.097	-.005	1.083	.015
12.23	.973	.036	-.083	.041	.950	.052
12.23	.999	.014	-.067	.095	.849	.083
12.23	1.027	-.016	-.046	.177	.770	.111
12.22	1.040	-.066	-.020	.311	.645	.135
12.22	1.032	-.146	.010	.351	.551	.166
12.21	1.092	-.219	.052	.395	.493	.181
12.20	1.113	-.288	.080	.337	.466	.189

α	C_L	C_X	C_m	T_c	J	C_P
[a]14.28	1.120	0.087	-0.143	- - -	- - -	- - -
14.28	1.116	.089	-.134	-0.007	1.094	0.005
14.29	1.137	.091	-.127	.038	.928	.078
14.29	1.164	.093	-.113	.094	.855	.091
14.30	1.193	.093	-.096	.171	.758	.112
14.31	1.239	-.044	-.078	.307	.647	.138
14.32	1.281	-.123	-.043	.311	.550	.157
14.33	1.313	-.184	-.016	.373	.501	.181
14.33	1.339	-.239	.004	.418	.463	.190
[a]16.30	1.230	.106	-.178	- - -	- - -	- - -
16.30	1.236	.108	-.167	-.005	1.086	.015
16.31	1.250	.094	-.164	.040	.951	.058
16.32	1.267	.078	-.157	.089	.848	.083
16.32	1.313	.051	-.177	.131	.752	.113
16.34	1.368	.006	-.148	.300	.651	.143
16.34	1.440	-.070	-.120	.314	.549	.169
16.36	1.480	-.129	-.105	.370	.499	.182
16.37	1.519	-.180	-.071	.406	.468	.192
[a]18.32	1.331	.154	-.225	- - -	- - -	- - -
18.31	1.319	.158	-.206	-.001	1.079	.020
18.32	1.334	.144	-.200	.036	.972	.061
18.32	1.374	.126	-.193	.054	.846	.090
18.34	1.414	.105	-.190	.122	.754	.117
18.35	1.479	.061	-.185	.297	.645	.142
18.37	1.527	-.001	-.183	.399	.555	.168
18.39	1.623	-.065	-.165	.430	.501	.187
18.40	1.629	-.110	-.150	.379	.470	.193

[a]Propellers removed

TABLE VI.– LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10. TAIL HEIGHT, 0.10 b/2; FLAPS UP – Continued

(d) M = 0.082; R = 4,000,000; β = 26°; i_t = –4°; Outboard propeller only

α	C_L	C_X	C_m	T_c	J	C_P
[a]2.01	0.092	0.016	0.021	- - -	- - -	- - -
2.02	.037	.019	.088	-0.008	1.082	-0.001
2.03	.038	-.002	.090	.047	.936	.049
2.02	.092	-.022	.100	.098	.846	.079
2.02	.089	-.054	.106	.177	.747	.108
2.03	.081	-.107	.130	.313	.647	.136
2.02	.070	-.194	.162	.532	.546	.167
2.03	.063	-.314	.160	.885	.468	.189
[a]4.07	.228	.018	.050	- - -	- - -	- - -
4.07	.279	.021	.048	-.005	1.086	-.001
4.07	.281	.001	.057	.039	.946	.045
4.07	.281	-.028	.057	.099	.843	.079
4.07	.281	-.054	.067	.179	.747	.111
4.07	.280	-.105	.080	.307	.649	.137
4.07	.276	-.195	.105	.533	.549	.167
4.08	.272	-.310	.119	.831	.468	.190
[a]6.11	.425	.028	.011	- - -	- - -	- - -
6.11	.425	.025	.013	-.006	1.085	.003
6.11	.423	.002	.018	.038	.945	.047
6.12	.417	-.019	.024	.096	.846	.079
6.12	.371	-.048	.031	.180	.747	.107
6.11	.476	-.099	.040	.309	.648	.135
6.11	.478	-.190	.060	.534	.546	.166
6.11	.481	-.306	.078	.889	.467	.189

α	C_L	C_X	C_m	T_c	J	C_P
[a]8.15	0.620	0.030	-0.035	- - -	- - -	- - -
8.15	.627	.033	-.030	-0.007	1.086	-0.002
8.16	.640	.014	-.024	.040	.946	.045
8.16	.647	-.008	-.021	.097	.843	.079
8.15	.637	-.040	-.028	.176	.747	.107
8.16	.664	-.092	-.004	.305	.649	.137
8.16	.681	-.182	.017	.541	.546	.167
8.16	.692	-.302	.032	.831	.467	.193
[a]10.20	.793	.040	-.070	- - -	- - -	- - -
10.20	.799	.044	-.068	-.009	1.087	-.001
10.20	.809	.024	-.067	.042	.946	.048
10.20	.824	.002	-.064	.097	.843	.081
10.20	.840	-.086	-.059	.179	.747	.107
10.21	.859	-.176	-.048	.309	.648	.134
10.21	.878	-.278	-.034	.536	.549	- - -
10.21	.889	-.388	-.025	.883	.501	.181
10.21	.901	-.483	-.019	.857	.467	.189
[a]12.24	.938	.051	-.132	- - -	- - -	- - -
12.24	.955	.052	-.110	-.008	1.083	.002
12.25	.968	-.030	-.107	.042	.946	.049
12.24	1.003	.015	-.104	.097	.845	.081
12.25	1.019	-.015	-.099	.179	.747	.111
12.25	1.047	-.068	-.094	.310	.646	.141
12.25	1.079	-.150	-.080	.533	.547	.167
12.25	1.108	-.210	-.078	.871	.502	.181
12.26	1.117	-.265	-.066	.823	.469	.191

α	C_L	C_X	C_m	T_c	J	C_P
[a]14.28	1.190	0.067	-0.143	- - -	- - -	- - -
14.28	1.189	.070	-.142	-0.004	1.083	0.004
14.29	1.191	.052	-.144	.044	.947	.051
14.29	1.196	.031	-.143	.099	.843	.085
14.29	1.200	.002	-.140	.177	.747	.118
14.29	1.230	-.049	-.139	.317	.610	.139
14.30	1.276	-.156	-.132	.595	.539	- - -
14.30	1.321	-.252	-.127	.857	.508	.184
14.30	1.324	-.247	-.123	.809	.470	.194
[a]16.30	1.230	.106	-.178	- - -	- - -	- - -
16.30	1.231	.107	-.173	-.001	1.088	.030
16.32	1.232	.072	-.166	.047	.947	.056
16.33	1.238	.028	-.169	.103	.841	.088
16.33	1.271	.024	-.169	.179	.747	.112
16.33	1.409	-.023	-.167	.302	.649	.142
16.34	1.467	-.108	-.162	.583	.545	.178
16.34	1.495	-.199	-.176	.855	.501	.188
16.34	1.583	-.213	-.168	.792	.471	.194
[a]18.32	1.331	.154	-.225	- - -	- - -	- - -
18.32	1.336	.152	-.197	-.010	1.186	.021
18.32	1.370	.145	-.207	.050	.944	.059
18.35	1.460	.088	-.212	.106	.842	.091
18.35	1.518	.067	-.210	.180	.748	.115
18.36	1.555	.024	-.204	.304	.650	.144
18.36	1.622	-.055	-.199	.564	.545	.171
18.37	1.697	-.109	-.189	.863	.501	.183
18.37	1.687	-.152	-.198	.788	.471	.194

[a]Propellers removed

(e) M = 0.082; R = 4,000,000; β = 26°; i_t = 0°

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]2.04	0.108	0.016	-0.031	- - -	- - -	- - -
2.03	.141	.019	-.029	-0.001	1.061	0.010
2.04	.134	-.018	-.031	.040	.945	.047
2.04	.130	-.062	-.036	.094	.845	.077
2.03	.120	-.134	.010	.186	.737	.110
2.03	.101	-.240	.028	.320	.640	.137
2.03	.079	-.407	.057	.541	.545	.164
2.03	.063	-.537	.082	.693	.498	.179
2.04	.055	-.644	.093	.837	.466	.188
[a]4.08	.330	.018	-.077	- - -	- - -	- - -
4.08	.321	.021	-.074	-.003	1.071	.006
4.08	.322	-.018	-.068	.038	.943	.048
4.08	.329	-.058	-.044	.093	.845	.077
4.09	.321	-.122	-.086	.170	.750	.107
4.09	.319	-.234	.008	.311	.643	.136
4.08	.313	-.399	.050	.538	.547	.163
4.09	.307	-.511	.077	.689	.498	.178
4.09	.309	-.624	.090	.841	.465	.188
[a]6.13	.506	.024	-.100	- - -	- - -	- - -
6.13	.496	.026	-.111	-.003	1.072	.004
6.13	.508	-.006	-.097	.036	.938	.045
6.13	.516	-.053	-.078	.093	.845	.077
6.14	.529	-.117	-.054	.172	.747	.106
6.14	.541	-.226	-.020	.310	.643	.136
6.14	.548	-.395	.026	.537	.546	.163
6.14	.559	-.531	.059	.691	.497	.180
6.14	.555	-.635	.082	.833	.466	.187

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]8.18	0.680	0.013	-0.167	- - -	- - -	- - -
8.17	.672	.034	-.150	-0.004	1.070	0.007
8.18	.692	0	-.137	.040	.942	.050
8.18	.712	-.041	-.125	.092	.846	.078
8.19	.736	-.105	-.102	.173	.749	.106
8.19	.763	-.213	-.066	.316	.643	.136
8.20	.765	-.382	-.010	.541	.547	.164
8.20	.808	-.508	.030	.693	.498	.178
8.20	.824	-.620	.044	.837	.466	.188
[a]10.22	.845	.044	-.203	- - -	- - -	- - -
10.22	.842	.049	-.188	-.005	1.073	.011
10.22	.870	.014	-.136	.037	.951	.048
10.23	.908	-.028	-.160	.089	.851	.080
10.24	.943	-.094	-.144	.169	.746	.110
10.26	.989	-.196	-.121	.307	.646	.137
10.26	1.035	-.302	-.070	.532	.547	.165
10.28	1.074	-.401	-.037	.691	.497	.182
10.28	1.101	-.599	-.023	.814	.469	.191
[a]12.26	1.005	.056	-.237	- - -	- - -	- - -
12.27	1.011	.061	-.224	-.009	1.084	.006
12.27	1.056	.024	-.220	.037	.948	.053
12.28	1.101	-.017	-.214	.095	.848	.083
12.30	1.147	-.072	-.206	.183	.750	.108
12.31	1.217	-.182	-.197	.309	.642	.140
12.33	1.297	-.341	-.187	.537	.547	.167
12.35	1.371	-.474	-.177	.691	.495	.180
12.36	1.389	-.565	-.119	.812	.468	.190

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]14.30	1.167	0.073	-0.272	- - -	- - -	- - -
14.30	1.179	.074	-.256	-0.004	1.073	0.012
14.31	1.226	.044	-.264	.036	.923	.054
14.33	1.267	.004	-.269	.093	.844	.085
14.34	1.347	-.050	-.273	.162	.738	.112
14.37	1.448	-.150	-.283	.303	.641	.140
14.40	1.548	-.308	-.264	.564	.546	.168
14.42	1.616	-.431	-.240	.875	.496	.182
14.43	1.661	-.588	-.220	.799	.469	.193
[a]16.32	1.282	.114	-.308	- - -	- - -	- - -
16.33	1.311	.115	-.284	-.003	1.083	.013
16.35	1.334	.067	-.300	.036	.936	.050
16.37	1.423	.031	-.303	.088	.854	.085
16.39	1.489	-.026	-.309	.166	.749	- - -
16.41	1.643	-.129	-.316	.311	.638	.144
16.45	1.777	-.273	-.312	.519	.547	.170
16.47	1.879	-.399	-.297	.665	.500	.183
16.49	1.916	-.477	-.282	.783	.472	.192
[a]18.34	1.376	.164	-.366	- - -	- - -	- - -
18.34	1.390	.169	-.316	-.005	1.079	.021
18.36	1.440	.143	-.312	.036	.936	.052
18.37	1.527	.110	-.306	.089	.852	.091
18.41	1.622	.052	-.285	.161	.754	.116
18.44	1.775	-.083	-.275	.307	.639	.146
18.48	1.925	-.197	-.259	.515	.547	.171
18.50	2.013	-.308	-.254	.665	.502	.186
18.51	2.076	-.394	-.245	.768	.473	.194

[a]Propellers removed

TABLE VI.– LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10. TAIL HEIGHT, 0.10 b/2; FLAPS UP – Continued

(f) $M = 0.082$; $R = 4{,}000{,}000$; $\beta = 26^\circ$; $i_t = -8^\circ$

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]2.00	0.046	0.019	0.234	- - -	- - -	- - -
2.00	.045	.024	.218	-0.007	1.081	0.001
2.00	.040	-.013	.238	.058	.947	.047
2.00	.032	-.057	.247	.095	.848	.077
2.00	.019	-.123	.263	.172	.730	.107
2.00	.005	-.225	.288	.306	.651	.135
1.99	-.019	-.394	.326	.523	.551	.163
1.98	-.050	-.649	.365	.829	.487	.191
[a]4.05	.227	.020	.172	- - -	- - -	- - -
4.05	.231	.023	.178	-.006	1.088	.004
4.05	.232	-.014	.197	.038	.949	.046
4.05	.229	-.060	.212	.096	.843	- - -
4.05	.231	-.125	.232	.176	.749	.107
4.05	.227	-.223	.263	.303	.651	.135
4.05	.215	-.403	.307	.539	.547	.165
4.05	.208	-.646	.351	.843	.466	.189
[a]6.09	.406	.023	.133	- - -	- - -	- - -
6.09	.407	.027	.146	-.006	1.084	.002
6.09	.414	-.009	.160	.039	.949	.046
6.10	.424	-.053	.182	.093	.850	.077
6.10	.432	- - -	.206	.180	.747	.105
6.11	.440	-.229	.240	.307	.649	.135
6.11	.450	-.397	.301	.536	.548	.165
6.10	.453	-.634	.359	.838	.467	.188

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]8.14	0.583	0.029	0.097	- - -	- - -	- - -
8.14	.584	.033	.110	-0.006	1.082	0.001
8.14	.597	-.003	.134	.038	.950	.046
8.14	.614	-.046	.158	.092	.850	.079
8.15	.638	-.116	.187	.176	.746	.109
8.16	.658	-.209	.226	.296	.654	.135
8.16	.678	-.385	.286	.528	.570	.163
8.16	.702	-.647	.360	.832	.487	.188
[a]10.18	.746	.037	.058	- - -	- - -	- - -
10.18	.754	.041	.078	-.003	1.083	.005
10.19	.780	.004	.095	.040	.945	.050
10.20	.806	-.036	.123	.092	.846	.084
10.20	.842	-.100	.152	.170	.748	.109
10.21	.875	-.203	.198	.304	.646	.137
10.22	.913	-.374	.273	.529	.548	.166
10.22	.942	-.606	.334	.689	.469	.181
10.23	.965	-.806	.370	.820	.466	.188
[a]12.22	.909	.048	.021	- - -	- - -	- - -
12.23	.925	.052	.043	-.003	1.083	.008
12.23	.963	.015	.065	.038	.946	.048
12.24	.995	-.033	.085	.092	.849	.081
12.26	1.040	-.082	.122	.165	.750	.111
12.26	1.090	-.169	.173	.298	.647	.139
12.28	1.152	-.347	.250	.517	.550	.166
12.29	1.198	-.485	.302	.679	.500	.183
12.30	1.231	-.582	.330	.804	.468	.190

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]14.26	1.073	0.063	-0.020	- - -	- - -	- - -
14.27	1.084	.064	.007	-0.003	1.080	0.002
14.28	1.132	.051	.025	.037	.950	.055
14.29	1.179	-.008	.048	.092	.849	.085
14.30	1.233	-.068	.073	.166	.748	.113
14.32	1.305	-.163	.122	.296	.648	.140
14.34	1.398	-.327	.185	.522	.547	.168
14.36	1.496	-.496	.238	.676	.497	.184
14.36	1.493	-.555	.269	.796	.469	.193
[a]16.29	1.187	.085	-.023	- - -	- - -	- - -
16.29	1.221	.102	-.016	-.003	1.080	.013
16.32	1.304	.049	-.021	.040	.945	.052
16.34	1.362	.011	-.005	.093	.844	.087
16.35	1.405	-.042	.018	.166	.748	.114
16.37	1.520	-.136	.041	.297	.647	.144
16.40	1.634	-.289	.101	.515	.549	.169
16.42	1.712	-.417	.147	.675	.498	.185
16.43	1.755	-.502	.177	.786	.471	.193
[a]18.30	1.281	.145	-.104	- - -	- - -	- - -
18.30	1.295	.153	-.051	-.008	1.081	.011
18.31	1.373	.125	-.041	.038	.946	.063
18.34	1.429	.092	-.027	.092	.847	.091
18.38	1.576	.004	-.009	.166	.748	.118
18.40	1.678	-.076	.046	.300	.649	.146
18.44	1.816	-.221	.088	.513	.549	.174
18.46	1.894	-.332	.145	.673	.498	.185
18.47	1.948	-.415	.173	.781	.471	.192

[a]Propellers removed

(g) $M = 0.123$; $R = 4{,}000{,}000$; $\beta = 26^\circ$; $i_t = -4^\circ$

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]2.02	0.103	0.017	0.092	- - -	- - -	- - -
2.02	.097	.025	.083	-0.009	1.098	-0.009
2.02	.095	-.002	.095	.024	.992	.032
2.02	.091	-.037	.103	.068	.894	.064
2.02	.081	-.095	.120	.136	.797	.096
2.02	.065	-.179	.140	.250	.694	.126
2.02	.047	-.317	.165	.422	.598	.157
[a]4.07	.283	.019	.050	- - -	- - -	- - -
4.07	.283	.023	.050	-.008	1.092	-.005
4.07	.280	-.001	.063	.023	.996	.032
4.07	.282	-.033	.071	.065	.899	.061
4.07	.279	-.091	.093	.139	.796	.095
4.07	.277	-.177	.117	.251	.695	.127
4.07	.273	-.311	.152	.431	.597	.155
[a]6.11	.458	.023	.007	- - -	- - -	- - -
6.11	.453	.031	.011	-.008	1.094	-.009
6.11	.460	.003	.027	.025	.992	.033
6.12	.467	-.032	.045	.068	.894	.065
6.12	.479	-.083	.068	.139	.796	.093
6.12	.489	-.173	.094	.251	.695	.128
6.12	.493	-.306	.132	.432	.598	.155

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]8.16	0.630	0.030	-0.028	- - -	- - -	- - -
8.16	.635	.037	-.026	-0.008	1.092	-0.004
8.16	.639	.014	-.007	.022	.997	.030
8.16	.653	-.023	.011	.066	.897	.066
8.17	.675	-.078	.034	.138	.793	.095
8.18	.702	-.162	.063	.249	.696	.128
8.18	.724	-.300	.114	.427	.598	.159
[a]10.20	.793	.040	-.071	- - -	- - -	- - -
10.20	.793	.046	-.057	-.008	1.095	-.004
10.20	.812	.023	-.045	.022	1.000	.031
10.21	.841	-.011	-.030	.067	.898	.066
10.22	.870	-.069	-.006	.135	.799	.098
10.23	.908	-.149	.028	.242	.698	.129
10.24	.949	-.282	.051	.417	.599	.158
[a]12.24	.958	.055	-.105	- - -	- - -	- - -
12.24	.960	.060	-.093	-.009	1.102	-.005
12.25	.988	.035	-.084	.024	.997	.036
12.26	1.027	.001	-.069	.069	.896	.069
12.27	1.066	-.049	-.051	.134	.800	.099
12.28	1.117	-.135	-.016	.239	.698	.133
12.29	1.182	-.263	.050	.406	.600	.161

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]14.28	1.120	0.068	-0.137	- - -	- - -	- - -
14.28	1.117	.071	-.119	-0.009	1.098	-0.001
14.29	1.156	.050	-.112	.029	.995	.038
14.30	1.206	.017	-.105	.072	.891	.070
14.33	1.265	-.031	-.095	.134	.799	.101
14.34	1.330	-.112	-.079	.238	.690	.131
14.36	1.421	-.236	-.052	.406	.600	.161
[a]16.31	1.241	.107	-.171	- - -	- - -	- - -
16.31	1.256	.111	-.153	-.005	1.095	.004
16.33	1.305	.083	-.151	.028	.992	.041
16.34	1.378	.039	-.160	.072	.896	.075
16.36	1.441	-.006	-.154	.137	.797	.103
16.38	1.532	-.079	-.142	.239	.697	.132
16.39	1.581	-.132	-.139	.316	.648	.146
16.41	1.642	-.201	-.128	.414	.597	.161
[a]18.32	1.333	.153	-.220	- - -	- - -	- - -
18.32	1.343	.187	-.179	-.003	1.098	.009
18.33	1.384	.146	-.173	.032	.998	.046
18.35	1.436	.117	-.168	.077	.896	.080
18.36	1.508	.078	-.175	.140	.798	.110
18.41	1.663	-.020	-.184	.242	.699	.135
18.43	1.726	-.065	-.115	.309	.651	.150
18.44	1.801	-.132	-.102	.409	.598	.164

[a]Propellers removed

TABLE VI.- LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10. TAIL HEIGHT, 0.10 b/2; FLAPS UP - Continued

(h) M = 0.123; R = 4,000,000; β = 26°; i_t = -4°; Negative thrust

α	C_L	C_X	C_m	Z_{ev}	X_{ev}	$C_{P_{ev}}$	α	C_L	C_X	C_m	Z_{ev}	X_{ev}	$C_{P_{ev}}$	α	C_L	C_X	C_m	Z_{ev}	X_{ev}	$C_{P_{ev}}$
[a]2.02	0.303	0.027	0.098	---	---	---	[a]8.16	0.630	0.030	-0.028	---	---	---	[a]14.28	1.220	0.068	-0.137	---	---	---
2.02	.296	.022	.077	-0.020	1.080	-0.003	8.15	.623	.030	-.025	-0.011	1.082	-0.001	14.28	1.222	.072	-.135	-0.004	1.084	0.005
2.02	.297	.021	.072	-.033	1.172	-.038	8.15	.615	.024	-.034	-.021	1.166	-.039	14.27	1.220	.068	-.325	-.026	1.173	-.029
2.02	.298	.028	.064	-.021	1.273	-.079	8.15	.608	.072	-.047	-.021	1.273	-.061	14.27	1.227	.104	-.134	-.046	1.280	-.073
2.02	.300	.072	.056	-.069	1.396	-.136	8.15	.601	.045	-.062	-.070	1.403	-.135	14.26	1.228	.117	-.137	-.068	1.397	-.126
2.02	.299	.084	.046	-.088	1.552	-.215	8.14	.590	.097	-.071	-.087	1.551	-.219	14.26	1.246	.189	-.136	-.088	1.554	-.203
2.02	.293	.097	.040	-.128	1.731	-.328	8.14	.582	.110	-.079	-.102	1.748	-.329	14.25	1.235	.140	-.136	-.094	1.737	-.298
2.02	.290	.123	.037	-.130	1.963	-.467	8.14	.573	.116	-.084	-.110	1.976	-.463	14.24	1.221	.149	-.167	-.105	1.990	-.443
2.02	.299	.163	.039	-.122	2.227	-.627	8.14	.576	.135	-.084	-.110	2.317	-.626	14.24	1.217	.190	-.178	-.108	2.313	-.599
2.02	.299	.299	.041	-.165	2.731	-.799	8.14	.560	.132	-.089	-.105	2.739	-.829	14.25	1.227	.145	-.181	-.100	2.740	-.766
[a]4.07	.289	.029	.050	---	---	---	[a]10.20	.793	.040	-.071	---	---	---	[a]16.31	1.241	.307	-.171	---	---	---
4.07	.278	.026	.044	-.010	1.082	-.003	10.20	.793	.049	-.064	-.010	1.083	.002	16.31	1.239	.307	-.148	-.003	1.084	.009
4.07	.276	.043	.030	-.033	1.173	-.039	10.19	.782	.063	-.071	-.032	1.174	-.036	16.31	1.236	.337	-.159	-.020	1.164	-.022
4.06	.273	.060	.018	-.052	1.280	-.063	10.19	.771	.082	-.080	-.021	1.280	-.081	16.32	1.236	.161	-.170	-.043	1.273	-.068
4.06	.271	.074	.008	-.069	1.400	-.142	10.19	.757	.092	-.089	-.060	1.400	-.133	16.30	1.222	.135	-.178	-.062	1.398	-.182
4.06	.271	.086	0	-.097	1.555	-.221	10.18	.743	.104	-.097	-.087	1.560	-.213	16.29	1.202	.146	-.188	-.078	1.550	-.183
4.06	.267	.099	-.011	-.102	1.741	-.331	10.18	.729	.117	-.104	-.100	1.746	-.319	16.28	1.184	.158	-.201	-.092	1.743	-.254
4.06	.269	.107	-.016	-.110	1.982	-.464	10.18	.726	.135	-.108	-.107	1.976	-.455	16.28	1.173	.167	-.211	-.103	1.976	-.464
4.06	.267	.106	-.015	-.112	2.259	-.617	10.17	.723	.154	-.110	-.110	2.241	-.587	16.28	1.169	.168	-.223	-.106	2.339	-.609
4.06	.267	.102	-.011	-.107	2.787	-.751	10.16	.731	.180	-.114	-.103	2.734	-.767	16.26	1.172	.162	-.221	-.096	2.737	-.741
[a]6.11	.358	.023	.037	---	---	---	[a]12.24	.958	.023	-.105	---	---	---	[a]18.32	1.331	.354	-.225	---	---	---
6.11	.351	.028	.028	-.011	1.081	-.004	12.24	.957	.027	-.093	-.006	1.082	.003	18.31	1.346	.356	-.189	-.003	1.084	.015
6.11	.348	.039	-.007	-.033	1.175	-.040	12.23	.940	.075	-.095	-.026	1.174	-.034	18.32	1.325	.369	-.194	-.023	1.177	-.022
6.11	.343	.054	-.018	-.051	1.273	-.081	12.23	.927	.090	-.103	-.047	1.277	-.078	18.30	1.286	.180	-.202	-.041	1.275	-.058
6.11	.338	.076	-.021	-.069	1.397	-.140	12.22	.909	.102	-.110	-.069	1.398	-.132	18.30	1.266	.188	-.206	-.061	1.402	-.113
6.10	.331	.090	-.043	-.087	1.556	-.217	12.22	.894	.115	-.118	-.089	1.549	-.201	18.33	1.253	.171	-.237	-.077	1.558	-.189
6.10	.324	.103	-.050	-.102	1.743	-.324	12.21	.881	.127	-.124	-.096	1.735	-.311	18.32	1.139	.182	-.250	-.090	1.741	-.279
6.10	.323	.112	-.054	-.116	1.975	-.455	12.21	.849	.138	-.131	-.106	1.963	-.447	18.32	1.135	.191	-.257	-.102	1.975	-.408
6.10	.324	.129	-.053	-.128	2.311	-.597	12.21	.830	.153	-.140	-.108	2.308	-.602	18.32	1.184	.198	-.258	-.105	2.302	-.565
6.10	.325	.163	-.050	-.165	2.724	-.777	12.21	.818	.151	-.146	-.101	2.707	-.725	18.32	1.226	.185	-.252	-.097	2.715	-.686
6.11	.336	.093	-.046	-.088	3.404	-.920														
6.11	.339	.084	-.035	-.079	4.302	-1.219														

[a]Propellers removed

(i) M = 0.123; R = 4,000,000; β = 31°; i_t = 0°

α	C_L	C_X	C_m	Z_{ev}	X_{ev}	$C_{P_{ev}}$	α	C_L	C_X	C_m	Z_{ev}	X_{ev}	$C_{P_{ev}}$	α	C_L	C_X	C_m	Z_{ev}	X_{ev}	$C_{P_{ev}}$
[a]2.04	0.153	0.016	-0.037	---	---	---	[a]8.17	0.674	0.034	-0.168	---	---	---	[a]14.29	1.154	0.075	-0.278	---	---	---
2.03	.132	.026	-.046	-0.010	1.369	-0.012	8.17	.669	.041	-.156	-0.009	1.358	-0.013	14.29	1.165	.061	-.252	-0.008	1.369	-0.003
2.03	.136	.022	-.032	.083	1.512	.055	8.18	.683	.016	-.146	.024	1.505	.055	14.31	1.206	.058	-.270	.025	1.206	.063
2.04	.130	-.043	-.018	.079	1.653	.113	8.19	.706	-.024	-.138	.075	1.654	.115	14.32	1.252	.022	-.288	.075	1.656	.125
2.03	.118	-.113	.002	.166	.896	.169	8.19	.731	-.055	-.102	.159	.903	.169	14.34	1.337	-.035	-.273	.157	.903	.177
2.03	.101	-.222	.032	.309	.734	.220	8.20	.759	-.090	-.062	.304	.736	.220	14.37	1.437	-.137	-.273	.297	.736	.227
2.03	.088	-.344	.054	.466	.668	.254	8.20	.779	-.121	-.016	.450	.669	.259	14.38	1.512	-.242	-.264	.446	.669	.259
[a]4.06	.237	.019	-.060	---	---	---	[a]10.22	.839	.044	-.186	---	---	---	[a]16.32	1.263	.115	-.306	---	---	---
4.06	.230	.028	-.054	-.010	1.367	-.001	10.21	.838	.053	-.189	-.010	1.369	-.013	16.32	1.296	.118	-.285	-.004	1.361	.007
4.06	.221	0	-.070	.084	1.503	.022	10.22	.822	.096	-.183	.086	1.503	.060	16.34	1.369	.080	-.293	.027	1.508	.070
4.06	.221	-.036	-.053	.074	1.657	.111	10.23	.889	-.022	-.169	.076	1.652	.159	16.36	1.430	.047	-.300	.076	1.656	.186
4.06	.222	-.126	---	.155	.907	.168	10.24	.930	-.078	-.150	.164	.896	.171	16.38	1.520	-.010	-.304	.159	.896	.178
4.09	.219	-.220	.011	.290	.736	.220	10.25	.978	-.129	-.115	.301	.737	.221	16.41	1.633	-.129	-.313	.292	.736	.229
4.08	.214	-.344	.040	.456	.669	.256	10.26	1.015	-.306	-.072	.457	.665	.258	16.44	1.722	-.221	-.304	.447	.673	.260
[a]6.13	.304	.025	-.122	---	---	---	[a]12.26	.998	.037	-.234	---	---	---	[a]18.34	1.363	.163	-.359	---	---	---
6.13	.296	.034	-.119	-.009	1.362	-.017	12.25	.999	.067	-.221	-.010	1.366	-.013	18.33	1.360	.174	-.317	-.007	1.378	.020
6.13	.303	.006	-.105	.023	1.503	.056	12.26	1.032	.039	-.203	.083	1.512	.063	18.33	1.397	.184	-.315	.014	1.564	.055
6.13	.314	-.032	-.080	.072	1.657	.111	12.26	1.060	.003	-.185	.073	1.654	.122	18.34	1.489	.145	-.309	.043	1.152	.101
6.14	.327	-.100	-.059	.160	.900	.167	12.25	1.137	-.059	-.203	.159	.901	.174	18.35	1.475	.187	-.304	.074	1.062	.133
6.14	.337	-.222	-.021	.300	.736	.218	12.31	1.210	-.165	-.187	.307	.736	---	18.37	1.539	.096	-.297	.123	.665	.188
6.14	.343	-.331	.015	.451	.669	.253	12.32	1.271	-.278	-.162	.443	.669	.263	18.42	1.684	.022	-.289	.193	.899	.200
														18.43	1.738	-.033	-.272	.292	.767	.231
														18.45	1.822	-.129	-.254	.451	.673	.243

[a]Propellers removed

TABLE VI.- LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10. TAIL HEIGHT, 0.10 b/2; FLAPS UP - Concluded

(j) $M = 0.123$; $R = 4{,}000{,}000$; $\beta = 31°$; $i_t = -4°$

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]2.02	0.103	0.017	0.092	- - -	- - -	- - -
2.01	.091	.023	.083	-0.006	1.337	-0.007
2.01	.086	-.001	.093	.025	1.204	.032
2.01	.081	-.045	.107	.060	1.040	.115
2.01	.068	-.114	.129	.164	.889	.170
2.01	.032	-.221	.176	.309	.733	.217
2.01	.036	-.340	.181	.458	.666	.256
[a]4.07	.283	.019	.050	- - -	- - -	- - -
4.07	.276	-.024	.042	-.009	1.325	-.014
4.07	.277	-.004	.060	.029	1.185	.059
4.07	.279	-.049	.079	.086	1.027	.119
4.07	.277	-.122	.104	.166	.892	.168
4.07	.270	-.220	.140	.306	.733	.218
4.07	.267	-.344	.172	.458	.655	.253
[a]6.11	.458	.023	.007	- - -	- - -	- - -
6.11	.452	.029	.022	-.006	1.341	-.010
6.11	.458	.004	.025	.024	1.197	.055
6.12	.463	-.041	.050	.082	1.034	.117
6.12	.476	-.104	.078	.162	.896	.168
6.12	.486	-.217	.123	.307	.731	.219
6.12	.493	-.337	.160	.461	.660	.253

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]8.16	0.630	0.030	-0.028	- - -	- - -	- - -
8.15	.623	.038	-.024	-0.006	1.352	-0.011
8.16	.638	.009	-.006	.029	1.188	.063
8.16	.658	-.032	.014	.083	1.096	.118
8.17	.681	-.098	.046	.167	.891	.170
8.17	.707	-.204	.089	.308	.733	.218
8.18	.724	-.319	.137	.450	.669	.255
[a]10.20	.799	.040	-.071	- - -	- - -	- - -
10.19	.787	.048	-.059	-.009	1.363	-.014
10.20	.810	.021	-.047	.027	1.196	.060
10.21	.844	-.022	-.028	.084	1.033	.120
10.22	.882	-.066	.005	.169	.890	.171
10.22	.917	-.185	.058	.298	.760	.220
10.24	.950	-.300	.105	.444	.672	.256
[a]12.24	.958	.053	-.105	- - -	- - -	- - -
12.23	.959	.060	-.092	-.008	1.358	-.009
12.23	.987	.034	-.082	.026	1.200	.062
12.25	1.028	-.006	-.065	.079	1.045	.124
12.27	1.083	-.068	-.034	.164	.894	.173
12.28	1.145	-.170	.009	.301	.736	.223
12.29	1.199	-.264	.047	.454	.669	.256

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]14.28	1.120	0.068	-0.137	- - -	- - -	- - -
14.27	1.116	.074	-.129	-0.010	1.357	-0.001
14.29	1.160	.047	-.114	.030	1.188	.071
14.30	1.232	.011	-.105	.081	1.041	.123
14.32	1.277	-.049	-.094	.163	.891	.178
14.34	1.362	-.137	-.075	.265	.766	.223
14.36	1.443	-.252	-.041	.448	.666	.258
[a]16.31	1.241	.107	-.171	- - -	- - -	- - -
16.31	1.236	.109	-.150	-.006	1.365	.009
16.31	1.268	.099	-.148	.015	1.239	.049
16.32	1.307	.083	-.146	.039	1.161	.069
16.33	1.332	.063	-.156	.072	1.067	.122
16.35	1.437	.016	-.192	.108	.985	.152
16.36	1.473	-.085	-.147	.166	.888	.183
16.39	1.578	-.137	-.134	.296	.755	.230
16.41	1.664	-.217	-.118	.436	.667	.260
[a]18.32	1.333	.153	-.230	- - -	- - -	- - -
18.31	1.326	.169	-.183	-.004	1.361	.015
18.31	1.373	.150	-.175	.016	1.273	.061
18.33	1.400	.135	-.168	.044	1.148	.109
18.34	1.445	.113	-.171	.083	1.042	.139
18.35	1.498	.083	-.169	.130	.945	.172
18.38	1.592	.037	-.156	.201	.844	.202
18.42	1.719	-.026	-.119	.298	.753	.235
18.44	1.803	-.142	-.089	.428	.672	.266

[a]Propellers removed

(k) $M = 0.123$; $R = 4{,}000{,}000$; $\beta = 31°$; $i_t = -8°$

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]2.00	0.061	0.080	0.234	- - -	- - -	- - -
2.00	.052	.088	.226	-0.009	1.368	-0.021
2.00	.048	0	.238	.026	1.207	.054
2.00	.040	-.038	.252	.073	1.061	.118
2.00	.030	-.106	.273	.162	.901	.167
1.99	.014	-.222	.304	.310	.733	.221
1.99	-.001	-.334	.336	.461	.665	.252
[a]4.05	.242	.021	.190	- - -	- - -	- - -
4.05	.235	.029	.184	-.009	1.361	-.018
4.05	.236	.002	.199	.024	1.204	.054
4.06	.236	-.043	.217	.079	1.044	.117
4.06	.235	-.111	.245	.164	.895	.170
4.05	.230	-.222	.281	.304	.733	.221
4.05	.227	-.337	.310	.453	.666	.253
[a]6.10	.415	.024	.145	- - -	- - -	- - -
6.09	.413	.030	.144	-.007	1.343	-.009
6.10	.419	.005	.162	.022	1.208	.052
6.10	.428	-.036	.187	.075	1.053	.114
6.11	.436	-.104	.218	.161	.900	.167
6.11	.445	-.218	.263	.300	.733	.221
6.11	.451	-.334	.300	.450	.666	.256

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]8.14	0.585	0.050	0.103	- - -	- - -	- - -
8.14	.582	.058	.107	-0.015	1.360	-0.013
8.14	.596	.012	.126	.024	1.205	.055
8.15	.615	-.029	.155	.075	1.054	.114
8.15	.637	-.097	.187	.163	.897	.169
8.15	.661	-.208	.239	.304	.733	.221
8.16	.678	-.322	.287	.453	.666	.252
[a]10.18	.752	.038	.066	- - -	- - -	- - -
10.19	.756	.045	.076	-.014	1.347	-.017
10.19	.776	.019	.094	.027	1.196	.060
10.20	.806	-.018	.117	.075	1.054	.116
10.20	.841	-.083	.150	.162	.899	.169
10.21	.880	-.197	.208	.310	.732	.223
10.21	.907	-.308	.268	.450	.668	.256
[a]12.22	.913	.049	.025	- - -	- - -	- - -
12.23	.924	.056	.047	-.013	1.347	-.001
12.23	.951	.029	.062	.027	1.196	.066
12.25	.989	-.007	.084	.075	1.054	.121
12.26	1.039	-.070	.119	.162	.899	.174
12.26	1.097	-.178	.182	.302	.733	.224
12.27	1.142	-.283	.236	.441	.670	.255
[a]14.27	1.078	.064	-.006	- - -	- - -	- - -
14.26	1.086	.068	.015	-.005	1.346	.005
14.27	1.106	.055	.020	.015	1.234	.046

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
14.28	1.135	0.035	0.035	0.059	1.157	0.089
14.29	1.165	.010	.047	.076	1.074	.125
14.30	1.205	-.027	.066	.127	.949	.160
14.31	1.255	-.080	.095	.197	.850	.196
14.32	1.321	-.161	.131	.309	.747	.230
14.34	1.376	-.255	.174	.437	.670	.257
[a]16.29	1.195	.100	-.037	- - -	- - -	- - -
16.29	1.213	.102	-.016	-.003	1.347	.012
16.30	1.241	.089	-.009	.017	1.232	.054
16.32	1.302	.054	-.008	.043	1.148	.094
16.33	1.342	.030	-.002	.079	1.049	.129
16.34	1.392	-.003	.007	.127	.950	.163
16.36	1.458	-.052	.027	.196	.850	.197
16.37	1.536	-.135	.052	.310	.745	.235
16.39	1.604	-.218	.088	.424	.673	.258
[a]18.31	1.293	.147	-.054	- - -	- - -	- - -
18.30	1.292	.157	-.042	-.001	1.347	.020
18.31	1.321	.147	-.037	.018	1.232	.058
18.32	1.365	.132	-.030	.043	1.148	.098
18.33	1.400	.107	-.032	.079	1.052	.136
18.34	1.457	.073	-.018	.128	.949	.170
18.39	1.612	-.004	.006	.199	.848	.201
18.41	1.688	-.071	.042	.304	.748	.237
18.42	1.756	-.143	.091	.414	.676	.262

[a]Propellers removed

TABLE VII.– LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10. TAIL HEIGHT, 0.15 b/2; FLAPS UP

M = 0.123; R = 4,000,000; β = 31°; i_t = –4°

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$	α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$	α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]2.02	0.093	0.017	0.100	- - -	- - -	- - -	[a]8.15	0.620	0.031	-0.025	- - -	- - -	- - -	[a]14.28	1.116	0.068	-0.147	- - -	- - -	- - -
2.02	.090	.024	.091	-0.002	1.357	-0.016	8.15	.620	.031	-.022	-0.012	1.317	-0.023	14.27	1.116	.077	-.118	-0.011	1.376	-0.015
2.02	.087	-.003	.103	.027	1.198	.055	8.15	.631	.014	-.002	.022	1.214	.052	14.29	1.151	.051	-.106	.024	1.212	.061
2.02	.081	-.043	.119	.079	1.047	.115	8.16	.632	-.029	.027	.079	1.047	.115	14.30	1.200	.013	-.086	.074	1.058	.126
2.02	.069	-.106	.136	.159	.904	.166	8.16	.671	-.095	.058	.164	.897	.169	14.31	1.253	-.044	-.050	.150	.912	.176
2.01	.054	-.214	.160	.298	.761	.216	8.17	.695	-.195	.103	.290	.766	.216	14.33	1.320	-.134	.006	.274	.773	.223
2.01	.039	-.326	.181	.436	.677	.253	8.18	.716	-.313	.140	.443	.670	.253	14.34	1.397	-.244	.066	.422	.678	.257
[a]4.07	.275	.039	.048	- - -	- - -	- - -	[a]10.20	.785	.040	-.065	- - -	- - -	- - -	[a]16.30	1.229	.106	-.180	- - -	- - -	- - -
4.06	.274	.031	.052	-.012	1.382	-.009	10.20	.787	.051	-.059	-.013	1.388	-.023	16.30	1.239	.108	-.148	-.010	1.392	-.011
4.06	.274	0	.068	.021	1.212	.052	10.20	.809	.021	-.032	.024	1.207	.060	16.32	1.318	.067	-.141	.030	1.198	.074
4.07	.275	-.043	.086	.079	1.044	.115	10.21	.837	-.020	-.006	.077	1.051	.121	16.34	1.371	.035	-.124	.079	1.050	.131
4.07	.277	-.109	.110	.162	.898	.167	10.22	.867	-.083	.033	.156	.905	.172	16.36	1.450	-.023	-.093	.161	.896	.181
4.07	.273	-.211	.138	.291	.763	.216	10.23	.905	-.175	.081	.276	.777	.219	16.37	1.536	-.108	-.051	.280	.769	.224
4.07	.269	-.324	.161	.439	.672	.249	10.23	.945	-.297	.127	.436	.675	.257	16.40	1.619	-.208	.005	.417	.677	.257
[a]6.11	.451	.023	.016	- - -	- - -	- - -	[a]12.24	.949	.032	-.106	- - -	- - -	- - -	[a]18.33	1.341	.153	-.215	- - -	- - -	- - -
6.11	.449	.034	.013	-.013	1.385	-.025	12.23	.954	.062	-.086	-.013	1.386	-.014	18.31	1.318	.168	-.164	-.010	1.403	-.007
6.11	.456	.006	.031	.018	1.220	.051	12.24	.979	.036	-.059	.021	1.223	.059	18.31	1.346	.158	-.157	.015	1.266	.055
6.12	.468	-.036	.054	.075	1.051	.113	12.25	1.020	-.006	-.043	.079	1.045	.123	18.33	1.399	.134	-.148	.043	1.148	.101
6.12	.478	-.103	.084	.159	.899	.166	12.27	1.069	-.066	-.008	.158	.903	.174	18.34	1.485	.114	-.151	.073	1.060	.134
6.12	.468	-.196	.117	.279	.773	.212	12.27	1.123	-.166	.047	.288	.767	.225	18.35	1.482	.083	-.146	.124	.956	.169
6.12	.454	-.324	.151	.431	.674	.255	12.28	1.173	-.271	.101	.428	.678	.255	18.40	1.629	.002	-.126	.197	.850	.201
														18.42	1.715	-.056	-.107	.288	.761	.230
														18.42	1.779	-.137	-.036	.415	.677	.260

[a]Propellers removed

TABLE VIII.– LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10. TAIL REMOVED; INBOARD FLAPS DEFLECTED 30°

(a) M = 0.082; R = 4,000,000; β = 26°

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$	α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$	α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]2.18	0.544	0.037	-0.015	- - -	- - -	- - -	[a]6.30	1.024	0.068	0.022	- - -	- - -	- - -	[a]14.39	1.415	0.154	0.059	- - -	- - -	- - -
2.19	.546	.041	-.017	-0.006	1.037	0.002	6.31	1.037	.078	.022	-0.009	1.090	-0.001	14.40	1.430	.155	.074	-0.005	1.102	0.004
2.20	.552	.003	-.006	.037	.941	.049	6.33	1.087	.036	.041	.042	.942	.049	14.41	1.470	.140	.088	.020	.994	.042
2.21	.554	-.070	.018	.136	.798	.095	6.35	1.162	-.029	.060	.133	.795	.096	14.43	1.604	.079	.111	.064	.895	.078
2.24	.559	-.203	.050	.306	.647	.135	6.39	1.289	-.176	.108	.336	.631	.141	14.49	1.743	.013	.142	.169	.745	.113
2.28	.738	-.605	.102	.834	.466	.188	6.47	1.511	-.534	.192	.832	.467	.188	14.55	1.942	-.130	.198	.398	.596	.155
														14.63	2.204	-.405	.299	.793	.470	.191
[a]4.23	.706	.046	-.002	- - -	- - -	- - -	[a]10.34	1.178	.082	.036	- - -	- - -	- - -							
4.23	.715	.049	-.004	-.006	1.086	.003	10.35	1.193	.089	.042	-.011	1.094	.001	[a]16.41	1.510	.201	.066	- - -	- - -	- - -
4.24	.740	.012	.010	.040	.944	.051	10.36	1.233	.067	.054	.019	.993	.036	16.40	1.488	.211	.084	-.004	1.105	.011
4.26	.786	-.059	.029	.136	.794	.095	10.38	1.284	.036	.068	.064	.894	.067	16.41	1.589	.190	.086	.023	.990	.051
4.29	.855	-.200	.062	.321	.641	.137	10.41	1.367	-.040	.095	.173	.745	.111	16.43	1.600	.171	.115	.064	.896	.078
4.35	.993	-.584	.127	.837	.467	.187	10.46	1.535	-.198	.143	.409	.595	.152	16.43	1.727	.111	.145	.171	.747	.116
							10.53	1.749	-.455	.227	.822	.468	.190	16.56	2.065	-.065	.260	.395	.597	.155
[a]6.27	.866	.056	.009	- - -	- - -	- - -								16.66	2.346	-.315	.381	.783	.472	.191
6.27	.872	.059	.006	-.006	1.087	.004	[a]12.38	1.330	.100	.049	- - -	- - -	- - -							
6.28	.914	.022	.025	.042	.942	.051	12.39	1.348	.106	.055	-.012	1.093	.003	[a]18.41	1.569	.265	.065	- - -	- - -	- - -
6.31	.976	-.044	.045	.136	.796	.094	12.40	1.392	.085	.075	.018	.995	.038	18.39	1.533	.287	.110	-.003	1.094	.019
6.34	1.074	-.192	.083	.335	.634	.139	12.42	1.453	.057	.084	.062	.897	.069	18.40	1.587	.266	.124	.022	.992	.054
6.41	1.258	-.564	.161	.839	.467	.188	12.46	1.573	-.018	.118	.175	.739	.113	18.42	1.654	.245	.166	.054	.895	.082
							12.51	1.743	-.166	.171	.405	.595	.152	18.45	1.762	.186	.219	.166	.747	.122
							12.58	1.977	-.450	.264	.801	.470	.189	18.54	2.070	.064	.368	.399	.595	.160
														18.65	2.409	-.211	.520	.781	.473	.193

[a]Propellers removed

TABLE VIII.– LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10. TAIL REMOVED; INBOARD FLAPS DEFLECTED 30° – Continued

(b) M = 0.082; R = 4,000,000; β = 26°; Inboard propeller only

α	C_L	C_X	C_m	T_c	J	C_P
[a]2.18	0.544	0.037	-0.015	- - -	- - -	- - -
2.19	.555	.038	-.039	-0.005	1.073	0.012
2.20	.569	.019	-.011	.051	.922	.056
2.20	.583	-.008	-.005	.107	.827	.089
2.21	.601	-.035	.004	.189	.732	.110
2.22	.621	-.088	.013	.330	.633	.136
2.24	.655	-.173	.028	.566	.536	.165
2.25	.696	-.255	.046	.894	.456	.188
[a]4.23	.706	.046	-.002	- - -	- - -	- - -
4.23	.722	.047	-.030	-.001	1.062	.013
4.24	.739	.029	0	.047	.930	.052
4.25	.759	.006	.007	.108	.828	.084
4.26	.786	-.024	.019	.193	.733	.111
4.27	.811	-.073	.030	.334	.633	.137
4.29	.863	-.161	.052	.570	.536	.165
4.31	.916	-.279	.076	.898	.456	.188
[a]6.27	.866	.056	.009	- - -	- - -	- - -
6.27	.888	.057	.007	-.001	1.063	.015
6.28	.920	.041	.015	.048	.931	.057
6.29	.932	.021	.024	.109	.833	.086
6.30	.968	-.011	.042	.193	.733	.112
6.32	1.004	-.061	.056	.335	.633	.138
6.34	1.068	-.139	.081	.564	.539	.164
6.36	1.136	-.252	.109	.902	.455	.189

α	C_L	C_X	C_m	T_c	J	C_P
[a]8.30	1.024	0.068	0.022	- - -	- - -	- - -
8.31	1.046	.071	.021	-0.004	1.071	0.013
8.32	1.074	.053	.036	.050	.925	.060
8.33	1.107	.034	.047	.105	.831	.085
8.35	1.148	.004	.064	.193	.731	.112
8.36	1.192	-.040	.078	.327	.636	.136
8.39	1.287	-.122	.107	.569	.537	.166
8.42	1.349	-.233	.139	.895	.456	.188
[a]10.34	1.178	.082	.036	- - -	- - -	- - -
10.36	1.205	.085	.037	-.005	1.070	.014
10.36	1.244	.069	.037	.050	.926	.052
10.38	1.282	.058	.059	.109	.830	.085
10.39	1.322	.024	.081	.194	.732	.113
10.41	1.382	-.019	.106	.328	.636	.138
10.44	1.467	-.093	.137	.564	.538	.165
10.47	1.563	-.206	.173	.890	.456	.188
[a]12.38	1.330	.100	.049	- - -	- - -	- - -
12.39	1.362	.103	.058	-.005	1.072	.016
12.40	1.399	.088	.069	.046	.931	.052
12.41	1.444	.071	.087	.108	.830	.089
12.44	1.498	.047	.109	.185	.730	.115
12.46	1.561	.005	.141	.333	.634	.141
12.49	1.660	-.064	.166	.565	.536	.166
12.52	1.769	-.168	.213	.889	.457	.189

α	C_L	C_X	C_m	T_c	J	C_P
[a]14.39	1.415	0.154	0.039	- - -	- - -	- - -
14.40	1.453	.152	.088	0	1.055	0.023
14.41	1.474	.146	.097	.049	.927	.063
14.42	1.498	.131	.109	.105	.828	.090
14.44	1.585	.110	.136	.175	.731	.117
14.46	1.626	.066	.161	.318	.635	.142
14.50	1.728	-.009	.204	.552	.537	.168
14.54	1.852	-.110	.253	.863	.457	.191
[a]16.41	1.510	.201	.066	- - -	- - -	- - -
16.40	1.499	.209	.083	-.004	1.070	.025
16.40	1.524	.195	.097	.047	.927	.071
16.42	1.569	.181	.118	.101	.835	.095
16.44	1.639	.156	.149	.175	.731	.121
16.46	1.709	.125	.170	.316	.634	.144
16.48	1.769	.092	.187	.518	.535	.165
16.50	1.848	.054	.219	.848	.537	.170
16.56	2.017	-.044	.276	.836	.456	.191
[a]18.41	1.569	.265	.063	- - -	- - -	- - -
18.40	1.550	.263	.104	.023	1.070	.033
18.43	1.625	.252	.129	.050	.927	.073
18.42	1.686	.260	.162	.105	.830	.097
18.44	1.690	.227	.206	.182	.729	.123
18.44	1.722	.207	.242	.319	.633	.148
18.47	1.797	.185	- - -	.513	.535	.160
18.48	1.890	.154	.313	.542	.537	.174
18.54	2.041	.074	.408	.830	.460	.196

[a]Propellers removed

(c) M = 0.082; R = 4,000,000; β = 26°; Outboard propeller only

α	C_L	C_X	C_m	T_c	J	C_P
[a]2.18	0.544	0.037	-0.015	- - -	- - -	- - -
2.19	.550	.040	-.015	-0.008	1.065	0.008
2.19	.555	.020	-.007	.049	.927	.052
2.19	.559	-.008	-.003	.103	.831	.082
2.20	.560	-.039	.002	.188	.734	.112
2.20	.565	-.090	.013	.326	.636	.137
2.20	.578	-.181	.026	.561	.538	.165
2.21	.595	-.297	.037	.846	.464	.188
[a]4.23	.706	.046	-.008	- - -	- - -	- - -
4.23	.713	.047	-.003	-.002	1.064	.004
4.23	.724	.028	.007	.048	.928	.050
4.24	.730	.005	.009	.109	.828	.082
4.24	.740	-.028	.013	.194	.733	.108
4.25	.750	-.082	.021	.333	.634	.137
4.25	.766	-.169	.034	.569	.537	.165
4.28	.778	-.285	.044	.862	.462	.186
[a]6.27	.866	.056	.009	- - -	- - -	- - -
6.27	.879	.058	.011	-.001	1.060	.008
6.27	.887	.039	.013	.049	.928	.051
6.28	.897	.018	.016	.103	.836	.079
6.28	.916	-.017	.025	.198	.731	.110
6.29	.934	-.069	.030	.329	.657	.136
6.30	.955	-.155	.045	.567	.535	.164
6.31	.976	-.269	.054	.878	.463	.186

α	C_L	C_X	C_m	T_c	J	C_P
[a]8.30	1.024	0.068	0.022	- - -	- - -	- - -
8.31	1.038	.071	.022	-0.004	1.068	0.007
8.32	1.056	.050	.029	.048	.928	.051
8.32	1.074	.030	.034	.107	.829	.082
8.33	1.090	-.004	.036	.190	.734	.110
8.33	1.119	-.076	.046	.331	.634	.139
8.34	1.149	-.146	.058	.574	.534	.168
8.36	1.185	-.250	.075	.851	.463	.185
[a]10.34	1.178	.082	.036	- - -	- - -	- - -
10.35	1.201	.084	.037	0	1.061	.022
10.36	1.222	.066	.038	.046	.929	.053
10.36	1.242	.046	.039	.105	.831	.083
10.37	1.267	.016	.046	.190	.732	.109
10.38	1.292	-.026	.049	.328	.636	.138
10.39	1.333	-.120	.064	.561	.538	.165
10.41	1.388	-.231	.080	.848	.462	.187
[a]12.36	1.330	.100	.049	- - -	- - -	- - -
12.39	1.359	.101	.050	-.001	1.064	.020
12.40	1.380	.089	.050	.046	.928	.056
12.40	1.411	.064	.049	.103	.829	.084
12.41	1.441	.054	.055	.189	.732	.111
12.42	1.478	-.014	.063	.324	.633	.140
12.44	1.527	-.095	.077	.560	.538	.166
12.46	1.568	-.208	.099	.828	.462	.186

α	C_L	C_X	C_m	T_c	J	C_P
[a]14.39	1.415	0.154	0.039	- - -	- - -	- - -
14.41	1.462	.146	.074	-0.001	1.064	0.017
14.44	1.543	.106	.077	.052	.928	.059
14.44	1.568	.088	.073	.108	.830	.089
14.45	1.602	.059	.074	.181	.734	.114
14.47	1.651	.012	.084	.321	.634	.141
14.48	1.706	-.070	.098	.548	.537	.169
14.50	1.770	-.170	.112	.820	.465	.188
[a]16.41	1.510	.201	.066	- - -	- - -	- - -
16.41	1.522	.208	.070	.006	1.063	.022
16.42	1.559	.192	.072	.056	.927	.069
16.46	1.675	.161	.077	.105	.828	.090
16.47	1.702	.095	.079	.188	.733	.118
16.48	1.758	.049	.089	.323	.632	.144
16.49	1.811	-.023	.089	.546	.539	.169
16.50	1.850	-.072	.102	.676	.498	.180
16.54	1.875	-.121	.107	.812	.465	.189
[a]18.41	1.569	.265	.063	- - -	- - -	- - -
18.40	1.548	.282	.081	.008	1.063	.027
18.41	1.577	.269	.090	.051	.924	.070
18.41	1.603	.251	.095	.106	.829	.100
18.42	1.649	.234	.103	.184	.732	.124
18.47	1.738	.190	- - -	.324	.632	.149
18.49	1.822	.165	.168	.546	.541	.170
18.49	1.895	.024	.180	.682	.503	.182
18.51	1.959	-.026	.195	.795	.468	.191

[a]Propellers removed

TABLE VIII.– LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10. TAIL REMOVED; INBOARD FLAPS DEFLECTED 30° – Concluded

(d) M = 0.082; R = 4,000,000; β = 31°

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]2.18	0.544	0.037	-0.035	---	---	---
2.19	.548	.047	-.021	-0.013	1.350	-0.016
2.18	.560	.027	-.011	.025	1.249	.043
2.19	.573	.022	-.022	.043	1.183	.063
2.19	.593	-.023	.005	.062	1.042	.102
2.20	.607	-.068	.021	.164	.895	.170
2.21	.643	-.197	.046	.305	.722	.216
2.21	.681	-.324	.068	.486	.652	.252
2.23	.719	-.460	.092	.696	.574	.280
[a]4.23	.706	.046	-.002	---	---	---
4.23	.716	.050	-.005	-.005	1.339	.002
4.23	.724	.038	-.001	.010	1.265	---
4.24	.742	.019	.011	.037	1.158	.076
4.24	.768	-.015	.023	.064	1.034	.129
4.26	.805	-.084	.048	.121	.865	.175
4.28	.864	-.194	.070	.320	.740	.220
4.29	.920	-.326	.096	.503	.643	.259
4.31	.968	-.468	.124	.694	.574	.281
[a]6.27	.866	.056	.009	---	---	---
6.27	.874	.060	.005	-.005	1.347	.001
6.28	.898	.044	.015	.016	1.240	.047
6.29	.940	.027	.026	.040	1.148	.081
6.30	.986	-.001	.037	.078	1.050	.119
6.32	1.003	-.066	.059	.128	.896	.172
6.34	1.079	-.186	.092	.324	.738	.226
6.36	1.144	-.298	.118	.476	.621	.255
6.39	1.215	-.451	.156	.699	.571	.282
[a]8.30	1.024	0.068	0.088	---	---	---
8.31	1.041	.071	.089	-0.005	1.339	0.007
8.32	1.060	.057	.034	.016	1.248	.044
8.33	1.055	.037	.040	.041	1.143	.069
8.34	1.189	.010	.025	.088	1.039	.134
8.36	1.195	-.047	.073	.169	.894	.169
8.39	1.284	-.160	.111	.319	.741	.223
8.41	1.363	-.272	.141	.486	.692	.256
8.49	1.459	-.464	.187	.700	.573	.284
[a]10.34	1.178	.082	.036	---	---	---
10.35	1.191	.090	.043	-.008	1.373	-.010
10.36	1.229	.072	.050	.014	1.247	.047
10.37	1.257	.058	.059	.046	1.136	.089
10.38	1.305	.029	.071	.083	1.036	.126
10.41	1.361	-.028	.097	.163	.893	.173
10.44	1.490	-.130	.136	.306	.746	.222
10.47	1.592	-.232	.174	.496	.645	.259
10.50	1.689	-.385	.220	.638	.574	.282
[a]12.35	1.330	.100	.049	---	---	---
12.39	1.346	.157	.069	-.020	1.321	-.022
12.39	1.385	.089	.073	.017	1.239	.061
12.41	1.422	.072	.088	.043	1.137	.096
12.42	1.475	.049	.098	.063	1.033	.131
12.45	1.572	-.008	.126	.173	.860	.180
12.49	1.696	-.106	.168	.316	.734	.227
12.52	1.809	-.210	.215	.477	.650	.259
12.56	1.913	-.339	.256	.660	.572	---
[a]14.39	1.415	0.154	0.059	---	---	---
14.40	1.465	.144	.103	-0.004	1.340	0.022
14.40	1.469	.143	.093	.021	1.229	.070
14.43	1.520	.119	.114	.051	1.113	.112
14.46	1.595	.078	.134	.094	1.014	.144
14.50	1.730	.021	.154	.171	.882	.187
14.53	1.879	-.073	.163	.315	.737	.232
14.56	1.994	-.176	.184	.480	.649	.262
14.60	2.123	-.303	.194	.697	.576	.283
[a]16.41	1.510	.201	.066	---	---	---
16.39	1.479	.222	.055	-.008	1.378	.015
16.41	1.527	.200	.107	.014	1.254	.049
16.42	1.581	.175	.123	.046	1.134	.108
16.43	1.632	.165	.180	.064	1.021	.143
16.44	1.733	.124	.163	.168	.893	.188
16.46	2.019	-.014	.249	.307	.741	.232
16.59	2.152	-.120	.309	.461	.643	.259
16.63	2.270	-.224	.371	.639	.576	.290
[a]18.41	1.569	.265	.065	---	---	---
18.39	1.536	.263	.118	-.008	1.375	.026
18.40	1.576	.271	.124	.022	1.265	.070
18.43	1.649	.247	.147	.041	1.140	.114
18.42	1.666	.242	.189	.082	1.035	.148
18.46	1.777	.196	.235	.167	.865	.195
18.51	1.964	.187	.325	.307	.739	.242
18.57	2.167	.009	.440	.463	.648	.269
18.61	2.320	-.111	.515	.639	.578	.291

[a]Propellers removed

(e) M = 0.123; R = 4,000,000; β = 31°

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]2.19	0.564	0.039	-0.007	---	---	---
2.19	.557	.041	-.012	-0.004	1.327	0.008
2.19	.565	.014	-.001	.026	1.232	.063
2.20	.590	-.029	.012	.058	1.027	.125
2.20	.615	-.092	.027	.132	.886	.173
2.21	.663	-.201	.053	.316	.746	.223
2.22	.697	-.318	.072	.473	.659	.257
[a]4.23	.724	.047	.004	---	---	---
4.23	.730	.048	-.002	-.004	1.325	.004
4.23	.740	.024	.011	.027	1.192	.063
4.24	.773	-.018	.023	.064	1.032	.123
4.26	.832	-.087	.046	.126	.880	.176
4.28	.869	-.188	.071	.310	.751	.223
4.30	.913	-.303	.097	.467	.660	.255
[a]6.27	.880	.037	.015	---	---	---
6.27	.880	.040	.013	-.004	1.328	0
6.28	.907	.033	.029	.032	1.173	.067
6.30	.950	-.003	.041	.068	1.037	.120
6.32	1.002	-.064	.063	.169	.890	.170
6.35	1.078	-.170	.096	.313	.749	.221
6.38	1.161	-.286	.123	.469	.660	.258
[a]8.31	1.039	0.069	0.030	---	---	---
8.31	1.036	.071	.032	-0.004	1.328	0.005
8.32	1.077	.046	.044	.032	1.178	.068
8.34	1.168	.011	.058	.065	1.032	.122
8.36	1.296	-.051	.081	.173	.884	.171
8.39	1.483	-.150	.115	.330	.731	.223
8.42	1.369	-.259	.150	.472	.659	.253
[a]10.35	1.196	.083	.045	---	---	---
10.34	1.204	.088	.053	-.003	1.339	.001
10.36	1.230	.063	.063	.031	1.179	.070
10.39	1.312	.027	.084	.064	1.031	.127
10.41	1.393	-.030	.105	.178	.883	.177
10.44	1.497	-.125	.141	.308	.750	.225
10.47	1.588	-.227	.176	.466	.661	.256
[a]12.39	1.351	.101	.068	---	---	---
12.38	1.357	.106	.074	-.012	1.343	.003
12.40	1.405	.085	.086	.027	1.195	.065
12.43	1.487	.048	.106	.089	1.024	.121
12.46	1.568	-.003	.132	.167	.889	.172
12.49	1.657	-.091	.169	.300	.734	.225
12.52	1.798	-.198	.207	.458	.652	.259
[a]14.39	1.419	0.151	0.077	---	---	---
14.40	1.456	.151	.090	-0.004	1.326	0.080
14.41	1.479	.139	.104	.028	1.193	.073
14.44	1.580	.092	.130	.062	1.037	.133
14.49	1.737	.024	.153	.170	.887	.183
14.53	1.877	-.029	.197	.300	.738	.229
14.57	1.993	-.097	.243	.453	.662	.252
[a]16.41	1.523	.199	.073	---	---	---
16.40	1.514	.216	.111	-.009	1.362	.013
16.41	1.543	.192	.104	.020	1.228	.057
16.42	1.581	.185	.119	.049	1.183	.107
16.44	1.622	.170	.138	.092	1.040	.139
16.46	1.696	.143	.153	.139	.937	.159
16.48	1.788	.107	.182	.205	.842	.204
16.54	1.973	.015	.252	.311	.744	.236
16.58	2.118	-.060	.302	.437	.668	.260
[a]18.41	1.567	.263	.075	---	---	---
18.40	1.554	.282	.121	.003	1.341	.031
18.40	1.592	.272	.137	.022	1.230	.075
18.43	1.655	.245	.144	.052	1.122	.127
18.43	1.693	.240	.196	.083	1.037	.165
18.45	1.744	.225	.211	.130	.947	.177
18.48	1.840	.181	.246	.204	.844	.209
18.51	1.982	.139	.294	.297	.737	.239
18.56	2.127	.055	.327	.421	.674	.264

[a]Propellers removed

TABLE IX.– LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10. TAIL HEIGHT, 0; INBOARD FLAPS DEFLECTED 30°

(a) $M = 0.082$; $R = 4{,}000{,}000$; $\beta = 26°$; $i_t = 0°$

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]-2.18	0.322	0.038	0.032	- - -	- - -	- - -
2.19	.351	.039	.048	-0.005	1.073	0.008
2.20	.363	.037	.061	.042	.949	.049
2.21	.380	-.057	.084	.098	.845	.078
2.21	.601	-.099	.111	.181	.745	.107
2.24	.639	-.204	.151	.309	.644	.139
2.26	.660	-.317	.206	.238	.546	.169
2.27	.700	-.614	.265	.837	.466	.189
[a]4.22	.689	.047	.006	- - -	- - -	- - -
4.24	.727	.050	.024	-.005	1.074	.004
4.24	.754	.045	.039	.040	.949	.048
4.25	.782	-.028	.055	.096	.844	.080
4.27	.813	-.092	.075	.182	.743	- - -
4.29	.859	-.194	.114	.314	.644	.136
4.31	.916	-.358	.180	.537	.547	.164
4.34	.971	-.589	.252	.843	.465	.187
[a]6.27	.873	.058	-.022	- - -	- - -	- - -
6.28	.905	.061	-.009	-.004	1.073	.006
6.29	.940	.026	0	.041	.941	.049
6.31	.983	-.016	.020	.098	.841	.080
6.33	1.034	-.076	.038	.185	.743	.109
6.34	1.086	-.177	.070	.313	.645	.137
6.37	1.171	-.341	.138	.540	.545	.165
6.41	1.261	-.566	.216	.839	.467	.189

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]8.32	1.022	0.072	-0.020	- - -	- - -	- - -
8.33	1.064	.074	-.044	-0.005	1.073	0.010
8.33	1.131	.037	-.043	.046	.941	.055
8.36	1.191	-.001	-.038	.101	.841	.085
8.38	1.254	-.051	-.022	.184	.742	.113
8.40	1.327	-.157	.014	.314	.645	.139
8.44	1.431	-.318	.050	.537	.545	.168
8.48	1.545	-.551	.164	.836	.466	.188
[a]10.36	1.219	.089	-.100	- - -	- - -	- - -
10.38	1.257	.054	-.076	-.007	1.080	.008
10.39	1.325	.021	-.074	.043	.937	.053
10.42	1.398	.022	-.071	.102	.838	.084
10.44	1.470	-.032	-.065	.184	.743	.112
10.47	1.571	-.129	-.044	.318	.643	.141
10.51	1.697	-.277	.014	.534	.545	.167
10.55	1.793	-.428	.073	.740	.465	.185
10.55	1.832	-.493	.099	.841	.464	.188
[a]12.41	1.398	.112	-.133	- - -	- - -	- - -
12.42	1.431	.113	-.105	-.008	1.078	.011
12.44	1.509	.083	-.103	.040	.943	.055
12.46	1.581	.046	-.111	.093	.839	.085
12.49	1.670	-.003	-.108	.171	.743	.112
12.52	1.789	-.083	-.096	.302	.646	.139
12.58	1.946	-.237	-.065	.533	.545	.169
12.60	2.043	-.356	-.019	.690	.495	.184
12.63	2.108	-.447	.010	.820	.466	.191

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]14.42	1.303	0.163	-0.169	- - -	- - -	- - -
14.43	1.352	.171	-.133	-0.006	1.079	0.012
14.49	1.430	.108	-.134	.043	.936	.057
14.51	1.566	.076	-.135	.097	.839	.087
14.54	1.663	.029	-.133	.171	.743	.115
14.58	1.993	-.053	-.127	.308	.642	.142
14.64	2.172	-.198	-.120	.534	.543	.171
14.67	2.286	-.301	-.083	.677	.497	.184
14.69	2.358	-.383	-.054	.803	.468	.191
[a]16.44	1.394	.218	-.233	- - -	- - -	- - -
16.44	1.416	.226	-.181	-.002	1.079	.019
16.46	1.486	.208	-.182	.043	.940	.056
16.50	1.776	.175	-.164	.098	.839	.086
16.54	1.990	.098	-.154	.171	.743	.113
16.59	2.085	.025	-.079	.306	.641	.143
16.69	2.282	-.102	-.021	.521	.546	.173
16.68	2.416	-.219	-.082	.688	.493	.188
16.71	2.467	-.282	-.006	.786	.470	.194
[a]18.43	1.624	.302	-.250	- - -	- - -	- - -
18.44	1.666	.305	-.208	-.003	1.090	.025
18.46	1.792	.282	-.178	.044	.838	.071
18.48	1.797	.235	-.161	.095	.843	.096
18.51	1.922	.216	-.119	.171	.743	.122
18.57	2.099	.153	-.077	.298	.644	.149
18.64	2.372	-.008	.044	.515	.544	.173
18.67	2.490	-.107	.075	.663	.500	.186
18.71	2.593	-.182	.097	.774	.472	.194

[a]Propellers removed

(b) $M = 0.082$; $R = 4{,}000{,}000$; $\beta = 26°$; $i_t = -2°$

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]2.17	0.311	0.039	0.030	- - -	- - -	- - -
2.18	.344	.041	.052	-0.006	1.079	0.005
2.19	.339	.032	.116	.046	.939	.052
2.20	.334	-.042	.137	.096	.848	.084
2.21	.373	-.106	.168	.185	.740	.110
2.22	.422	-.210	.203	.321	.642	- - -
2.24	.530	-.384	.270	.547	.542	.163
2.26	.626	-.603	.327	.843	.467	.188
[a]4.22	.688	.047	.087	- - -	- - -	- - -
4.23	.697	.032	.070	-.006	1.080	.006
4.24	.727	.014	.092	.043	.942	.048
4.25	.732	-.051	.111	.103	.838	.081
4.27	.767	-.094	.138	.183	.740	.110
4.28	.824	-.191	.173	.316	.644	.135
4.30	.883	-.358	.232	.560	.547	- - -
4.33	.955	-.597	.324	.832	.469	.187
[a]6.26	.858	.039	.038	- - -	- - -	- - -
6.27	.882	.028	.046	-.006	1.083	.004
6.29	.918	.002	.039	.043	.932	.052
6.30	.961	-.017	.076	.100	.840	.082
6.32	1.009	-.070	.107	.184	.743	.111
6.34	1.058	-.173	.144	.313	.640	.136
6.37	1.143	-.349	.220	.532	.543	.165
6.39	1.218	-.567	.294	.838	.467	.187

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]8.31	1.033	0.072	0.007	- - -	- - -	- - -
8.32	1.062	.075	.013	-0.005	1.077	0.006
8.34	1.122	.039	.022	.043	.939	.058
8.35	1.164	-.001	.034	.102	.836	.083
8.38	1.225	-.060	.061	.185	.740	.113
8.40	1.301	-.137	.102	.320	.641	.136
8.43	1.400	-.283	.176	.555	.542	.166
8.46	1.501	-.590	.255	.825	.469	.188
[a]10.36	1.208	.089	-.087	- - -	- - -	- - -
10.37	1.241	.091	-.032	-.006	1.078	.010
10.38	1.300	.056	-.010	.049	.934	.056
10.41	1.364	.021	-.002	.103	.837	.085
10.43	1.446	-.036	.022	.197	.731	.116
10.46	1.541	-.128	.049	.334	.633	.136
10.50	1.666	-.290	.120	.549	.540	.167
10.54	1.784	-.483	.200	.827	.469	.187
[a]12.40	1.382	.109	-.068	- - -	- - -	- - -
12.40	1.413	.110	-.043	-.004	1.073	.011
12.43	1.487	.079	-.035	.047	.935	.058
12.45	1.558	.044	-.034	.103	.837	.085
12.48	1.632	-.002	-.021	.190	.731	.115
12.52	1.767	-.056	-.010	.321	.639	.140
12.57	1.918	-.230	.043	.561	.534	.165
12.61	2.060	-.436	.126	.819	.469	.187

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]14.42	1.302	0.153	-0.090	- - -	- - -	- - -
14.43	1.336	.162	-.068	-0.004	1.078	0.015
14.45	1.667	.106	-.071	.097	.940	.058
14.50	1.746	.076	-.069	.102	.838	.088
14.53	1.849	.029	-.063	.184	.740	.114
14.57	1.979	-.056	-.057	.326	.633	.138
14.63	2.162	-.205	-.083	.555	.535	.166
14.68	2.326	-.384	.044	.810	.469	.190
[a]16.44	1.376	.223	-.163	- - -	- - -	- - -
16.43	1.395	.224	-.139	-.002	1.077	.021
16.46	1.674	.193	-.122	.052	.936	.067
16.48	1.780	.178	-.092	.106	.837	.093
16.56	1.995	.077	-.068	.194	.731	.116
16.60	2.129	.003	-.045	.327	.634	.141
16.66	2.329	-.126	-.009	.546	.536	.167
16.68	2.419	-.220	.008	.677	.497	.183
16.70	2.465	-.254	.066	.791	.471	.191
[a]18.43	1.631	.304	-.200	- - -	- - -	- - -
18.44	1.674	.306	-.149	0	1.076	.029
18.47	1.788	.268	-.143	.043	.939	.071
18.48	1.808	.252	-.129	.077	.840	.090
18.51	1.983	.217	-.089	.178	.741	.123
18.55	2.086	.150	-.006	.310	.639	.148
18.64	2.360	-.011	.110	.529	.542	.174
18.68	2.489	-.106	.158	.681	.501	.189
18.69	2.503	-.181	.161	.770	.473	.191

[a]Propellers removed

TABLE IX.– LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10. TAIL HEIGHT, 0; INBOARD FLAPS DEFLECTED 30° – Concluded

(c) M = 0.082; R = 4,000,000; β = 26°; i_t = –4°

α	C_L	C_X	C_m	$T_{c_{ST}}$	J_{ST}	$C_{T_{ST}}$	α	C_L	C_X	C_m	$T_{c_{ST}}$	J_{ST}	$C_{T_{ST}}$	α	C_L	C_X	C_m	$T_{c_{ST}}$	J_{ST}	$C_{T_{ST}}$
[a]2.17	0.493	0.039	0.156	---	---	---	[a]8.35	1.011	0.071	0.078	---	---	---	[a]14.42	1.450	0.157	-0.015	---	---	---
2.17	.496	.038	.153	0.003	1.051	0.001	8.31	1.042	.070	.073	0.008	1.039	0.010	14.42	1.497	.159	-.012	0.002	1.034	0.002
2.18	.515	-.008	.150	.056	.922	.056	8.38	1.093	.031	.038	.006	.919	.009	14.48	1.652	.092	-.008	.056	.919	.056
2.19	.531	-.047	.133	.112	.847	.095	8.34	1.144	-.007	.007	.112	.817	.095	14.47	1.820	.000	.002	.109	.881	.090
2.20	.550	-.115	.231	.199	.738	.115	8.36	1.201	-.049	.143	.199	.728	.115	14.52	1.880	.027	.002	.196	.789	.116
2.21	.573	-.220	.289	.341	.631	.140	8.38	1.273	-.169	.188	.338	.631	.141	14.56	1.954	-.070	.083	.333	.630	.143
2.23	.605	-.357	.335	.570	.535	.168	8.40	1.373	-.335	.271	.568	.534	.169	14.61	2.133	-.222	.076	.568	.533	.171
2.30	.643	-.616	.356	.863	.462	.189	8.45	1.475	-.546	.351	.873	.462	.190	14.66	2.263	-.394	.159	.869	.462	.187
[a]4.22	.673	.047	.130	---	---	---	[a]10.39	1.188	.086	.037	---	---	---	[a]16.42	1.554	.209	-.050	---	---	---
4.22	.685	.043	.132	.004	1.027	.011	10.36	1.220	.088	.047	.002	1.033	.017	16.42	1.564	.216	-.053	.004	1.041	.006
4.23	.709	.002	.134	.022	.923	.026	10.38	1.280	.081	.055	.055	.921	.059	16.45	1.639	.192	-.041	.057	.924	.058
4.24	.729	-.039	.137	.115	.843	.085	10.40	1.345	.014	.089	.112	.844	.085	16.47	1.789	.128	-.024	.115	.846	.084
4.26	.789	-.102	.212	.197	.739	.113	10.42	1.419	-.049	.090	.203	.735	.115	16.52	1.970	.021	.002	.198	.738	.116
4.27	.806	-.209	.250	.339	.631	.140	10.45	1.514	-.142	.140	.341	.629	.140	16.59	2.181	-.012	.025	.341	.628	.140
4.29	.862	-.354	.327	.573	.534	.169	10.49	1.626	-.308	.226	.574	.532	.167	16.64	2.292	-.136	.077	.542	.535	.170
4.32	.927	-.604	.402	.875	.461	.191	10.55	1.739	-.506	.315	.868	.463	.188	16.67	2.362	-.223	.140	.836	.463	.189
[a]6.26	.832	.058	.103	---	---	---	[a]12.39	1.360	.106	.004	---	---	---	16.69	2.408	-.309	.158	.825	.466	.190
6.26	.857	.056	.106	.003	1.028	.012	12.40	1.397	.104	.020	.003	1.033	.017	[a]18.42	1.590	.250	-.147	---	---	---
6.28	.885	.035	.103	.036	.921	.036	12.42	1.468	.078	.060	.056	.917	.060	18.43	1.643	.237	-.079	.004	1.033	.004
6.29	.939	-.024	.116	.118	.844	.086	12.44	1.536	.039	.092	.110	.806	.087	18.45	1.761	.170	-.047	.052	.922	.075
6.31	.989	-.093	.173	.196	.739	.118	12.47	1.625	-.047	.091	.199	.728	.115	18.47	1.850	.243	-.014	.121	.821	.103
6.33	1.043	-.181	.242	.338	.629	.140	12.50	1.738	-.195	.065	.333	.631	.140	18.51	1.907	.205	.021	.202	.728	.128
6.37	1.184	-.366	.334	.571	.533	.169	12.55	1.866	-.365	.157	.564	.533	.168	18.56	2.096	.131	.057	.327	.624	.155
6.38	1.293	-.580	.393	.860	.460	.190	12.59	2.015	-.556	.246	.857	.463	.188	18.64	2.361	-.087	.126	.548	.535	.176
														18.67	2.458	-.118	.183	.825	.467	.186
														18.69	2.570	-.197	.238	.797	.467	.188

[a]Propellers removed

TABLE X.– LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10. TAIL HEIGHT, 0.10 b/2; INBOARD FLAPS DEFLECTED 30°

(a) M = 0.082; R = 4,000,000; β = 26°; i_t = 0°

α	C_L	C_X	C_m	$T_{c_{ST}}$	J_{ST}	$C_{T_{ST}}$	α	C_L	C_X	C_m	$T_{c_{ST}}$	J_{ST}	$C_{T_{ST}}$	α	C_L	C_X	C_m	$T_{c_{ST}}$	J_{ST}	$C_{T_{ST}}$
[a]2.18	0.500	0.039	0.066	---	---	---	[a]8.31	1.040	0.071	-0.085	---	---	---	[a]14.42	1.487	0.168	-0.109	---	---	---
2.18	.501	.038	.069	-0.003	1.073	0.010	8.32	1.060	.073	-.088	-0.006	1.081	0.007	14.42	1.491	.171	-.079	-0.004	1.038	0.016
2.19	.519	.003	.081	.048	.921	.051	8.33	1.104	.059	.005	.042	.940	.051	14.47	1.625	.163	-.068	.041	.948	.050
2.20	.555	-.039	.093	.097	.848	.080	8.35	1.151	.038	.089	.096	.843	.080	14.48	1.725	.078	-.066	.098	.845	.086
2.20	.592	-.101	.117	.159	.744	.109	8.36	1.204	-.008	.128	.159	.744	.109	14.51	1.809	.086	-.054	.159	.747	.114
2.22	.696	-.208	.144	.302	.638	.137	8.39	1.277	-.150	.200	.310	.640	.136	14.54	1.932	-.004	.025	.304	.634	.141
2.24	.837	-.378	.184	.540	.542	.164	8.42	1.374	-.319	.292	.532	.542	.164	14.58	2.082	-.091	.107	.520	.547	.170
2.26	.984	-.597	.226	.848	.467	.187	8.45	1.497	-.530	.324	.829	.467	.188	14.64	2.249	-.302	.159	.788	.471	.188
[a]4.23	.696	.047	.039	---	---	---	[a]10.36	1.208	.088	-.080	---	---	---	[a]16.43	1.562	.238	-.159	---	---	---
4.23	.701	.046	.031	-.004	1.073	.010	10.37	1.225	.088	-.047	-.006	1.080	.005	16.43	1.591	.220	-.154	0	1.035	.030
4.24	.729	.023	.037	.040	.940	.052	10.38	1.293	.059	-.002	.039	.943	.052	16.45	1.653	.155	-.121	.043	.939	.064
4.25	.756	-.007	.053	.094	.848	.080	10.40	1.348	.023	.002	.092	.848	.081	16.47	1.731	.074	-.091	.097	.838	.093
4.27	.789	-.088	.098	.150	.746	.108	10.42	1.418	-.034	.040	.150	.744	.110	16.54	1.956	-.079	-.049	.170	.744	.118
4.28	.832	-.189	.131	.311	.636	.135	10.45	1.506	-.184	.063	.308	.639	.138	16.59	2.089	.005	.001	.301	.643	.144
4.30	.891	-.373	.174	.534	.542	.164	10.48	1.621	-.373	.156	.532	.537	.164	16.62	2.250	-.130	.101	.523	.544	.173
4.34	.938	-.584	.223	.835	.467	.188	10.53	1.765	-.599	.233	.834	.468	.190	16.66	2.376	-.235	.154	.826	.464	.186
														16.67	2.465	-.307	.199	.783	.471	.190
[a]6.27	.833	.058	.008	---	---	---	[a]12.40	1.372	.110	-.092	---	---	---	[a]18.44	1.651	.290	-.188	---	---	---
6.27	.854	.058	.007	-.003	1.079	.003	12.40	1.408	.112	-.078	-.003	1.079	.009	18.46	1.696	.258	-.161	0	1.031	.035
6.29	.922	.024	.036	.042	.942	.052	12.42	1.477	.088	-.053	.042	.940	.053	18.49	1.733	.204	-.132	.041	.942	.059
6.30	.971	-.025	.054	.095	.843	.080	12.43	1.540	.047	-.032	.093	.845	.080	18.47	1.802	.233	-.154	.092	.845	.085
6.32	1.002	-.077	.080	.153	.744	.109	12.46	1.616	-.006	.010	.171	.744	.111	18.50	1.905	.206	-.088	.170	.744	.120
6.35	1.068	-.195	.119	.314	.636	.136	12.49	1.721	-.201	.064	.315	.644	.138	18.54	2.071	.159	-.006	.321	.644	.148
6.38	1.135	-.340	.168	.548	.540	.165	12.53	1.854	-.394	.143	.548	.537	.165	18.60	2.317	-.004	.186	.514	.549	.169
6.40	1.225	-.559	.221	.837	.467	.187	12.57	1.994	-.603	.238	.834	.468	.191	18.63	2.459	-.180	.197	.884	.463	.187
														18.67	2.533	-.187	.236	.781	.472	.194

[a]Propellers removed

TABLE X.– LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10. TAIL HEIGHT, 0.10 b/2; INBOARD FLAPS DEFLECTED 30° – Continued

(b) M = 0.082; R = 4,000,000; β = 26°; i_t = 0°; Inboard propeller only

α	C_L	C_X	C_m	T_c	J	C_P
*2.18	0.920	0.039	0.066	- - -	- - -	- - -
2.19	.916	.039	.069	-0.006	1.083	0.009
2.19	.933	.022	.084	.036	.933	.048
2.19	.944	-.001	.097	.094	.842	.082
2.20	.937	-.031	.111	.173	.749	.111
2.21	.977	-.061	.130	.306	.648	.136
2.21	.999	-.154	.158	.532	.548	.167
2.23	.635	-.251	.181	.839	.466	.189
*4.23	.696	.047	.030	- - -	- - -	- - -
4.23	.701	.047	.039	-.006	1.083	.008
4.23	.715	.030	.053	.038	.949	.050
4.24	.734	.009	.069	.093	.847	.079
4.25	.751	-.019	.088	.176	.750	.108
4.25	.776	-.070	.109	.308	.648	.136
4.27	.815	-.158	.144	.537	.547	.165
4.29	.860	-.266	.179	.843	.465	.188
*6.27	.668	.038	.002	- - -	- - -	- - -
6.27	.672	.039	.007	-.006	1.082	.005
6.28	.695	.043	.028	.039	.950	.047
6.29	.919	.022	.046	.087	.850	.081
6.29	.942	-.008	.070	.181	.746	.109
6.30	.973	-.053	.101	.304	.651	.136
6.32	1.005	-.132	.142	.532	.550	.166
6.35	1.052	-.247	.187	.844	.466	.189

α	C_L	C_X	C_m	T_c	J	C_P
*8.31	1.042	0.071	-0.026	- - -	- - -	- - -
8.32	1.052	.073	-.016	-0.005	1.081	0.005
8.32	1.074	.056	.006	.038	.946	.051
8.33	1.105	.037	.029	.094	.847	.080
8.35	1.135	.009	.054	.176	.747	.108
8.36	1.171	-.058	.094	.306	.649	.138
8.38	1.234	-.132	.145	.532	.549	.166
8.40	1.304	-.222	.196	.837	.466	.189
*10.36	1.228	.088	-.060	- - -	- - -	- - -
10.36	1.223	.090	-.042	-.005	1.084	.009
10.37	1.234	.074	-.018	.038	.947	.052
10.38	1.285	.057	.008	.093	.848	.079
10.39	1.324	.029	.041	.175	.748	.112
10.41	1.373	-.013	.087	.305	.648	.139
10.43	1.442	-.064	.141	.528	.550	.168
10.45	1.489	-.138	.178	.873	.503	.189
10.46	1.533	-.193	.208	.835	.466	.190
*12.40	1.375	.110	-.092	- - -	- - -	- - -
12.40	1.399	.111	-.067	-.006	1.080	.011
12.41	1.415	.097	-.038	.036	.948	.054
12.42	1.453	.081	-.009	.093	.845	.088
12.43	1.493	-.057	.040	.166	.747	.110
12.45	1.550	.016	.081	.301	.647	.140
12.47	1.624	-.053	.143	.527	.546	.167
12.49	1.676	-.098	.187	.663	.502	.177
12.50	1.719	-.156	.218	.818	.466	.191

α	C_L	C_X	C_m	T_c	J	C_P
*14.42	1.487	0.162	-0.109	- - -	- - -	- - -
14.42	1.492	.169	-.082	-0.005	1.081	0.016
14.43	1.524	.154	-.052	.038	.946	.060
14.44	1.546	.143	-.031	.094	.844	.090
14.45	1.577	.118	-.001	.166	.747	.114
14.47	1.606	.073	.044	.300	.647	.138
14.50	1.761	.008	.118	.523	.547	.170
14.52	1.821	-.057	.160	.629	.503	.180
14.54	1.892	-.093	.211	.805	.468	.192
*16.43	1.562	.218	-.139	- - -	- - -	- - -
16.42	1.549	.221	-.121	-.004	1.083	.017
16.44	1.595	.209	-.119	.038	.947	.063
16.45	1.631	.198	-.093	.094	.847	.091
16.46	1.686	.172	-.059	.168	.746	.118
16.48	1.750	.134	-.015	.299	.648	.144
16.52	1.871	.077	.075	.518	.548	.169
16.55	1.965	.024	.111	.658	.502	.181
16.57	2.049	-.020	.154	.798	.469	.191
*18.44	1.652	.290	-.188	- - -	- - -	- - -
18.42	1.607	.299	-.117	-.002	1.085	.027
18.45	1.687	.284	-.121	.040	.949	.067
18.46	1.715	.263	-.122	.093	.846	.094
18.47	1.772	.232	-.059	.171	.742	.119
18.48	1.797	.230	-.005	.295	.646	.143
18.50	1.904	.177	.120	.527	.548	.174
18.53	2.000	.136	.154	.610	.502	.186
18.55	2.059	.100	.185	.778	.471	.194

*Propellers removed

(c) M = 0.082; R = 4,000,000; β = 26°; i_t = 0°; Outboard propeller only

α	C_L	C_X	C_m	T_c	J	C_P
*2.18	0.920	0.039	0.066	- - -	- - -	- - -
2.18	.936	.042	.069	-0.011	1.090	0
2.19	.941	.024	.076	.041	.932	.046
2.19	.943	.001	.077	.097	.847	.078
2.19	.951	-.032	.088	.176	.746	.110
2.20	.954	-.065	.094	.303	.648	.138
2.20	.982	-.130	.102	.526	.550	.168
2.20	.570	-.228	.112	.832	.470	.189
*4.23	.696	.047	.030	- - -	- - -	- - -
4.23	.711	.049	.038	-.008	1.088	-.001
4.23	.729	.030	.059	.046	.934	.089
4.23	.743	.009	.063	.094	.847	.091
4.24	.756	-.024	.090	.176	.749	.111
4.25	.767	-.073	.077	.303	.649	.138
4.25	.784	-.153	.066	.530	.550	.166
4.26	.780	-.260	.078	.824	.469	.192
*6.27	.668	.038	.002	- - -	- - -	- - -
6.27	.684	.050	.002	-.006	1.087	.003
6.28	.696	.042	.007	.041	.946	.048
6.28	.918	.022	.018	.093	.850	.079
6.29	.924	-.010	.017	.179	.748	.109
6.29	.945	-.060	.021	.307	.648	.139
6.30	.974	-.144	.033	.532	.550	.166
6.31	.999	-.269	.038	.821	.470	.192

α	C_L	C_X	C_m	T_c	J	C_P
*8.31	1.042	0.071	-0.026	- - -	- - -	- - -
8.32	1.062	.074	-.027	-0.008	1.087	-0.002
8.33	1.076	.054	-.023	.039	.947	.046
8.33	1.094	.034	-.021	.100	.836	.079
8.33	1.111	.003	-.020	.174	.748	.110
8.34	1.138	-.047	-.015	.306	.648	.139
8.36	1.176	-.130	-.007	.531	.549	.167
8.37	1.215	-.243	.005	.823	.469	.190
*10.36	1.208	.088	-.060	- - -	- - -	- - -
10.36	1.229	.091	-.054	-.008	1.088	.001
10.37	1.252	.071	-.053	.042	.947	.051
10.38	1.274	.052	-.052	.097	.847	.081
10.38	1.307	.024	-.054	.179	.747	.108
10.39	1.333	-.025	-.047	.309	.648	.137
10.41	1.379	-.106	-.046	.521	.550	.168
10.42	1.434	-.218	-.030	.824	.470	.190
*12.40	1.375	.110	-.092	- - -	- - -	- - -
12.40	1.404	.111	-.066	-.008	1.088	.003
12.41	1.427	.094	-.065	.040	.948	.051
12.42	1.458	.075	-.067	.094	.846	.084
12.43	1.489	.046	-.065	.171	.743	.111
12.44	1.527	0	-.069	.297	.648	.140
12.46	1.584	-.080	-.067	.520	.548	.168
12.49	1.638	-.136	-.064	.679	.503	.181
12.48	1.646	-.190	-.076	.801	.469	.191

α	C_L	C_X	C_m	T_c	J	C_P
*14.42	1.487	0.162	-0.109	- - -	- - -	- - -
14.42	1.500	.173	-.102	-0.008	1.090	0.010
14.43	1.528	.118	-.120	.040	.946	.055
14.47	1.632	.101	-.122	.093	.847	.087
14.48	1.664	.074	-.120	.187	.747	.114
14.49	1.709	.047	-.124	.297	.647	.140
14.51	1.777	-.049	-.122	.523	.547	.169
14.52	1.816	-.104	-.116	.658	.503	.184
14.53	1.847	-.154	-.107	.786	.471	.191
*16.43	1.562	.218	-.139	- - -	- - -	- - -
16.44	1.591	.221	-.147	-.006	1.091	.018
16.44	1.614	.207	-.146	.038	.949	.064
16.45	1.652	.191	-.151	.092	.847	.096
16.49	1.764	.137	-.163	.166	.749	.116
16.50	1.802	.074	-.177	.296	.648	.144
16.53	1.894	.002	-.171	.511	.551	.171
16.54	1.931	-.049	-.158	.670	.505	.184
16.55	1.986	-.095	-.176	.782	.471	.191
*18.44	1.651	.290	-.188	- - -	- - -	- - -
18.43	1.633	.302	-.204	-.004	1.088	.024
18.44	1.657	.290	-.184	.038	.947	.068
18.45	1.687	.280	-.155	.089	.848	.095
18.45	1.708	.262	-.164	.166	.749	.124
18.47	1.796	.230	-.157	.296	.648	.152
18.52	1.931	.173	-.197	.514	.548	.177
18.53	2.001	.137	-.144	.650	.504	.190
18.54	2.032	.102	-.142	.765	.473	.197

*Propellers removed

TABLE X.– LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10. TAIL HEIGHT, 0.10 b/2; INBOARD FLAPS DEFLECTED 30° – Concluded

(d) $M = 0.082$; $R = 4{,}000{,}000$; $\beta = 26°$; $i_t = -2°$

α	C_L	C_X	C_m	$T_{c_{BY}}$	J_{BY}	$C_{P_{BY}}$
[a]2.17	0.504	0.038	0.132	---	---	---
2.17	.514	.041	.135	-0.007	1.079	0.005
2.18	.508	.004	.147	.044	.943	.049
2.20	.549	-.040	.169	.100	.893	.080
2.20	.569	-.107	.188	.181	.793	.110
2.22	.595	-.208	.216	.319	.643	.137
2.20	.631	-.377	.257	.537	.547	.166
2.21	.682	-.606	.297	.837	.466	.185
[a]4.22	.680	.046	.093	---	---	---
4.23	.697	.050	.100	-.005	1.080	.005
4.23	.715	.011	.120	.043	.943	.031
4.24	.748	-.031	.142	.097	.844	.061
4.26	.780	-.095	.161	.183	.743	.110
4.28	.824	-.189	.196	.312	.646	.134
4.30	.884	-.359	.243	.544	.543	.167
4.33	.954	-.591	.296	.842	.466	.189
[a]6.26	.956	.057	.069	---	---	---
6.27	.971	.059	.067	-.006	1.076	.007
6.28	.907	.025	.094	.043	.940	.032
6.30	.948	-.017	.118	.098	.843	.079
6.31	.994	-.081	.146	.167	.741	.110
6.32	1.061	-.176	.177	.314	.645	.136
6.36	1.131	-.339	.230	.540	.547	.165
6.39	1.229	-.571	.291	.844	.466	.190

[a]Propellers removed

α	C_L	C_X	C_m	$T_{c_{BY}}$	J_{BY}	$C_{P_{BY}}$
[a]8.31	1.026	0.070	0.088	---	---	---
8.32	1.031	.073	.096	-0.006	1.075	0.006
8.33	1.088	.056	.068	.043	.940	.031
8.33	1.136	.002	.095	.094	.847	.079
8.36	1.198	-.060	.129	.179	.744	.109
8.38	1.266	-.158	.164	.310	.645	.137
8.42	1.374	-.313	.227	.540	.545	.165
8.46	1.486	-.536	.288	.825	.468	.190
[a]10.39	1.198	.086	.009	---	---	---
10.36	1.226	.090	.021	-.006	1.075	.005
10.37	1.278	.075	.044	.088	.946	.032
10.39	1.339	.037	.072	.094	.843	.066
10.42	1.406	-.038	.109	.173	.742	.111
10.44	1.494	-.127	.151	.305	.644	.138
10.48	1.610	-.283	.218	.530	.548	.167
10.53	1.731	-.502	.286	.824	.467	.191
[a]12.40	1.373	.126	-.020	---	---	---
12.40	1.391	.128	-.006	-.006	1.076	.023
12.42	1.459	.079	.016	.099	.944	.036
12.44	1.529	.045	.043	.094	.842	.054
12.46	1.605	-.010	.083	.173	.739	.111
12.49	1.704	-.093	.134	.308	.645	.139
12.54	1.851	-.245	.220	.532	.548	.167
12.58	1.990	-.451	.303	.804	.469	.191

α	C_L	C_X	C_m	$T_{c_{BY}}$	J_{BY}	$C_{P_{BY}}$
[a]14.41	1.448	0.163	-0.021	---	---	---
14.41	1.498	.160	-.016	-0.006	1.081	0.014
14.47	1.637	.104	-.006	.040	.942	.037
14.49	1.710	.068	.014	.098	.837	.090
14.52	1.820	.009	.060	.193	.722	.122
14.55	1.913	-.039	.107	.304	.643	.141
14.59	2.052	-.204	.168	.523	.547	.170
14.64	2.241	-.395	.233	.738	.469	.190
[a]16.42	1.549	.209	-.038	---	---	---
16.42	1.574	.215	-.034	.006	1.050	.008
16.44	1.637	.193	-.026	.041	.944	.063
16.46	1.704	.171	-.022	.092	.848	.091
16.54	1.944	.075	.032	.189	.745	.116
16.58	2.067	0	.058	.301	.644	.143
16.62	2.238	-.127	.120	.516	.548	.172
16.66	2.346	-.238	.154	.675	.497	---
16.72	2.506	-.368	.354	.772	.473	.199
[a]18.42	1.292	.297	-.104	---	---	---
18.43	1.433	.293	-.034	.007	1.044	.039
18.46	1.733	.261	-.048	.043	.940	.070
18.48	1.802	.239	-.032	.094	.844	.096
18.50	1.881	.210	.033	.189	.745	.125
18.54	2.044	.150	.076	.297	.646	.147
18.58	2.210	-.016	.132	.520	.545	.173
18.66	2.443	-.126	.223	.690	.493	.188
18.67	2.508	-.189	.384	.774	.472	.193

(e) $M = 0.082$; $R = 4{,}000{,}000$; $\beta = 26°$; $i_t = -4°$

α	C_L	C_X	C_m	$T_{c_{BY}}$	J_{BY}	$C_{P_{BY}}$
[a]2.17	0.493	0.037	0.137	---	---	---
2.18	.499	.040	.138	-0.009	1.083	0.005
2.18	.506	.009	.214	.042	.949	.049
2.19	.523	-.059	.232	.097	.847	.082
2.20	.543	-.120	.254	.175	.749	.108
2.18	.569	-.199	.285	.309	.649	.134
2.20	.609	-.373	.316	.531	.548	.163
2.21	.660	-.601	.350	.838	.468	.188
[a]4.21	.671	.043	.153	---	---	---
4.21	.672	.049	.158	-.006	1.087	.004
4.23	.697	.013	.176	.041	.945	.049
4.23	.721	-.028	.199	.096	.845	.077
4.25	.772	-.090	.222	.177	.750	.107
4.27	.795	-.191	.253	.305	.650	.136
4.29	.822	-.358	.301	.529	.551	.163
4.31	.926	-.586	.349	.834	.469	.189
[a]6.26	.847	.034	.120	---	---	---
6.26	.850	.050	.125	-.005	1.086	---
6.27	.881	.024	.144	.039	.949	.051
6.29	.923	-.014	.167	.093	.850	.078
6.31	.968	-.075	.192	.181	.748	.106
6.38	1.081	-.271	.229	.303	.652	.134
6.35	1.103	-.337	.267	.536	.548	.164
6.38	1.199	-.566	.343	.834	.469	.190

α	C_L	C_X	C_m	$T_{c_{BY}}$	J_{BY}	$C_{P_{BY}}$
[a]8.30	1.017	0.067	0.090	---	---	---
8.31	1.027	.072	.097	-0.007	1.089	0.002
8.32	1.066	.058	.119	.038	.950	.048
8.33	1.114	.005	.143	.087	.857	.075
8.36	1.176	-.060	.176	.174	.748	.110
8.37	1.243	-.154	.212	.305	.650	.137
8.41	1.350	-.314	.277	.533	.548	.165
8.43	1.460	-.531	.350	.826	.470	.190
[a]10.34	1.184	.082	.069	---	---	---
10.35	1.195	.086	.074	-.007	1.085	.003
10.36	1.251	.053	.099	.048	.958	.031
10.38	1.319	.017	.124	.096	.847	.058
10.40	1.379	-.038	.157	.176	.749	.110
10.44	1.489	-.126	.203	.309	.648	.137
10.47	1.588	-.288	.273	.528	.547	.165
10.52	1.724	-.494	.346	.821	.470	.190
[a]12.39	1.355	.122	.036	---	---	---
12.39	1.372	.126	.033	-.007	1.084	.008
12.42	1.459	.074	.073	.043	.946	.036
12.43	1.502	.040	.102	.097	.846	.064
12.45	1.578	-.013	.141	.177	.747	.112
12.48	1.678	-.097	.191	.302	.650	.139
12.53	1.815	-.249	.258	.523	.547	.168
12.58	1.963	-.449	.338	.815	.470	.189

α	C_L	C_X	C_m	$T_{c_{BY}}$	J_{BY}	$C_{P_{BY}}$
[a]14.40	1.433	0.156	0	---	---	---
14.40	1.438	.179	.043	-0.006	1.087	0.012
14.46	1.607	.103	.042	.043	.952	.034
14.48	1.680	.069	.076	.096	.847	.064
14.50	1.772	.018	.113	.179	.744	.114
14.54	1.896	-.059	.167	.302	.648	.140
14.58	2.094	-.200	.247	.514	.549	.167
14.63	2.199	-.404	.348	.801	.471	.191
[a]16.42	1.549	.206	-.038	---	---	---
16.41	1.535	.214	.004	.007	1.038	.027
16.43	1.599	.192	.022	.046	.949	.060
16.45	1.673	.169	.036	.097	.851	.091
16.53	1.915	.071	.096	.175	.750	.117
16.56	2.034	.001	.145	.302	.649	.141
16.61	2.204	-.132	.241	.511	.549	.172
16.65	2.328	-.258	.305	.670	.500	.185
16.66	2.376	-.308	.358	.777	.474	.192
[a]18.43	1.617	.288	-.044	---	---	---
18.41	1.584	.289	.005	.005	1.034	.030
18.44	1.699	.258	.001	.047	.939	.062
18.46	1.769	.232	.027	.102	.846	.096
18.49	1.822	.211	.037	.178	.750	.122
18.53	2.000	.147	.143	.306	.648	.146
18.61	2.271	-.010	.232	.509	.550	.173
18.64	2.367	-.130	.258	.676	.497	.186
18.66	2.408	-.192	.298	.763	.473	.194

[a]Propellers removed

TABLE XI.– LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10. TAIL REMOVED; OUTBOARD FLAPS DEFLECTED 30°
M = 0.082; R = 4,000,000; β = 26°

α	C_L	C_X	C_m	$T_{c_{BW}}$	J_{BW}	$C_{P_{BW}}$
[a]2.14	0.463	0.031	-0.200	---	---	---
2.14	.454	.035	-.197	-0.005	1.083	0.004
2.32	.446	-.001	-.194	.038	.977	.049
2.35	.452	-.043	-.192	.056	.841	.080
2.37	.450	-.103	-.189	.177	.740	.110
2.38	.395	-.214	-.182	.319	.601	.148
2.60	.334	-.316	-.173	.460	.526	.186
2.61	.331	-.398	-.168	.579	.501	.178
2.61	.324	-.401	-.166	.623	.479	.189
[a]4.28	.584	.037	-.193	---	---	---
4.33	.592	.048	-.185	-.003	1.073	.007
4.34	.584	.006	-.180	.046	.966	.049
4.62	.542	-.032	-.172	.120	.863	.081
4.63	.473	-.098	-.165	.179	.766	.109
4.64	.416	-.164	-.158	.303	.694	.137
4.65	.368	-.225	-.150	.395	.634	.166
4.67	.316	-.278	-.145	.488	.602	.177
4.68	.313	-.288	-.147	.533	.567	.187
[a]6.80	.743	.046	-.184	---	---	---
6.83	.752	.047	-.172	-.003	1.076	.006
6.83	.734	.010	-.167	.038	.971	.049
6.83	.616	-.064	-.160	.096	.890	.080
6.84	.550	-.128	-.154	.180	.797	.109
6.88	.522	-.191	-.155	.264	.738	.138
6.88	.522	-.249	-.145	.353	.695	.156
6.91	1.083	-.257	-.151	.382	.709	.172
6.94	1.063	-.267	-.118	.385	.667	.188

[a]Propellers removed

α	C_L	C_X	C_m	$T_{c_{BW}}$	J_{BW}	$C_{P_{BW}}$
[a]8.85	0.900	0.057	-0.172	---	---	---
8.87	.924	.061	-.164	-0.006	1.081	0.005
8.88	.936	.008	-.149	.039	.945	.052
8.89	1.000	-.061	-.130	.077	.843	.080
8.91	1.037	-.092	-.140	.181	.763	.111
8.93	1.108	-.159	-.131	.316	.670	.137
8.96	1.136	-.194	-.129	.348	.615	.169
8.98	1.135	-.246	-.099	.433	.566	.189
[a]10.95	1.222	.055	-.15	---	---	---
10.95	1.278	.055	-.142	-.007	1.080	.008
10.95	1.243	.050	-.139	.044	.980	.047
10.94	1.282	.003	-.132	.093	.892	.084
10.96	1.240	-.051	-.129	.174	.814	.109
10.98	1.228	-.142	-.115	.305	.697	.142
10.91	1.403	-.237	-.098	.429	.646	.167
10.88	1.327	-.321	-.085	.528	.599	.186
10.85	1.368	-.309	-.073	.621	.568	.189
[a]12.34	1.297	.055	-.150	---	---	---
12.34	1.325	.059	-.128	-.009	1.083	.009
12.35	1.298	.037	-.120	.040	.992	.037
12.36	1.395	.022	-.118	.083	.920	.064
12.40	1.434	-.021	-.112	.158	.872	.113
12.43	1.531	-.104	-.096	.308	.848	.143
12.47	1.637	-.171	-.070	.420	.815	.170
12.49	1.736	-.237	-.052	.473	.796	.181
12.51	1.785	-.264	-.054	.529	.766	.186

α	C_L	C_X	C_m	$T_{c_{BW}}$	J_{BW}	$C_{P_{BW}}$
[a]14.36	1.331	0.115	-0.143	---	---	---
14.37	1.372	.117	-.134	-0.006	1.081	0.013
14.40	1.445	.077	-.109	.040	.984	.037
14.42	1.533	.043	-.102	.094	.839	.069
14.44	1.605	-.005	-.095	.171	.748	.115
14.46	1.694	-.088	-.071	.237	.646	.140
14.52	1.870	-.232	-.059	.388	.549	.169
14.54	1.953	-.317	-.048	.479	.500	.183
14.56	2.005	-.403	-.034	.570	.470	.191
[a]16.38	1.441	.159	-.108	---	---	---
16.37	1.423	.176	-.083	-.004	1.086	.014
16.38	1.499	.146	-.075	.041	.943	.060
16.44	1.639	.094	-.057	.093	.842	.085
16.47	1.734	.051	-.037	.150	.763	.115
16.50	1.845	-.021	-.023	.211	.698	.141
16.54	2.025	-.150	.021	.324	.642	.172
16.56	2.102	-.243	.033	.366	.608	.188
16.59	2.184	-.331	.066	.434	.578	.192
[a]18.38	1.480	.245	-.028	---	---	---
18.36	1.453	.254	-.046	-.003	1.081	.005
18.38	1.538	.221	-.022	.049	.986	.065
18.41	1.625	.186	.007	.097	.893	.095
18.43	1.728	.153	.023	.171	.793	.122
18.48	1.922	.050	.157	.246	.737	.146
18.52	2.033	-.063	.164	.289	.697	.178
18.54	2.131	-.182	.191	.338	.669	.187
18.56	2.249	-.329	.209	.372	.673	.183

TABLE XII.– LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10. TAIL HEIGHT, 0.10 b/2; OUTBOARD FLAPS DEFLECTED 30°
(a) M = 0.082; R = 4,000,000; β = 26°; i_t = 0°

α	C_L	C_X	C_m	$T_{c_{BW}}$	J_{BW}	$C_{P_{BW}}$
[a]2.15	0.458	0.033	-0.217	---	---	---
2.15	.441	.038	-.214	-0.004	1.079	0.003
2.32	.435	.003	-.211	.036	.973	.044
2.36	.438	-.043	-.211	.085	.864	.080
2.37	.445	-.104	-.217	.173	.767	.107
2.39	.411	-.209	-.216	.329	.696	.140
2.60	.341	-.321	-.220	.515	.654	.169
2.61	.321	-.399	-.223	.620	.638	.181
2.62	.372	-.393	-.226	.620	.649	.188
[a]4.28	.687	.040	-.237	---	---	---
4.29	.689	.041	-.225	-.004	1.077	.006
4.30	.690	.009	-.220	.039	.977	.046
4.31	.693	-.033	-.226	.084	.898	.081
4.33	.693	-.097	-.228	.178	.797	.109
4.34	.747	-.164	-.229	.310	.696	.136
4.37	.782	-.227	-.240	.394	.649	.159
4.38	.809	-.283	-.251	.488	.595	.180
4.39	.832	-.326	-.254	.532	.568	.190
[a]6.84	.802	.049	-.305	---	---	---
6.84	.784	.023	-.302	-.003	1.080	.008
6.83	.825	.023	-.296	.034	.980	.042
6.85	.857	-.020	-.297	.084	.893	.079
6.88	.898	-.080	-.289	.180	.797	.106
6.90	.945	-.135	-.289	.254	.751	.136
6.93	1.026	-.243	-.279	.340	.747	.166
6.96	1.058	-.270	-.285	.423	.697	.188
6.97	1.105	-.291	-.287	.479	.689	.190

α	C_L	C_X	C_m	$T_{c_{BW}}$	J_{BW}	$C_{P_{BW}}$
[a]8.89	0.974	0.058	-0.346	---	---	---
8.89	.955	.063	-.333	-0.007	1.083	0.005
8.90	1.026	.037	-.328	.040	.987	.044
8.92	1.093	-.001	-.330	.086	.923	.073
8.93	1.113	-.064	-.321	.173	.797	.109
8.95	1.186	-.141	-.309	.309	.746	.137
8.98	1.271	-.203	-.311	.339	.744	.158
8.10	1.337	-.261	-.320	.394	.698	.180
8.12	1.379	-.332	-.322	.416	.678	.190
[a]10.93	1.340	.055	-.395	---	---	---
10.93	1.344	.055	-.383	-.009	1.081	.009
10.94	1.389	.024	-.384	.033	.983	.047
10.97	1.459	.015	-.385	.087	.872	.080
10.98	1.523	-.040	-.411	.169	.813	.108
10.98	1.616	-.137	-.408	.308	.745	.140
10.96	1.740	-.236	-.409	.398	.745	.168
10.95	1.811	-.279	-.412	.484	.699	.183
10.90	1.888	-.329	-.413	.508	.692	.189
[a]12.38	1.338	.055	-.454	---	---	---
12.38	1.337	.055	-.448	-.010	1.088	.009
12.39	1.379	.029	-.451	.033	.986	.041
12.41	1.477	.023	-.466	.081	.847	.083
12.44	1.594	-.046	-.473	.161	.773	.112
12.48	1.698	-.101	-.469	.222	.721	.145
12.51	1.776	-.147	-.477	.311	.723	.167
12.54	1.860	-.198	-.470	.366	.705	.188
12.56	1.927	-.251	-.470	.397	.673	.191

α	C_L	C_X	C_m	$T_{c_{BW}}$	J_{BW}	$C_{P_{BW}}$
[a]14.41	1.406	0.121	-0.499	---	---	---
14.42	1.427	.123	-.505	-0.006	1.081	0.009
14.44	1.478	.094	-.514	.037	.978	.044
14.47	1.562	.059	-.528	.091	.843	.074
14.49	1.728	.088	-.583	.168	.732	.112
14.53	1.854	-.031	-.621	.239	.647	.140
14.57	2.009	-.209	-.614	.311	.551	.168
14.60	2.143	-.336	-.612	.388	.520	.182
14.62	2.178	-.399	-.608	.380	.473	.191
[a]16.42	1.575	.185	-.531	---	---	---
16.41	1.542	.204	-.557	-.008	1.084	.012
16.44	1.621	.176	-.518	.044	.942	.062
16.49	1.713	.122	-.528	.080	.874	.089
16.51	1.821	.080	-.547	.121	.763	.114
16.55	1.978	.007	-.513	.202	.672	.142
16.59	2.153	-.114	-.480	.267	.621	.169
16.62	2.232	-.209	-.459	.290	.597	.182
16.64	2.324	-.294	-.431	.317	.576	.193
[a]18.42	1.598	.281	-.512	---	---	---
18.41	1.580	.273	-.471	-.003	1.073	.006
18.44	1.690	.237	-.461	.032	.974	.063
18.46	1.750	.206	-.490	.059	.920	.081
18.48	1.823	.157	-.474	.103	.839	.105
18.51	1.987	.051	-.472	.201	.751	.136
18.59	2.220	-.093	-.461	.303	.739	.172
18.63	2.325	-.213	-.461	.353	.724	.189
18.64	2.390	-.281	-.461	.384	.679	.193

[a]Propellers removed

TABLE XII.– LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10. TAIL HEIGHT, 0.10 b/2; OUTBOARD FLAPS DEFLECTED 30° – Continued

(b) M = 0.082; R = 4,000,000; β = 26°; i_t = 0°; Inboard propeller only

α	C_L	C_X	C_m	T_c	J	C_P	α	C_L	C_X	C_m	T_c	J	C_P	α	C_L	C_X	C_m	T_c	J	C_P
[a]2.15	0.452	0.033	-0.217	- - -	- - -	- - -	[a]8.29	0.974	0.062	-0.346	- - -	- - -	- - -	[a]14.41	1.458	0.131	-0.499	- - -	- - -	- - -
2.15	.446	.033	-.220	-0.006	1.077	0.003	8.29	.972	.063	-.342	-0.003	1.097	0.003	14.42	1.474	.130	-.488	-0.004	1.086	0.010
2.15	.449	.016	-.213	.043	.938	.050	8.30	.996	.048	-.334	.039	.947	.051	14.42	1.503	.116	-.473	.038	.948	.057
2.16	.460	-.003	-.209	.101	.835	.079	8.30	1.015	.030	-.323	.094	.846	.077	14.43	1.532	.097	-.451	.100	.851	.085
2.16	.465	-.036	-.207	.154	.738	.106	8.31	1.040	0	-.303	.173	.748	.108	14.44	1.571	.071	-.417	.166	.748	.113
2.17	.473	-.064	-.203	.204	.649	.136	8.31	1.064	-.048	-.269	.238	.646	.136	14.46	1.629	.036	-.347	.227	.648	.140
2.17	.478	-.166	-.199	.258	.550	.165	8.33	1.100	-.132	-.229	.308	.544	.168	14.48	1.714	-.030	-.233	.319	.548	.166
2.17	.481	-.229	-.191	.321	.465	.190	8.35	1.152	-.243	-.161	.389	.451	.190	14.50	1.764	-.083	-.165	.369	.503	.180
														14.51	1.806	-.136	-.114	.410	.467	.198
[a]4.20	.627	.040	-.257	- - -	- - -	- - -	[a]10.33	1.140	.075	-.390	- - -	- - -	- - -	[a]16.48	1.574	.186	-.321	- - -	- - -	- - -
4.19	.623	.038	-.253	-.006	1.035	.001	10.33	1.146	.078	-.389	-.008	1.083	.010	16.48	1.543	.194	-.321	-.001	1.073	.017
4.20	.639	.024	-.242	.049	.945	.050	10.34	1.171	.069	-.386	.038	.945	.054	16.49	1.587	.180	-.314	.039	.946	.061
4.20	.644	.008	-.238	.097	.844	.078	10.35	1.204	.044	-.378	.094	.844	.083	16.44	1.633	.157	-.326	.094	.844	.089
4.21	.653	-.027	-.233	.150	.746	.105	10.36	1.235	.015	-.368	.171	.747	.110	16.45	1.671	.134	-.337	.167	.738	.115
4.21	.653	-.078	-.226	.210	.647	.131	10.37	1.273	-.030	-.355	.320	.638	.135	16.47	1.724	.100	-.394	.235	.648	.143
4.22	.660	-.160	-.218	.277	.541	.159	10.39	1.329	-.104	-.336	.289	.545	.167	16.51	1.678	.048	-.460	.311	.549	.171
4.23	.696	-.279	-.189	.348	.465	.181	10.40	1.361	-.156	-.327	.377	.501	.176	16.53	1.920	-.023	-.449	.364	.503	.183
							10.41	1.395	-.217	-.322	.435	.465	.191	16.53	1.989	-.070	-.430	.394	.468	.192
[a]6.24	.802	.049	-.305	- - -	- - -	- - -	[a]12.36	1.318	.092	-.434	- - -	- - -	- - -	[a]18.46	1.598	.221	-.512	- - -	- - -	- - -
6.24	.793	.052	-.302	-.006	1.069	.007	12.37	1.318	.096	-.438	-.009	1.083	.010	18.39	1.577	.278	-.485	-.003	1.087	.003
6.24	.807	.034	-.295	.045	.946	.052	12.38	1.326	.080	-.434	.038	.944	.055	18.43	1.637	.266	-.305	.039	.948	.065
6.25	.814	.015	-.273	.097	.845	.081	12.40	1.391	.062	-.433	.092	.845	.084	18.42	1.634	.229	-.442	.094	.846	.093
6.26	.840	-.015	-.264	.150	.739	.107	12.41	1.433	.037	-.430	.165	.746	.112	18.43	1.645	.244	-.433	.168	.747	.119
6.26	.860	-.065	-.250	.214	.640	.134	12.43	1.490	-.004	-.422	.238	.646	.139	18.45	1.748	.214	-.428	.234	.648	.146
6.27	.877	-.138	-.236	.275	.549	.160	12.44	1.549	-.077	-.407	.321	.546	.167	18.49	1.896	.151	-.389	.308	.550	.178
6.28	.917	-.254	-.220	.338	.464	.191	12.46	1.592	-.128	-.395	.385	.503	.180	18.50	1.939	.112	-.341	.375	.502	.184
							12.47	1.633	-.184	-.388	.421	.468	.190	18.52	1.985	.066	-.300	.421	.470	.195

[a]Propellers removed

(c) M = 0.082; R = 4,000,000; β = 26°; i_t = 0°; Outboard propeller only

α	C_L	C_X	C_m	T_c	J	C_P	α	C_L	C_X	C_m	T_c	J	C_P	α	C_L	C_X	C_m	T_c	J	C_P
[a]2.15	0.452	0.033	-0.217	- - -	- - -	- - -	[a]8.29	0.974	0.062	-0.346	- - -	- - -	- - -	[a]14.41	1.458	0.131	-0.499	- - -	- - -	- - -
2.15	.451	.035	-.224	-0.004	1.081	0.002	8.29	.973	.064	-.352	-0.003	1.075	0.007	14.42	1.508	.132	-.513	-0.006	1.081	0.009
2.16	.459	.019	-.220	.033	.964	.046	8.29	.994	.047	-.360	.037	.951	.049	14.43	1.526	.120	-.523	.031	.965	.048
2.16	.464	-.002	-.226	.087	.859	.076	8.30	1.014	.029	-.367	.089	.854	.076	14.44	1.569	.093	-.521	.082	.854	.087
2.17	.477	-.035	-.230	.171	.751	.105	8.32	1.041	-.001	-.375	.172	.759	.109	14.46	1.633	.062	-.505	.168	.746	.115
2.17	.489	-.083	-.229	.210	.646	.131	8.33	1.077	-.051	-.382	.251	.646	.139	14.47	1.668	.026	-.509	.300	.646	.142
2.18	.508	-.170	-.230	.269	.549	.160	8.35	1.123	-.132	-.394	.329	.546	.169	14.50	1.746	-.046	-.529	.336	.542	.189
2.19	.528	-.242	-.238	.339	.496	.182	8.37	1.159	-.196	-.399	.700	.499	.184	14.51	1.797	-.087	-.606	.382	.502	.184
2.19	.551	-.293	-.236	.385	.463	.193	8.38	1.181	-.243	-.399	.383	.469	.192	14.52	1.832	-.149	-.616	.778	.473	.195
[a]4.20	.627	.040	-.257	- - -	- - -	- - -	[a]10.33	1.140	.075	-.390	- - -	- - -	- - -	[a]16.48	1.574	.186	-.321	- - -	- - -	- - -
4.20	.625	.042	-.255	-0.001	1.084	.008	10.33	1.148	.080	-.400	-.008	1.087	.003	16.48	1.541	.191	-.341	-.004	1.085	.017
4.20	.636	.026	-.270	.034	.961	.046	10.34	1.173	.064	-.408	.038	.947	.045	16.44	1.601	.182	-.344	.033	.964	.058
4.21	.632	.008	-.271	.093	.849	.080	10.35	1.209	.043	-.421	.097	.859	.079	16.46	1.732	.154	-.371	.084	.851	.087
4.22	.646	-.029	-.277	.173	.750	.112	10.37	1.231	.014	-.434	.160	.738	.106	16.50	1.781	.101	-.357	.171	.738	.116
4.23	.683	-.082	-.282	.314	.643	.140	10.37	1.274	-.033	-.447	.319	.639	.137	16.51	1.842	.060	-.409	.235	.648	.144
4.24	.719	-.169	-.284	.340	.544	.171	10.39	1.334	-.113	-.462	.392	.540	.165	16.54	1.929	-.006	-.438	.312	.549	.173
4.24	.732	-.229	-.283	.391	.493	.184	10.40	1.374	-.172	-.472	.368	.499	.183	16.56	1.988	-.057	-.446	.357	.502	.185
4.25	.747	-.281	-.283	.429	.468	.192	10.41	1.397	-.218	-.475	.409	.470	.192	16.57	2.026	-.093	-.492	.772	.473	.195
[a]6.24	.802	.049	-.305	- - -	- - -	- - -	[a]12.36	1.318	.092	-.434	- - -	- - -	- - -	[a]18.46	1.598	.221	-.512	- - -	- - -	- - -
6.24	.800	.051	-.306	-.001	1.092	.003	12.38	1.325	.097	-.434	-.008	1.081	.009	18.41	1.589	.225	-.281	-.004	1.090	.020
6.25	.816	.036	-.305	.039	.950	.045	12.39	1.350	.083	-.439	.031	.959	.049	18.42	1.605	.212	-.280	.035	.960	.063
6.25	.823	.015	-.316	.091	.852	.079	12.40	1.391	.063	-.449	.090	.847	.085	18.44	1.664	.181	-.323	.092	.850	.098
6.26	.838	-.017	-.326	.176	.747	.111	12.41	1.431	.037	-.505	.155	.747	.113	18.44	1.699	.143	-.308	.155	.750	.120
6.27	.881	-.068	-.330	.213	.646	.140	12.43	1.481	-.007	-.524	.306	.644	.140	18.47	1.783	.102	-.321	.296	.648	.147
6.29	.919	-.150	-.335	.341	.547	.170	12.44	1.521	-.073	-.547	.332	.545	.170	18.50	1.835	.115	-.287	.305	.551	.171
6.29	.930	-.214	-.337	.364	.497	.189	12.46	1.566	-.140	-.557	.377	.499	.183	18.50	1.891	.073	-.350	.423	.503	.186
6.31	.966	-.282	-.339	.390	.469	.193	12.47	1.589	-.184	-.563	.501	.470	.191	18.52	1.966	.040	-.357	.767	.474	.195

[a]Propellers removed

TABLE XII.– LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10. TAIL HEIGHT, 0.10 b/2; OUTBOARD FLAPS DEFLECTED 30° – Concluded

(d) M = 0.082; R = 4,000,000; β = 26°; i_t = –8°

α	C_L	C_X	C_m	$T_{c_{BF}}$	J_{BF}	$C_{P_{BF}}$	α	C_L	C_X	C_m	$T_{c_{BF}}$	J_{BF}	$C_{P_{BF}}$	α	C_L	C_X	C_m	$T_{c_{BF}}$	J_{BF}	$C_{P_{BF}}$
[a]0.11	0.340	0.035	0.046	- - -	- - -	- - -	[a]8.42	0.890	0.058	-0.090	- - -	- - -	- - -	[a]14.37	1.364	0.116	-0.228	- - -	- - -	- - -
0.12	.348	.039	.046	-0.004	1.076	0.005	8.43	.895	.058	-.090	-0.009	1.059	0.008	14.38	1.367	.120	-.201	-0.006	1.035	0.003
0.12	.349	.041	.048	.038	.947	.048	8.47	.905	.058	-.079	.053	.946	.050	14.41	1.389	.150	-.205	.040	.941	.051
0.13	.378	-.039	.050	.056	.845	.080	8.48	.905	-.059	-.088	.096	.845	.090	14.43	1.361	.249	-.207	.094	.843	.095
0.14	.397	-.101	.053	.179	.744	.108	8.50	1.016	-.067	-.073	.180	.745	.109	14.46	1.349	-.003	-.205	.170	.744	.115
0.15	.425	-.158	.055	.265	.648	.136	8.51	1.083	-.162	-.081	.306	.646	.136	14.50	1.769	-.039	-.194	.305	.647	.142
0.17	.480	-.233	.072	.340	.546	.167	8.54	1.164	-.228	.002	.341	.545	.167	14.53	1.913	-.229	-.166	.326	.546	.171
0.18	.492	-.299	.080	.422	.447	.190	8.57	1.256	-.341	.004	.433	.447	.190	14.56	2.000	-.233	-.136	.470	.500	.184
														14.58	2.072	-.418	-.118	.734	.470	.199
[a]4.36	.349	.040	0	- - -	- - -	- - -	[a]10.09	1.037	.021	-.194	- - -	- - -	- - -	[a]16.40	1.499	.160	-.296	- - -	- - -	- - -
4.36	.350	.045	.003	-.006	1.035	-.001	10.10	1.055	.024	-.123	-.006	1.073	.003	16.39	1.470	.185	-.225	-.004	1.057	.006
4.37	.355	.008	.030	.039	.943	.050	10.11	1.114	.042	-.116	.016	.940	.038	16.40	1.541	.158	-.221	.042	.942	.069
4.39	.382	-.031	.009	.096	.847	.096	10.13	1.169	.068	-.103	.092	.847	.092	16.47	1.703	.099	-.222	.096	.846	.091
4.39	.402	-.097	.030	.184	.744	.109	10.15	1.234	-.033	-.059	.179	.745	.110	16.49	1.795	.055	-.232	.173	.740	.136
4.41	.436	-.183	.080	.297	.647	.136	10.17	1.313	-.140	-.060	.325	.636	.137	16.50	1.869	-.006	-.197	.301	.644	.144
4.43	.465	-.262	.036	.362	.546	.165	10.19	1.409	-.301	-.081	.398	.545	.169	16.56	2.032	-.147	-.146	.347	.537	.170
4.45	.734	-.398	.081	.835	.447	.189	10.23	1.536	-.503	.014	.846	.449	.194	16.59	2.169	-.242	-.101	.830	.539	.183
														16.66	2.203	-.320	-.094	.781	.442	.194
[a]6.21	.401	.048	-.048	- - -	- - -	- - -	[a]10.34	1.213	.057	-.187	- - -	- - -	- - -	[a]18.40	1.547	.246	-.206	- - -	- - -	- - -
6.21	.403	.038	-.046	-.005	1.087	.004	10.34	1.232	.081	-.143	-.005	1.071	.030	18.39	1.528	.257	-.193	-.006	1.059	.005
6.22	.438	.017	-.033	.039	.941	.050	10.36	1.303	.057	-.138	.041	.940	.056	18.42	1.630	.225	-.189	.042	.940	.066
6.23	.470	-.024	-.022	.097	.844	.081	10.38	1.363	.009	-.153	.093	.843	.094	18.43	1.673	.205	-.182	.093	.844	.094
6.25	.613	-.066	-.020	.182	.741	.110	10.41	1.444	-.032	-.157	.173	.741	.113	18.45	1.768	.159	-.171	.170	.744	.121
6.26	.678	-.124	-.008	.309	.647	.137	10.44	1.514	-.118	-.158	.305	.644	.141	18.51	1.939	.050	-.163	.301	.646	.145
6.28	.803	-.245	.018	.548	.546	.167	10.48	1.664	-.278	-.032	.395	.544	.169	18.56	2.140	-.081	-.082	.331	.545	.173
6.31	.967	-.355	.062	.838	.447	.189	10.52	1.806	-.470	-.044	.835	.449	.192	18.59	2.238	-.153	-.035	.826	.534	.187
														18.62	2.343	-.222	-.016	.783	.473	.196

[a]Propellers removed

TABLE XIII.– LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10. TAIL REMOVED; INBOARD FLAPS DEFLECTED 60°

(a) M = 0.082; R = 4,000,000; β = 26°

α	C_L	C_X	C_m	$T_{c_{BF}}$	J_{BF}	$C_{P_{BF}}$	α	C_L	C_X	C_m	$T_{c_{BF}}$	J_{BF}	$C_{P_{BF}}$	α	C_L	C_X	C_m	$T_{c_{BF}}$	J_{BF}	$C_{P_{BF}}$
[a]2.27	0.758	0.088	0.013	- - -	- - -	- - -	[a]8.38	1.233	0.123	0.032	- - -	- - -	- - -	[a]14.43	1.511	0.232	0.073	- - -	- - -	- - -
2.27	.774	.090	.017	-0.006	1.080	0.005	8.39	1.247	.124	.046	-0.004	1.070	0.011	14.44	1.524	.243	.102	0	1.038	0.004
2.29	.824	.077	.021	.039	.946	.051	8.41	1.313	.097	.063	.041	.944	.052	14.47	1.548	.224	.125	.043	.948	.058
2.32	.866	.044	.013	.098	.849	.079	8.43	1.386	.068	.082	.096	.844	.081	14.50	1.741	.197	.133	.108	.841	.094
2.34	.944	-.021	.008	.187	.754	.107	8.47	1.474	.029	.107	.175	.749	.107	14.55	1.838	.163	.169	.179	.745	.114
2.39	1.095	-.103	.009	.299	.652	.134	8.51	1.546	-.046	.150	.313	.644	.137	14.63	2.143	.060	.222	.301	.642	.142
2.44	1.195	-.174	.132	.317	.553	.164	8.54	1.669	-.159	.200	.352	.542	.165	14.72	2.355	-.041	.229	.368	.541	.170
2.50	1.324	-.250	.136	.395	.447	.179	8.63	2.022	-.461	.233	.490	.449	.181	14.77	2.461	-.111	.248	.386	.538	.182
2.58	1.439	-.347	.169	.835	.344	.189	8.71	2.288	-.333	.280	.832	.349	.189	14.90	2.669	-.365	.374	.811	.449	.189
[a]4.30	.932	.096	.027	- - -	- - -	- - -	[a]10.42	1.369	.132	.092	- - -	- - -	- - -	[a]16.45	1.636	.279	.077	- - -	- - -	- - -
4.31	.932	.098	.021	-.002	1.064	.008	10.43	1.408	.139	.064	.001	1.059	.004	16.44	1.600	.301	.206	0	1.081	.004
4.33	.951	.071	.027	.047	.948	.046	10.45	1.468	.124	.055	.042	.944	.047	16.47	1.650	.279	.171	.042	.944	.053
4.35	1.037	.039	.023	.089	.854	.076	10.48	1.577	.083	.103	.097	.849	.083	16.50	1.784	.253	.149	.102	.846	.096
4.38	1.138	-.021	.016	.179	.747	.106	10.53	1.677	.028	.159	.170	.748	.109	16.53	1.903	.225	.153	.175	.748	.120
4.44	1.254	-.106	.008	.302	.650	.130	10.56	1.824	-.021	.174	.318	.640	.130	16.55	2.135	.170	.158	.298	.645	.143
4.51	1.437	-.233	.160	.343	.546	.162	10.65	2.076	-.132	.229	.532	.545	.167	16.59	2.321	.065	.163	.315	.549	.171
4.57	1.590	-.349	.163	.725	.451	.182	10.71	2.227	-.221	.254	.634	.446	.180	16.74	2.571	-.006	.161	.571	.500	.182
4.80	1.669	-.406	.179	.832	.347	.189	10.79	2.334	-.250	.291	.815	.349	.190	16.79	2.721	-.060	.151	.783	.472	.192
[a]6.34	1.070	.108	.029	- - -	- - -	- - -	[a]12.44	1.491	.171	.066	- - -	- - -	- - -	[a]18.43	1.672	.379	.088	- - -	- - -	- - -
6.35	1.097	.110	.032	-.001	1.060	.003	12.46	1.520	.173	.097	.001	1.056	.000	18.44	1.688	.391	.149	.001	1.038	.002
6.37	1.147	.084	.021	.038	.943	.045	12.49	1.646	.154	.107	.045	.926	.052	18.47	1.754	.358	.163	.045	.943	.072
6.40	1.209	.052	.017	.097	.849	.078	12.58	1.728	.111	.121	.105	.837	.096	18.48	1.819	.355	.182	.094	.855	.098
6.43	1.313	.007	.004	.173	.739	.105	12.66	1.855	.077	.152	.181	.742	.113	18.51	1.924	.337	.187	.196	.734	.127
6.52	1.578	-.032	.033	.311	.630	.132	12.61	2.012	.029	.195	.316	.645	.140	18.57	2.032	.283	.191	.309	.647	.148
6.55	1.643	-.159	.167	.339	.545	.164	12.70	2.275	-.096	.233	.391	.543	.170	18.68	2.482	.169	.173	.510	.546	.170
6.62	1.806	-.304	.197	.111	.445	.179	12.73	2.453	-.181	.254	.639	.446	.182	18.74	2.671	.065	.182	.621	.493	.189
6.69	1.905	-.370	.202	.839	.347	.186	12.78	2.533	-.235	.321	.819	.349	.187	18.79	2.776	.031	.190	.781	.473	.194

[a]Propellers removed

TABLE XIII.– LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10. TAIL REMOVED; INBOARD FLAPS DEFLECTED 60° – Concluded

(b) M = 0.082; R = 4,000,000; β = 31°

α	C_L	C_X	C_m	$T_{c_{BV}}$	J_{BV}	$C_{P_{BV}}$	α	C_L	C_X	C_m	$T_{c_{BV}}$	J_{BV}	$C_{P_{BV}}$	α	C_L	C_X	C_m	$T_{c_{BV}}$	J_{BV}	$C_{P_{BV}}$
[a]2.27	0.758	0.088	0.013	- - -	- - -	- - -	[a]8.38	1.233	0.183	0.033	- - -	- - -	- - -	[a]14.43	1.511	0.232	0.079	- - -	- - -	- - -
2.26	.758	.097	.005	-0.018	1.413	-0.029	8.38	1.229	.187	.048	-0.011	1.369	-0.004	14.43	1.529	.239	.094	-0.005	1.363	0.016
2.27	.762	.074	.020	.016	1.241	.048	8.40	1.259	.112	.029	.015	1.248	.050	14.44	1.367	.234	- - -	.017	1.258	.063
2.29	.806	.057	.026	.040	1.146	.087	8.41	1.304	.093	.063	.044	1.132	.097	14.45	1.609	.212	.108	.041	1.152	.100
2.31	.849	.031	.043	.064	1.096	.123	8.46	1.350	.073	.080	.081	1.042	.147	14.49	1.700	.200	.129	.064	1.032	.140
2.35	.935	-.027	.063	.171	.885	.176	8.46	1.464	.031	.107	.166	.894	.174	14.56	1.933	.220	.173	.161	.894	.185
2.39	1.064	-.122	.096	.324	.736	.223	8.53	1.636	-.096	.159	.327	.736	.227	14.61	2.156	.046	.222	.236	.747	.229
2.45	1.186	-.225	.139	.500	.646	.258	8.59	1.814	-.137	.198	.486	.652	.256	14.70	2.361	-.032	.280	.473	.647	.264
2.51	1.335	-.354	.155	.703	.571	.284	8.66	2.017	-.262	.250	.704	.571	.288	14.77	2.571	-.126	.343	.653	.573	.299
[a]4.30	.922	.096	.027	- - -	- - -	- - -	[a]10.42	1.368	.137	.052	- - -	- - -	- - -	[a]16.45	1.616	.279	.077	- - -	- - -	- - -
4.31	.918	.101	.021	-.011	1.370	-.008	10.42	1.391	.144	.063	-.011	1.366	-.003	16.48	1.569	.251	.103	-.006	1.371	.030
4.31	.943	.082	.030	.018	1.233	.038	10.43	1.430	.129	.074	.016	1.243	.053	16.46	1.698	.227	.135	.019	1.245	.075
4.33	.979	.065	.040	.043	1.135	.087	10.45	1.471	.114	.086	.043	1.140	.093	16.47	1.709	.272	.150	.048	1.141	.116
4.34	1.016	.045	.053	.080	1.047	.121	10.47	1.551	.095	.101	.084	1.035	.132	16.48	1.754	.257	.183	.085	1.029	.148
4.39	1.115	-.014	.077	.173	.883	.175	10.51	1.661	.092	.134	.174	.880	.181	16.50	1.914	.231	.200	.175	.874	.196
4.44	1.260	-.105	.110	.323	.737	.224	10.58	1.855	-.026	.185	.320	.734	.228	16.59	2.111	.191	.296	.237	.747	.235
4.49	1.400	-.199	.142	.494	.648	.256	10.63	2.033	-.108	.235	.496	.646	.260	16.67	2.371	.088	.412	.469	.648	.270
4.57	1.572	-.329	.186	.704	.570	.285	10.71	2.221	-.212	.286	.681	.576	.288	16.74	2.574	-.002	.479	.647	.575	.292
[a]6.34	1.070	.108	.029	- - -	- - -	- - -	[a]12.44	1.491	.171	.066	- - -	- - -	- - -	[a]18.43	1.613	.379	.088	- - -	- - -	- - -
6.34	1.074	.115	- - -	-.013	1.381	-.002	12.45	1.532	.173	.090	-.011	1.371	-.001	18.43	1.646	.360	.132	-.005	1.360	.031
6.35	1.103	.095	- - -	.016	1.240	.038	12.47	1.576	.154	.094	.016	1.240	.057	18.45	1.706	.375	.162	.020	1.250	.081
6.37	1.137	.079	- - -	.042	1.138	.090	12.49	1.651	.136	.106	.043	1.136	.098	18.46	1.726	.323	.169	.047	1.135	.123
6.39	1.187	.057	- - -	.088	1.040	.143	12.50	1.697	.119	.121	.088	1.036	.138	18.48	1.796	.343	.237	.080	1.038	.148
6.43	1.295	.006	- - -	.178	.884	.176	12.55	1.819	.082	.153	.166	.891	.182	18.50	1.914	.310	.286	.173	.879	.201
6.48	1.444	-.072	- - -	.327	.730	.222	12.61	2.011	.022	.204	.322	.746	.229	18.56	2.108	.243	.365	.298	.747	.241
6.54	1.619	-.179	- - -	.492	.646	.260	12.67	2.207	-.070	.257	.495	.648	.263	18.66	2.422	.195	.493	.423	.621	.271
6.61	1.789	-.298	- - -	.700	.572	.286	12.73	2.420	-.177	.320	.679	.572	.290	18.73	2.657	.094	.587	.689	.577	.297

[a]Propellers removed

(c) M = 0.123; R = 4,000,000; β = 31°

α	C_L	C_X	C_m	$T_{c_{BV}}$	J_{BV}	$C_{P_{BV}}$	α	C_L	C_X	C_m	$T_{c_{BV}}$	J_{BV}	$C_{P_{BV}}$	α	C_L	C_X	C_m	$T_{c_{BV}}$	J_{BV}	$C_{P_{BV}}$
[a]2.27	0.763	0.087	0.020	- - -	- - -	- - -	[a]8.38	1.224	0.180	0.047	- - -	- - -	- - -	[a]14.44	1.338	0.231	0.082	- - -	- - -	- - -
2.27	.757	.081	- - -	-0.006	1.345	-0.004	8.38	1.228	.182	.047	-0.010	1.365	-0.014	14.43	1.343	.243	.098	-0.007	1.358	0.028
2.29	.769	.068	- - -	.029	1.189	.062	8.40	1.277	.106	.062	.027	1.192	.063	14.45	1.397	.223	.130	.028	1.196	.079
2.31	.847	.052	.046	.054	1.032	.122	8.42	1.348	.079	.081	.081	1.046	.119	14.48	1.586	.202	.197	.065	1.033	.137
2.34	.926	-.024	.066	.175	.884	.172	8.47	1.469	.031	.116	.172	.897	.176	14.52	1.812	.173	.156	.160	.897	.183
2.38	1.094	-.103	.094	.315	.761	.216	8.52	1.607	-.098	.149	.286	.769	.222	14.63	2.138	.092	.212	.268	.736	.231
2.42	1.264	-.209	.120	.478	.661	.257	8.58	1.789	-.123	.201	.446	.671	.259	14.68	2.302	-.013	.259	.440	.669	.260
[a]4.31	.920	.096	.026	- - -	- - -	- - -	[a]10.42	1.376	.138	.059	- - -	- - -	- - -	[a]16.45	1.625	.279	.083	- - -	- - -	- - -
4.30	.922	.102	.020	-.010	1.366	-.012	10.42	1.392	.145	.065	-.007	1.370	-.005	16.44	1.598	.255	.111	-.001	1.368	.032
4.32	.953	.077	.037	.028	1.187	.054	10.43	1.440	.125	.080	.027	1.199	.065	16.45	1.663	.230	.136	.030	1.201	.088
4.34	1.019	.041	.057	.065	1.090	.124	10.46	1.518	.100	.101	.077	1.090	.121	16.47	1.720	.207	.147	.061	1.095	.121
4.38	1.114	-.009	.084	.171	.886	.174	10.51	1.651	.054	.133	.171	.886	.177	16.50	1.803	.151	.174	.104	.994	.156
4.44	1.243	-.092	.114	.304	.734	.222	10.56	1.810	-.012	.174	.302	.737	.225	16.53	1.896	.228	.193	.170	.884	.193
4.49	1.378	-.185	.150	.451	.667	.260	10.62	1.984	-.091	.224	.458	.665	.260	16.59	2.097	.184	.259	.296	.757	.236
														16.66	2.312	.117	.361	.423	.674	.264
[a]6.34	1.070	.107	.032	- - -	- - -	- - -	[a]12.44	1.498	.170	.077	- - -	- - -	- - -							
6.34	1.078	.113	.034	-.009	1.326	-.010	12.45	1.530	.174	.090	-.009	1.361	.003	[a]18.43	1.621	.371	.089	- - -	- - -	- - -
6.35	1.113	.089	.048	.025	1.194	.063	12.47	1.580	.158	.101	.029	1.191	.069	18.44	1.637	.371	.120	-.001	1.344	.039
6.38	1.183	.057	.067	.082	1.094	.123	12.51	1.669	.120	.130	.081	1.038	.131	18.45	1.681	.366	.163	.021	1.237	.078
6.43	1.293	.008	.096	.168	.888	.175	12.54	1.810	.084	.149	.161	.898	.180	18.46	1.708	.374	.193	.047	1.110	.111
6.48	1.431	-.064	.131	.295	.760	.220	12.60	1.984	.020	.192	.299	.758	.226	18.47	1.779	.340	.230	.088	1.040	.149
6.55	1.580	-.158	.173	.439	.671	.258	12.66	2.160	-.052	.244	.439	.672	.263	18.49	1.882	.324	.272	.135	.935	.182
														18.52	1.959	.300	.317	.207	.839	.213
														18.56	2.092	.272	.373	.293	.758	.241
														18.65	2.301	.228	.451	.408	.681	.266

[a]Propellers removed

TABLE XIV.- LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10. TAIL HEIGHT, 0.10 b/2; INBOARD FLAPS DEFLECTED 60°

$M = 0.082$; $R = 4{,}000{,}000$; $\beta = 26°$; $i_t = 0°$

α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$	α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$	α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]2.26	0.735	0.086	0.137	- - -	- - -	- - -	[a]8.39	1.236	0.121	0.019	- - -	- - -	- - -	[a]14.46	1.587	0.234	-0.069	- - -	- - -	- - -
2.26	.739	.087	.139	-0.006	1.081	0.007	8.39	1.250	.128	.023	-0.009	1.087	0.004	14.45	1.580	.255	.006	-0.008	1.091	0.013
2.28	.777	.057	.163	.039	.946	.049	8.41	1.313	.101	.052	.037	.950	.049	14.48	1.674	.227	.037	.038	.946	- - -
2.30	.827	.022	.191	.092	.849	.080	8.44	1.385	.070	.091	.087	.854	.081	14.57	1.913	.146	.018	.093	.845	.088
2.33	.905	-.031	.235	.176	.745	.108	8.48	1.499	.029	.146	.168	.749	.109	14.60	2.014	.118	.078	.168	.746	.115
2.37	1.004	-.118	.284	.306	.647	.138	8.53	1.635	-.048	.215	.309	.646	.137	14.64	2.161	.063	.151	.298	.648	.140
2.44	1.155	-.248	.349	.532	.548	.163	8.60	1.836	-.166	.300	.523	.550	.168	14.72	2.391	-.036	.261	.523	.547	.169
2.51	1.335	-.442	.424	.814	.470	.188	8.69	2.095	-.339	.417	.810	.470	.190	14.80	2.652	-.166	.387	.782	.472	.190
[a]4.30	.905	.095	.091	- - -	- - -	- - -	[a]10.43	1.398	0.139	-.011	- - -	- - -	- - -	[a]16.46	1.655	.298	-.071	- - -	- - -	- - -
4.30	.907	.098	.095	-.004	1.075	.005	10.44	1.428	.146	.005	-.007	1.078	.011	16.45	1.627	.310	-.001	-.002	1.075	.025
4.32	.963	.068	.124	.040	.945	.050	10.45	1.493	.120	.032	.039	.945	.055	16.49	1.743	.287	.025	.038	.952	.063
4.34	1.021	.033	.153	.094	.848	.080	10.48	1.570	.094	.067	.091	.848	.082	16.51	1.827	.266	.028	.096	.852	.092
4.38	1.098	-.021	.194	.183	.744	.110	10.52	1.684	.053	.128	.170	.748	.111	16.54	1.937	.236	.097	.167	.747	.117
4.42	1.212	-.101	.250	.307	.647	.138	10.57	1.819	-.013	.191	.292	.652	.138	16.59	2.098	.203	.159	.294	.649	.145
4.49	1.398	-.234	.337	.534	.549	.168	10.65	2.045	-.129	.291	.521	.549	.166	16.70	2.448	.066	.298	.513	.549	.174
4.58	1.609	-.418	.424	.828	.469	.190	10.74	2.315	-.296	.400	.801	.470	.192	16.75	2.605	-.020	.392	.674	.497	.188
														16.79	2.712	-.063	.432	.767	.474	.193
[a]6.34	1.073	.106	.051	- - -	- - -	- - -	[a]12.46	1.533	.177	-.028	- - -	- - -	- - -	[a]18.45	1.667	.394	-.093	- - -	- - -	- - -
6.35	1.088	.111	.057	-.005	1.081	.005	12.46	1.569	.181	-.001	-.008	1.083	.010	18.46	1.711	.394	-.008	-.001	1.080	.032
6.37	1.138	.081	.086	.040	.946	.050	12.50	1.662	.144	.014	.037	.948	.053	18.47	1.769	.382	.025	.041	.945	.073
6.40	1.206	.049	.121	.097	.845	.082	12.52	1.748	.125	.043	.090	.848	.085	18.51	1.884	.346	.074	.095	.844	.097
6.43	1.302	0	.171	.180	.748	.111	12.56	1.858	.080	.114	.165	.749	.113	18.54	1.977	.316	.123	.167	.747	- - -
6.48	1.428	-.075	.227	.307	.649	.138	12.61	2.008	.016	.178	.300	.648	.140	18.58	2.154	.266	.204	.309	.639	.148
6.55	1.624	-.198	.318	.536	.549	.167	12.67	2.198	-.073	.257	.488	.561	.166	18.71	2.526	.171	.323	.517	.547	.175
6.63	1.860	-.381	.421	.829	.469	.189	12.77	2.496	-.240	.380	.792	.472	.190	18.75	2.692	.091	.389	.666	.499	.185
														18.78	2.791	.043	.432	.750	.477	.194

[a]Propellers removed

TABLE XV.- LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10; TAIL OFF, $\beta = 41^{\circ}$, R = 2,000,000, M = 0.60, 0.70, 0.80

M, 0.60							M, 0.70							M, 0.80						
α	C_L	C_X	C_m	$T_{c_{eff}}$	J_{eff}	$C_{P_{eff}}$	α	C_L	C_X	C_m	$T_{c_{eff}}$	J_{eff}	$C_{P_{eff}}$	α	C_L	C_X	C_m	$T_{c_{eff}}$	J_{eff}	$C_{P_{eff}}$
[a]2.04	0.159	0.0174	-0.0489	- - -	- - -	- - -	[a]2.04	0.161	0.0179	-0.0478	- - -	- - -	- - -	[a]2.04	0.167	0.0207	-0.0478	- - -	- - -	- - -
2.04	.153	.0207	-.0626	-0.003	1.946	- - -	2.04	.157	.0218	-.0629	-0.005	1.934	- - -	2.04	.162	.0246	-.0633	-0.006	1.928	- - -
2.04	.158	.0263	-.0550	.009	1.849	0.103	2.04	.156	.0274	-.0598	.001	1.893	0.041	2.04	.163	.0195	-.0545	.001	1.902	0.046
2.04	.151	.0036	-.0517	.015	1.807	.139	2.04	.154	.0056	-.0519	.015	1.787	.132	2.04	.162	.0121	-.0510	.010	1.827	.098
2.04	.150	-.0009	-.0479	.021	1.771	.223	2.04	.157	-.0004	-.0477	.022	1.752	.204	2.04	.161	-.0047	-.0471	.017	1.757	.167
2.04	.149	-.0114	-.0405	.046	1.686	.277	2.04	.153	-.0157	-.0426	.039	1.618	.252	2.04	.161	-.0092	-.0398	.031	1.671	.211
[a]3.06	.247	.0182	-.0583	- - -	- - -	- - -	[a]3.07	.255	.0187	-.0586	- - -	- - -	- - -	[a]3.07	.269	.0211	-.0474	- - -	- - -	- - -
3.06	.241	.0214	-.0336	-.004	1.943	- - -	3.06	.250	.0222	-.0348	-.004	1.935	- - -	3.07	.265	.0232	-.0314	-.006	1.929	- - -
3.06	.241	.0128	-.0480	.009	1.843	.084	3.06	.251	.0136	-.0528	0	1.905	.033	3.07	.266	.0202	-.0569	0	1.909	.043
3.06	.242	.0039	-.0430	.018	1.786	.137	3.06	.252	.0081	-.0458	.013	1.803	.119	3.07	.267	.0108	-.0522	.012	1.810	.119
3.06	.242	-.0100	-.0375	.035	1.686	.224	3.06	.252	-.0047	-.0382	.028	1.697	.203	3.07	.268	.0017	-.0466	.023	1.726	.180
3.06	.242	-.0203	-.0330	.048	1.618	.278	3.06	.253	-.0145	-.0349	.039	1.621	.252	3.07	.268	-.0033	-.0449	.030	1.667	.209
[a]4.09	.332	.0197	-.0569	- - -	- - -	- - -	[a]4.09	.343	.0207	-.0589	- - -	- - -	- - -	[a]4.10	.369	.0234	-.0423	- - -	- - -	- - -
4.08	.329	.0227	-.0442	-.003	1.942	- - -	4.09	.342	.0240	-.0479	-.004	1.936	- - -	4.10	.369	.0252	-.0322	-.005	1.927	- - -
4.08	.331	.0187	-.0388	.006	1.841	.065	4.09	.343	.0211	-.0447	0	1.910	.039	4.10	.369	.0229	-.0461	0	1.913	.042
4.08	.332	.0070	-.0351	.017	1.794	.127	4.09	.346	.0104	-.0377	.013	1.807	.136	4.10	.371	.0139	-.0429	.012	1.819	.114
4.08	.334	-.0063	-.0278	.034	1.691	.225	4.09	.348	-.0021	-.0300	.027	1.708	.198	4.10	.374	.0055	-.0367	.024	1.725	.167
4.09	.336	-.0186	-.0234	.048	1.619	.275	4.09	.350	-.0117	-.0275	.040	1.625	.247	4.10	.376	-.0005	-.0349	.029	1.691	.208
[a]5.11	.418	.0228	-.0307	- - -	- - -	- - -	[a]5.12	.435	.0239	-.0337	- - -	- - -	- - -	[a]5.13	.473	.0276	-.0290	- - -	- - -	- - -
5.10	.414	.0249	-.0263	-.003	1.941	- - -	5.12	.435	.0267	-.0290	-.004	1.932	- - -	5.11	.474	.0216	-.0266	-.005	1.928	- - -
5.11	.419	.0194	-.0298	.009	1.843	.083	5.12	.436	.0247	-.0273	-.002	1.920	.021	5.13	.474	.0271	-.0243	0	1.916	.040
5.11	.422	.0095	-.0269	.016	1.797	.125	5.12	.441	.0138	-.0250	.012	1.815	.113	5.13	.479	.0184	-.0264	.012	1.822	.116
5.11	.426	-.0051	-.0228	.034	1.696	.219	5.12	.445	.0027	-.0226	.025	1.715	.188	5.13	.483	.0079	-.0300	.024	1.727	.197
5.11	.429	-.0185	-.0159	.047	1.621	.280	5.11	.448	-.0081	-.0181	.037	1.635	.245	5.13	.485	.0036	-.0265	.030	1.684	.209
[a]6.13	.502	.0253	-.0242	- - -	- - -	- - -	[a]6.14	.524	.0270	-.0281	- - -	- - -	- - -	[a]6.16	.571	.0366	-.0250	- - -	- - -	- - -
6.13	.500	.0280	-.0276	-.003	1.943	- - -	6.14	.525	.0305	-.0297	-.004	1.937	- - -	6.16	.581	.0391	-.0218	-.005	1.964	- - -
6.13	.505	.0177	-.0210	.011	1.838	.089	6.14	.525	.0205	-.0279	.001	1.925	.018	6.16	.582	.0350	-.0273	-.001	1.927	.033
6.13	.508	.0121	-.0180	.017	1.796	.129	6.14	.532	.0112	-.0210	.012	1.814	.113	6.16	.586	.0258	-.0211	.013	1.817	.188
6.14	.515	-.0029	-.0096	.035	1.691	.229	6.14	.537	.0057	-.0139	.026	1.718	.186	6.16	.589	.0165	-.0256	.024	1.733	.185
6.14	.518	-.0127	-.0056	.047	1.625	.277	6.14	.542	-.0034	-.0082	.038	1.639	.243	6.16	.592	.0131	-.0233	.030	1.694	.255
[a]7.15	.584	.0291	-.0206	- - -	- - -	- - -	[a]7.16	.611	.0325	-.0229	- - -	- - -	- - -	[a]7.18	.648	.0500	-.0299	- - -	- - -	- - -
7.15	.585	.0323	-.0179	-.003	1.946	- - -	7.16	.615	.0357	-.0229	-.004	1.940	- - -	7.18	.674	.0515	-.0225	-.005	1.971	- - -
7.15	.589	.0233	-.0281	.009	1.852	.078	7.16	.621	.0261	-.0159	.005	1.866	.032	7.18	.676	.0473	-.0285	0	1.929	.040
7.15	.592	.0162	-.0080	.017	1.795	.133	7.17	.627	.0174	-.0088	.019	1.765	.161	7.19	.678	.0285	-.0236	.022	1.830	.117
7.16	.601	.0027	-.0004	.034	1.696	.223	7.17	.630	.0123	-.0023	.026	1.720	.190	7.19	.679	.0296	-.0191	.024	1.738	.187
7.16	.607	-.0078	.0050	.047	1.625	.280	7.17	.637	.0023	.0001	.038	1.635	.246	7.19	.681	.0270	-.0170	.030	1.702	.209
[a]8.17	.663	.0346	-.0115	- - -	- - -	- - -	[a]8.18	.692	.0417	-.0147	- - -	- - -	- - -	[a]8.19	.700	.0679	-.0160	- - -	- - -	- - -
8.17	.665	.0378	-.0072	-.003	1.946	- - -	8.19	.702	.0441	-.0140	-.005	1.948	- - -	8.20	.734	.0691	-.0106	-.005	1.973	- - -
8.17	.674	.0290	-.0011	.009	1.853	.083	8.19	.712	.0358	-.0065	.007	1.861	.081	8.20	.737	.0658	-.0069	0	1.932	.039
8.18	.679	.0211	.0023	.018	1.792	.140	8.19	.719	.0270	.0014	.019	1.772	.155	8.20	.737	.0769	-.0026	.022	1.834	.122
8.18	.689	.0087	.0106	.034	1.694	.226	8.19	.723	.0219	.0051	.026	1.718	.193	8.20	.742	.0482	.0030	.024	1.743	.189
8.19	.694	-.0002	.0157	.046	1.630	.277	8.19	.726	.0130	.0095	.037	1.652	.245	8.20	.745	.0431	.0062	.030	1.704	.211
[a]9.19	.735	.0469	-.0011	- - -	- - -	- - -	[a]9.19	.750	.0597	-.0103	- - -	- - -	- - -	[a]9.19	.743	.0662	-.0024	- - -	- - -	- - -
9.19	.741	.0458	.0047	-.003	1.921	- - -	9.20	.719	.0575	-.0005	-.005	1.956	- - -	9.21	.782	.0500	.0054	-.005	1.979	- - -
9.19	.733	.0349	.0126	.020	1.849	.096	9.21	.787	.0509	-.0039	.005	1.878	.065	9.21	.793	.0667	.0123	-.001	1.939	.050
9.20	.728	.0260	.0169	.019	1.783	.151	9.21	.797	.0404	.0125	.019	1.777	.158	9.21	.798	.0766	.0184	.011	1.861	.129
9.20	.770	.0171	.0243	.034	1.697	.227	9.21	.800	.0354	.0152	.026	1.724	.194	9.21	.808	.0704	.0245	.023	1.752	.184
9.20	.777	.0088	.0291	.047	1.630	.278	9.21	.805	.0281	.0192	.037	1.630	.246	9.22	.811	.0679	.0265	.030	1.706	.217
[a]10.20	.798	.0589	.0102	- - -	- - -	- - -	[a]10.21	.806	.0803	-.0007	- - -	- - -	- - -	[a]10.19	.782	.1091	-.0045	- - -	- - -	- - -
10.21	.814	.0569	.0209	-.004	1.963	- - -	10.21	.828	.0784	.0391	-.005	1.960	- - -	10.21	.823	.1281	.0239	-.006	1.989	- - -
10.21	.823	.0478	.0378	.010	1.858	.095	10.22	.843	.0715	.0251	.008	1.877	.079	10.21	.832	.1066	.0259	-.001	1.946	.039
10.21	.831	.0402	.0316	.019	1.795	.151	10.22	.852	.0623	.0296	.019	1.781	.159	10.22	.841	.0995	.0258	.011	1.840	.126
10.22	.844	.0290	.0326	.034	1.708	.232	10.22	.861	.0522	.0315	.029	1.701	.202	10.22	.846	.0937	.0322	.022	1.781	.183
10.22	.850	.0217	.0423	.046	1.642	.278	10.23	.864	.0506	.0362	.037	1.664	.243	10.22	.849	.0908	.0313	.029	1.716	.211

[a]Props off.

TABLE XVI.- LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10; TAIL OFF, $\beta = 51^{\circ}$, R = 1,000,000

(a) M = 0.70, 0.80, 0.83

M = 0.70						
α	C_L	C_x	C_z	$C_{m_{cg}}$	η_{cg}	$C_{T_{cg}}$
[a]2.04	0.169	0.0201	-0.0466	- - -	- - -	- - -
2.04	.159	.0133	-.0693	-0.003	2.783	- - -
2.04	.154	.0111	-.0787	.011	2.511	0.257
2.04	.152	.0092	-.0490	.023	2.325	.414
2.04	.150	-.0069	-.0422	.037	2.178	.536
2.04	.150	-.0251	-.0338	.058	1.950	.657
[a]3.07	.262	.0214	-.0431	- - -	- - -	- - -
3.06	.253	.0238	-.0610	-.002	2.780	- - -
3.06	.252	.0136	-.0741	.009	2.561	.229
3.06	.252	.0068	-.0421	.025	2.320	.429
3.06	.252	-.0117	-.0341	.048	2.127	.568
3.06	.252	-.0246	-.0287	.057	1.953	.660
[a]4.09	.353	.0222	-.0425	- - -	- - -	- - -
4.09	.342	.0254	-.0721	-.002	2.782	- - -
4.09	.346	.0151	-.0452	.011	2.531	.224
4.09	.347	.0059	-.0379	.025	2.330	.429
4.09	.350	-.0089	-.0269	.041	2.144	.568
4.09	.352	-.0223	-.0200	.057	1.958	.697
[a]5.12	.442	.0258	-.0363	- - -	- - -	- - -
5.12	.437	.0211	-.0435	-.002	2.781	- - -
5.12	.440	.0181	-.0155	.010	2.537	.226
5.12	.444	.0079	-.0261	.026	2.334	.418
5.12	.449	-.0087	-.0173	.042	2.157	.567
5.12	.453	-.0190	-.0110	.057	1.976	.662
[a]6.14	.533	.0295	-.0137	- - -	- - -	- - -
6.14	.530	.0336	-.0142	-.001	2.781	- - -
6.14	.532	.0218	-.0262	.011	2.527	.237
6.14	.537	.0094	-.0159	.027	2.324	.436
6.14	.543	-.0085	-.0076	.043	2.126	.579
6.15	.549	-.0198	-.0014	.058	1.955	.682
[a]7.16	.617	.0361	-.0287	- - -	- - -	- - -
7.16	.617	.0375	-.0143	-.001	2.787	- - -
7.16	.620	.0268	-.0139	.012	2.527	.232
7.17	.627	.0171	-.0078	.026	2.325	.427
7.17	.635	.0049	.0019	.043	2.130	.579
7.17	.642	-.0051	.0092	.058	1.964	.681
[a]8.19	.694	.0473	-.0168	- - -	- - -	- - -
8.19	.701	.0468	-.0097	-.001	2.788	- - -
8.19	.706	.0370	-.0006	.012	2.539	.247
8.19	.711	.0273	.0066	.028	2.342	.422
8.19	.719	.0168	.0147	.042	2.144	.572
8.19	.727	.0068	.0212	.058	1.969	.669
[a]9.19	.748	.0629	-.0097	- - -	- - -	- - -
9.20	.763	.0630	.0080	0	2.799	- - -
9.20	.778	.0537	.0151	.014	2.596	.266
9.21	.787	.0424	.0212	.027	2.329	.438
9.21	.797	.0318	.0290	.043	2.129	.583
9.21	.805	.0228	.0333	.058	1.960	.663
[a]10.20	.796	.0692	.0063	- - -	- - -	- - -
10.21	.827	.0637	.0266	-.001	2.810	- - -
10.22	.835	.0746	.0340	.014	2.582	.285
10.22	.844	.0654	.0387	.026	2.337	.438
10.22	.855	.0540	.0422	.043	2.130	.588
10.23	.865	.0453	.0333	.058	1.960	.658

M = 0.80						
α	C_L	C_x	C_z	$C_{m_{cg}}$	η_{cg}	$C_{T_{cg}}$
[a]2.03	0.176	0.0231	-0.0478	- - -	- - -	- - -
2.04	.168	.0206	-.0726	-0.004	2.742	- - -
2.04	.166	.0213	-.0671	.001	2.523	0.117
2.04	.164	.0108	-.0529	.014	2.407	.310
2.04	.164	-.0030	-.0471	.031	2.170	.501
2.04	.164	-.0176	-.0407	.049	1.950	.599
[a]3.08	.279	.0238	-.0473	- - -	- - -	- - -
3.07	.272	.0271	-.0696	-.004	2.740	- - -
3.07	.274	.0195	-.0577	.005	2.522	.230
3.07	.274	.0071	-.0476	.021	2.321	.381
3.08	.276	-.0079	-.0391	.039	2.079	.549
3.08	.277	-.0148	-.0357	.048	1.969	.596
[a]4.10	.379	.0263	-.0440	- - -	- - -	- - -
4.10	.377	.0297	-.0776	-.004	2.743	- - -
4.10	.377	.0223	-.0496	.005	2.580	.164
4.10	.380	.0099	-.0423	.020	2.334	.378
4.11	.382	-.0035	-.0308	.037	2.107	.523
4.11	.388	.0120	-.0287	.048	1.978	.600
[a]5.13	.484	.0319	-.0375	- - -	- - -	- - -
5.13	.483	.0349	-.0477	-.003	2.744	- - -
5.13	.484	.0232	-.0408	.006	2.583	.165
5.14	.490	.0150	-.0311	.021	2.336	.376
5.14	.495	.0023	-.0238	.038	2.108	.530
5.14	.498	-.0061	-.0197	.048	1.984	.601
[a]6.16	.573	.0480	-.0379	- - -	- - -	- - -
6.16	.580	.0439	-.0403	-.003	2.749	- - -
6.16	.583	.0322	-.0384	.006	2.587	.170
6.16	.588	.0246	-.0236	.021	2.338	.351
6.16	.593	.0113	-.0155	.038	2.111	.542
6.17	.596	.0049	-.0289	.048	1.990	.599
[a]7.18	.646	.0570	-.0253	- - -	- - -	- - -
7.18	.651	.0575	-.0288	-.004	2.722	- - -
7.18	.660	.0494	-.0219	.006	2.589	.174
7.18	.673	.0379	-.0136	.022	2.323	.406
7.19	.676	.0265	-.0068	.038	2.116	.540
7.19	.680	.0198	-.0031	.047	1.992	.600
[a]8.18	.690	.0754	-.0097	- - -	- - -	- - -
8.19	.702	.0729	-.0202	-.003	2.773	- - -
8.20	.719	.0687	.0046	.006	2.593	.183
8.20	.736	.0579	.0103	.020	2.352	.365
8.20	.740	.0472	.0153	.038	2.119	.544
8.20	.748	.0389	.0182	.047	2.005	.602
[a]9.19	.731	.0934	-.0079	- - -	- - -	- - -
9.20	.767	.0956	.0132	-.003	2.784	- - -
9.20	.784	.0819	.0184	.005	2.596	.180
9.21	.794	.0713	.0254	.020	2.346	.358
9.21	.796	.0667	.0261	.037	2.127	.547
9.21	.798	.0610	.0282	.047	2.006	.606
[a]10.19	.771	.1185	.0005	- - -	- - -	- - -
10.20	.804	.1177	.0171	-.006	2.796	- - -
10.21	.815	.1102	.0265	.005	2.600	.192
10.22	.826	.1013	.0373	.020	2.348	.409
10.22	.836	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10.22	.838	.0847	.0433	.046	2.028	.597

M = 0.83						
α	C_L	C_x	C_z	$C_{m_{cg}}$	η_{cg}	$C_{T_{cg}}$
[a]2.03	0.182	0.0251	-0.0449	- - -	- - -	- - -
2.03	.176	.0251	-.0729	-0.004	2.733	- - -
2.04	.172	.0203	-.0660	.007	2.542	0.181
2.04	.171	.0088	-.0528	.018	2.404	.344
2.04	.170	-.0028	-.0462	.037	2.072	.514
2.04	.170	-.0187	-.0400	.050	1.895	.586
[a]3.08	.289	.0259	-.0467	- - -	- - -	- - -
3.08	.286	.0299	-.0666	-.004	2.737	- - -
3.08	.283	.0229	-.0594	.007	2.543	.161
3.08	.282	.0063	-.0469	.024	2.317	.311
3.08	.282	-.0078	-.0409	.039	2.092	.392
3.08	.280	-.0140	-.0362	.050	1.909	.589
[a]4.11	.389	.0297	-.0490	- - -	- - -	- - -
4.11	.387	.0338	-.0810	-.005	2.735	- - -
4.11	.385	.0237	-.0516	.007	2.544	.190
4.11	.400	.0103	-.0420	.024	2.269	.413
4.11	.402	-.0006	-.0339	.038	2.073	.531
4.11	.407	-.0107	-.0281	.049	1.926	.597
[a]5.14	.497	.0387	-.0418	- - -	- - -	- - -
5.14	.499	.0407	-.0534	-.005	2.736	- - -
5.14	.500	.0318	-.0400	.007	2.548	.190
5.14	.509	.0180	-.0361	.024	2.271	.440
5.14	.511	.0073	-.0302	.038	2.087	.551
5.14	.515	-.0018	-.0268	.049	1.954	.599
[a]6.16	.573	.0592	-.0382	- - -	- - -	- - -
6.16	.587	.0587	-.0439	-.005	2.749	- - -
6.16	.598	.0434	-.0371	.008	2.551	.192
6.16	.594	.0239	-.0289	.023	2.272	.446
6.17	.598	.0121	-.0204	.040	2.073	.543
6.17	.611	.0139	-.0183	.049	1.948	.597
[a]7.17	.637	.0673	-.0241	- - -	- - -	- - -
7.18	.659	.0696	-.0254	-.004	2.737	- - -
7.18	.662	.0594	-.0170	.007	2.560	.199
7.18	.667	.0466	-.0103	.023	2.267	.388
7.18	.673	.0361	-.0048	.040	2.078	.550
7.19	.680	.0292	-.0036	.049	1.959	.608
[a]8.18	.686	.0896	-.0122	- - -	- - -	- - -
8.19	.722	.0851	-.0062	-.004	2.771	- - -
8.19	.727	.0784	-.0093	.007	2.562	.200
8.20	.735	.0658	.0066	.024	2.276	.435
8.20	.744	.0549	.0132	.039	2.087	.570
8.20	.753	.0487	.0171	.048	1.964	.601
[a]9.19	.732	.1053	-.0021	- - -	- - -	- - -
9.20	.795	.1077	.0037	-.004	2.760	- - -
9.21	.781	.1000	.0150	.006	2.572	.202
9.21	.802	.0881	.0274	.024	2.281	.436
9.21	.806	.0769	.0322	.039	2.088	.572
9.22	.815	.0726	.0333	.047	1.964	.604
[a]10.18	.775	.1267	.0082	- - -	- - -	- - -
10.20	.804	.1291	.0281	-.005	2.796	- - -
10.21	.810	.1203	.0272	.006	2.582	.213
10.21	.838	.1101	.0348	.024	2.283	.443
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
10.22	.839	.0952	.0313	.047	1.976	.602

[a]Props off.

TABLE XVI.- LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10; TAIL OFF, $\beta = 51^{\circ}$, R = 1,000,000 - Concluded

(b) M = 0.86, 0.90

M, 0.86							M, 0.90						
α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$	α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]2.06	0.396	0.0288	-0.0439	---	---	---	[a]2.06	0.187	0.0363	-0.0441	---	---	---
2.05	.182	.0305	-.0734	-0.005	2.743	---	2.06	.186	.0401	-.0849	-0.005	2.708	---
2.05	.183	.0224	-.0639	.006	2.587	0.178	2.05	.184	.0332	-.0729	.003	2.542	0.187
2.05	.183	.0180	-.0576	.017	2.333	.385	2.05	.184	.0221	-.0697	.015	2.286	.381
2.05	.182	.0038	-.0474	.039	2.148	.451	2.05	.183	.0091	-.0543	.027	2.034	.432
2.05	.181	-.0066	-.0417	.041	1.964	.560	2.05	.188	.0034	-.0505	.035	1.878	.468
[a]3.07	.305	.0304	-.0474	---	---	---	[a]3.08	.286	.0413	-.0478	---	---	---
3.08	.297	.0324	-.0707	-.005	2.730	---	3.08	.296	.0474	-.0892	-.005	2.716	---
3.08	.299	.0249	-.0633	.006	2.577	.176	3.08	.300	.0388	-.0776	.003	2.542	.158
3.08	.301	.0180	-.0568	.017	2.360	.343	3.09	.306	.0266	-.0715	.015	2.291	.332
3.08	.303	.0039	-.0474	.039	2.162	.458	3.09	.306	.0197	-.0665	.026	2.067	.406
3.08	.302	-.0053	-.0417	.042	1.975	.559	3.09	.309	.0051	-.0618	.035	1.891	.473
[a]4.11	.406	.0371	-.0484	---	---	---	[a]4.10	.373	.0508	-.0589	---	---	---
4.10	.411	.0388	-.0586	-.004	2.748	---	4.11	.388	.0566	-.0849	-.005	2.726	---
4.12	.413	.0311	-.0614	.006	2.559	.164	4.11	.387	.0473	-.0734	.004	2.549	.160
4.12	.416	.0219	-.0528	.017	2.382	.343	4.11	.393	.0360	-.0688	.015	2.303	.333
4.12	.422	.0108	-.0470	.039	2.160	.478	4.11	.400	.0253	-.0618	.027	2.056	.436
4.12	.425	.0010	-.0401	.041	1.964	.551	4.11	.401	.0189	-.0593	.035	1.897	.479
[a]5.14	.492	.0489	-.0496	---	---	---	[a]5.12	.431	.0632	-.0494	---	---	---
5.14	.505	.0486	-.0632	-.004	2.734	---	5.13	.453	.0687	-.0684	-.004	2.734	---
5.14	.508	.0414	-.0547	.006	2.560	.186	5.12	.468	.0596	-.0626	.004	2.535	.163
5.14	.510	.0318	-.0477	.018	2.355	.355	5.13	.473	.0485	-.0569	.015	2.319	.341
5.14	.508	.0230	-.0448	.040	2.139	.477	5.13	.481	.0374	-.0506	.027	2.061	.432
5.14	.517	.0128	-.0380	.042	1.982	.554	5.14	.489	.0312	-.0484	.034	1.987	.480
[a]6.15	.562	.0628	-.0397	---	---	---	[a]6.14	.521	.0761	-.0433	---	---	---
6.15	.583	.0625	-.0665	-.004	2.761	---	6.14	.528	.0821	-.0577	-.004	2.749	---
6.16	.586	.0528	-.0609	.006	2.567	.187	6.14	.535	.0749	-.0499	.005	2.559	.173
6.16	.587	.0476	-.0561	.018	2.368	.349	6.15	.545	.0643	-.0487	.016	2.320	.349
6.16	.593	.0373	-.0537	.040	2.166	.460	6.15	.555	.0532	-.0574	.028	2.082	.423
6.17	.599	.0278	-.0528	.042	1.990	.539	6.15	.561	.0495	-.0548	.035	1.923	.490
[a]7.16	.623	.0784	-.0378	---	---	---	[a]7.15	.584	.0934	-.0537	---	---	---
7.18	.631	.0600	-.0515	-.004	2.764	---	7.16	.607	.0976	-.0439	-.004	2.739	---
7.18	.650	.0737	-.0628	.006	2.571	.191	7.16	.608	.0884	-.0380	.005	2.565	.172
7.18	.653	.0543	-.0397	.017	2.375	.353	7.16	.617	.0807	-.0512	.017	2.316	.338
7.18	.659	.0340	-.0336	.039	2.180	.468	7.16	.624	.0743	-.0379	.029	2.126	.443
7.18	.665	.0456	-.0128	.042	1.992	.561	7.17	.630	.0664	-.0230	.034	1.949	.496
[a]8.18	.675	.0967	-.0177	---	---	---	[a]8.17	.649	.1101	-.0268	---	---	---
8.19	.704	.0866	-.0237	-.004	2.782	---	8.17	.664	.1161	-.0291	-.004	2.767	---
8.19	.716	.0719	-.0291	.007	2.578	.187	8.18	.676	.1119	-.0241	.005	2.566	.181
8.19	.720	.0594	-.0315	.018	2.370	.354	8.18	.683	.1013	-.0195	.017	2.324	.354
8.19	.727	.0742	.0020	.041	2.172	.468	8.18	.691	.0928	-.0154	.029	2.130	.448
8.20	.735	.0650	.0064	.042	2.004	.569	8.19	.697	.0869	-.0124	.034	1.956	.508
[a]9.19	.765	.1169	-.0074	---	---	---	[a]9.18	.698	.1322	-.0162	---	---	---
9.19	.774	.1173	.0014	-.005	2.792	---	9.18	.721	.1367	-.0223	-.005	2.779	---
9.20	.773	.1113	.0097	.006	2.589	.185	9.19	.737	.1332	-.0119	.005	2.578	.182
9.20	.782	.1034	.0186	.018	2.380	.352	9.19	.748	.1281	-.0042	.017	2.368	.354
9.21	.791	.0969	.0172	.041	2.173	.468	9.19	.754	.1196	-.0007	.029	2.329	.463
9.21	.798	.0879	.0216	.042	2.013	.570	9.20	.759	.1119	.0023	.034	1.963	.499
[a]10.18	.798	.1379	.0007	---	---	---	[a]10.18	.750	.1397	-.0008	---	---	---
10.20	.800	.1415	.0202	-.005	2.812	---	10.20	.763	.1269	.0055	-.005	2.802	---
10.21	.819	.1354	.0266	.007	2.590	.202	10.21	.807	.1348	.0061	.006	2.587	.200
10.22	.837	.1292	.0339	.019	2.380	.376	10.21	.816	.1308	.0128	.018	2.324	.378
10.22	.847	.1227	.0390	.040	2.196	.488	10.21	.819	.1218	.0167	.026	2.145	.463
10.22	.855	.1181	.0415	.042	2.033	.566	10.21	.824	.1188	.0216	.034	1.986	.516

[a]Props. off.

TABLE XVII.- LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10; TAIL OFF, $\beta = 51^{\circ}$, R = 2,000,000, M = 0.70, 0.80, 0.90

M, 0.70							M, 0.80							M, 0.90						
α	C_L	C_X	C_m	$T_{C_{BV}}$	J_{BV}	$\eta_{P_{BV}}$	α	C_L	C_X	C_m	$T_{C_{BV}}$	J_{BV}	$\eta_{P_{BV}}$	α	C_L	C_X	C_m	$T_{C_{BV}}$	J_{BV}	$\eta_{P_{BV}}$
[a]2.04	0.361	0.0279	-0.0458	- - -	- - -	- - -	[a]2.04	0.167	0.0207	-0.0478	- - -	- - -	- - -	[a]2.06	0.808	0.0372	-0.0837	- - -	- - -	- - -
2.04	.354	.0209	-.0676	-0.003	2.770	- - -	2.04	.158	.0248	-.0711	-0.004	2.744	- - -	2.05	.188	.0361	-.0803	-0.005	2.726	- - -
2.04	.152	.0143	-.0613	.006	2.620	0.160	2.04	.154	.0198	-.0677	.001	2.646	0.108	2.05	.186	.0324	-.0743	-.001	2.628	0.090
2.04	.151	.0091	-.0574	.012	2.522	.260	2.04	.158	.0131	-.0636	.009	2.505	.242	2.05	.183	.0272	-.0702	.005	2.508	.197
2.04	.150	.0048	-.0537	.017	2.433	.342	2.04	.155	.0078	-.0592	.015	2.398	.342	2.05	.182	.0208	-.0659	.012	2.368	.292
2.04	.149	-.0023	-.0487	.027	2.296	.446	2.04	.153	.0030	-.0544	.020	2.323	.400	2.05	.181	.0181	-.0604	.016	2.276	.343
[a]3.07	.255	.0187	-.0426	- - -	- - -	- - -	[a]3.07	.269	.0211	-.0474	- - -	- - -	- - -	[a]3.08	.388	.0374	-.0568	- - -	- - -	- - -
3.06	.248	.0215	-.0380	-.003	2.769	- - -	3.07	.262	.0246	-.0431	-.004	2.769	- - -	3.08	.397	.0422	-.0578	-.005	2.787	- - -
3.06	.245	.0192	-.0328	.005	2.631	.198	3.07	.261	.0232	-.0393	.001	2.660	.091	3.08	.397	.0364	-.0532	-.001	2.636	.089
3.06	.246	.0107	-.0291	.011	2.336	.243	3.07	.262	.0136	-.0327	.009	2.311	.233	3.08	.397	.0311	-.0466	.005	2.322	.198
3.06	.245	.0041	-.0243	.019	2.420	.329	3.07	.263	.0092	-.0287	.015	2.415	.325	3.08	.398	.0274	-.0398	.011	2.377	.271
3.06	.246	-.0019	-.0208	.026	2.319	.448	3.07	.264	.0037	-.0257	.021	2.316	.407	3.08	.399	.0212	-.0323	.016	2.292	.347
[a]4.09	.343	.0207	-.0369	- - -	- - -	- - -	[a]4.10	.369	.0236	-.0423	- - -	- - -	- - -	[a]4.10	.376	.0460	-.0630	- - -	- - -	- - -
4.09	.339	.0131	-.0286	-.002	2.771	- - -	4.10	.369	.0208	-.0372	-.004	2.728	- - -	4.11	.402	.0486	-.0583	-.004	2.743	- - -
4.09	.340	.0174	-.0233	.005	2.632	.136	4.10	.369	.0236	-.0286	0	2.671	.082	4.11	.402	.0448	-.0527	-.001	2.665	.074
4.09	.340	.0226	-.0208	.011	2.341	.234	4.10	.368	.0156	-.0219	.009	2.509	.246	4.11	.402	.0407	-.0457	.005	2.333	.183
4.09	.341	.0061	-.0162	.019	2.432	.332	4.10	.369	.0113	-.0177	.015	2.418	.330	4.11	.403	.0338	-.0418	.010	2.466	.267
4.09	.343	-.0007	-.0107	.027	2.321	.460	4.10	.368	.0063	-.0162	.020	2.332	.399	4.11	.407	.0290	-.0376	.016	2.305	.336
[a]5.12	.435	.0235	-.0337	- - -	- - -	- - -	[a]5.13	.473	.0276	-.0390	- - -	- - -	- - -	[a]5.12	.443	.0539	-.0543	- - -	- - -	- - -
5.11	.432	.0258	-.0287	-.002	2.769	- - -	5.13	.478	.0320	-.0453	-.004	2.748	- - -	5.14	.468	.0531	-.0681	-.004	2.749	- - -
5.11	.432	.0202	-.0232	.005	2.636	.132	5.13	.472	.0273	-.0416	0	2.665	.093	5.14	.467	.0593	-.0534	0	2.662	.088
5.11	.434	.0126	-.0205	.011	2.344	.228	5.13	.476	.0206	-.0358	.009	2.519	.247	5.14	.465	.0506	-.0744	.005	2.737	.196
5.12	.436	.0088	-.0245	.019	2.436	.337	5.13	.477	.0157	-.0317	.014	2.423	.328	5.13	.464	.0469	-.0741	.010	2.463	.281
5.12	.439	.0029	-.0199	.027	2.329	.459	5.13	.478	.0106	-.0286	.020	2.327	.405	5.13	.462	.0468	-.0727	.016	2.319	.349
[a]6.14	.524	.0270	-.0281	- - -	- - -	- - -	[a]6.16	.571	.0366	-.0350	- - -	- - -	- - -	[a]6.13	.512	.0768	-.0779	- - -	- - -	- - -
6.14	.522	.0232	-.0266	-.002	2.771	- - -	6.16	.576	.0388	-.0405	-.004	2.732	- - -	6.15	.551	.0764	-.0764	-.004	2.736	- - -
6.14	.523	.0257	-.0244	.003	2.673	.134	6.16	.573	.0322	-.0372	0	2.676	.088	6.15	.554	.0713	-.0681	0	2.666	.091
6.14	.524	.0192	-.0217	.011	2.341	.232	6.16	.576	.0287	-.0303	.008	2.533	.231	6.15	.554	.0654	-.0632	.005	2.542	.200
6.14	.528	.0132	-.0151	.019	2.445	.332	6.16	.581	.0237	-.0259	.015	2.419	.322	6.15	.558	.0610	-.0583	.010	2.438	.266
6.14	.531	.0065	-.0103	.026	2.332	.459	6.16	.582	.0197	-.0219	.020	2.333	.409	6.15	.558	.0540	-.0565	.016	2.329	.353
[a]7.16	.611	.0229	-.0229	- - -	- - -	- - -	[a]7.18	.648	.0300	-.0299	- - -	- - -	- - -	[a]7.15	.582	.0919	-.0498	- - -	- - -	- - -
7.16	.612	.0248	-.0198	-.002	2.773	- - -	7.18	.668	.0311	-.0304	-.004	2.769	- - -	7.16	.614	.0923	-.0500	-.004	2.776	- - -
7.16	.613	.0232	-.0185	.005	2.642	.136	7.18	.670	.0277	-.0272	.001	2.684	.091	7.16	.617	.0854	-.0505	0	2.680	.090
7.16	.615	.0143	-.0114	.011	2.342	.248	7.18	.672	.0205	-.0213	.009	2.524	.246	7.16	.614	.0815	-.0465	.005	2.564	.187
7.16	.619	.0091	-.0079	.018	2.443	.350	7.18	.672	.0151	-.0184	.016	2.407	.350	7.16	.615	.0781	-.0422	.011	2.438	.278
7.16	.622	.0024	-.0040	.027	2.333	.459	7.18	.672	.0123	-.0159	.021	2.338	.406	7.16	.620	.0743	-.0399	.016	2.337	.351
[a]8.18	.692	.0417	-.0147	- - -	- - -	- - -	[a]8.19	.700	.0679	-.0160	- - -	- - -	- - -	[a]8.17	.649	.1092	-.0399	- - -	- - -	- - -
8.19	.700	.0430	-.0086	-.002	2.775	- - -	8.20	.738	.0678	-.0059	-.004	2.778	- - -	8.18	.680	.1132	-.0398	-.004	2.764	- - -
8.19	.703	.0375	-.0083	.004	2.648	.149	8.20	.738	.0641	-.0079	0	2.696	.091	8.18	.683	.1073	-.0369	0	2.687	.095
8.19	.705	.0327	-.0014	.011	2.345	.257	8.20	.739	.0587	-.0038	.010	2.529	.270	8.18	.682	.1080	-.0328	.005	2.556	.205
8.19	.709	.0284	.0015	.017	2.451	.352	8.20	.742	.0535	0	.017	2.411	.360	8.18	.687	.0954	-.0288	.010	2.463	.285
8.19	.722	.0227	.0030	.025	2.338	.454	8.20	.745	.0499	.0018	.021	2.348	.414	8.18	.687	.0906	-.0259	.016	2.338	.363
[a]9.19	.750	.0297	-.0103	- - -	- - -	- - -	[a]9.19	.743	.0862	-.0024	- - -	- - -	- - -	[a]9.18	.700	.1346	-.0287	- - -	- - -	- - -
9.20	.776	.0303	.0041	-.002	2.787	- - -	9.21	.764	.0888	.0113	-.004	2.786	- - -	9.19	.781	.1343	-.0238	-.005	2.798	- - -
9.20	.783	.0305	.0091	.006	2.658	.170	9.21	.768	.0829	.0281	.002	2.677	.139	9.19	.783	.1271	-.0202	0	2.688	.101
9.21	.788	.0463	.0187	.012	2.343	.270	9.21	.798	.0788	.0274	.010	2.533	.299	9.19	.788	.1211	-.0164	.005	2.569	.211
9.21	.788	.0424	.0160	.017	2.454	.356	9.18	.801	.0718	.0205	.017	2.421	.358	9.19	.789	.1164	-.0127	.010	2.468	.299
9.21	.793	.0312	.0204	.025	2.345	.453	9.21	.807	.0704	.0241	.021	2.356	.409	9.19	.789	.1114	-.0094	.016	2.329	.364
[a]10.21	.806	.0603	-.0007	- - -	- - -	- - -	[a]10.19	.782	.1092	-.0045	- - -	- - -	- - -	[a]10.19	.763	.1581	-.0196	- - -	- - -	- - -
10.22	.840	.0769	.0105	-.003	2.806	- - -	10.21	.823	.1117	.0178	-.004	2.793	- - -	10.21	.808	.1573	-.0066	-.005	2.810	- - -
10.22	.841	.0715	.0257	.005	2.651	.171	10.21	.838	.1070	.0304	.001	2.693	.113	10.21	.805	.1501	-.0002	0	2.698	.132
10.22	.845	.0676	.0307	.011	2.354	.269	10.22	.838	.1007	.0304	.009	2.533	.267	10.21	.808	.1441	.0026	.005	2.576	.215
10.22	.851	.0634	.0334	.018	2.454	.361	10.22	.845	.0969	.0327	.015	2.447	.330	10.21	.808	.1424	.0052	.010	2.478	.296
10.22	.851	.0582	.0377	.025	2.348	.453	10.22	.851	.0932	.0361	.020	2.367	.415	10.21	.812	.1378	.0071	.016	2.358	.371

[a]Props off.

TABLE XVIII.- LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10; TAIL HEIGHT = 0, i_t = -4°, β = 41°, R = 2,000,000, M = 0.60, 0.70, 0.80

M, 0.60							M, 0.70							M, 0.80						
α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$	α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$	α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]2.04	0.159	0.0174	-0.0489	- - -	- - -	- - -	[a]2.04	0.161	0.0179	-0.0458	- - -	- - -	- - -	[a]2.04	0.167	0.0207	-0.0478	- - -	- - -	- - -
2.03	.223	.0220	.0306	-0.003	1.983	- - -	2.03	.227	.0236	.0276	-0.005	1.940	- - -	2.03	.238	.0268	.0240	-0.006	1.849	- - -
2.03	.283	.0195	.0340	.004	1.878	0.072	2.03	.285	.0259	.0340	.006	1.866	0.067	2.03	.294	.0308	.0305	.001	1.893	0.047
2.03	.321	.0042	.0423	.019	1.774	.141	2.03	.324	.0072	.0414	.017	1.787	.131	2.03	.333	.0120	.0373	.013	1.796	.116
2.03	.339	-.0069	.0536	.034	1.677	.220	2.03	.322	-.0013	.0480	.026	1.715	.185	2.03	.332	.0057	.0446	.022	1.727	.178
2.03	.317	-.0210	.0594	.049	1.599	.280	2.03	.320	-.0137	.0590	.039	1.639	.245	2.03	.331	-.0034	.0494	.031	1.668	.212
[a]3.06	.247	.0182	-.0383	- - -	- - -	- - -	[a]3.07	.252	.0187	-.0426	- - -	- - -	- - -	[a]3.07	.269	.0211	-.0474	- - -	- - -	- - -
3.05	.319	.0224	.0197	-.005	1.931	- - -	3.06	.328	.0241	.0156	-.004	1.939	- - -	3.06	.346	.0271	.0109	-.005	1.947	- - -
3.05	.380	.0117	.0315	.011	1.830	.088	3.06	.388	.0160	.0219	.005	1.862	.069	3.06	.395	.0238	.0144	-.008	1.837	.087
3.05	.420	.0052	.0277	.018	1.777	.134	3.06	.428	.0074	.0275	.016	1.787	.132	3.06	.446	.0131	.0253	.011	1.811	.113
3.05	.440	-.0050	.0351	.035	1.678	.221	3.06	.429	-.0008	.0331	.026	1.717	.187	3.06	.447	.0023	.0291	.020	1.743	.163
3.05	.430	-.0204	.0402	.049	1.602	.278	3.06	.429	-.0100	.0373	.038	1.645	.237	3.06	.446	-.0012	.0333	.029	1.685	.205
[a]4.09	.332	.0107	-.0369	- - -	- - -	- - -	[a]4.09	.343	.0207	-.0389	- - -	- - -	- - -	[a]4.10	.369	.0234	-.0423	- - -	- - -	- - -
4.08	.415	.0238	.0026	-.003	1.930	- - -	4.08	.427	.0261	.0024	-.004	1.942	- - -	4.10	.456	.0290	-.0005	-.005	1.949	- - -
4.08	.518	.0134	.0083	.009	1.831	.086	4.08	.528	.0181	.0090	.006	1.867	.065	4.10	.556	.0261	.0013	-.008	1.882	.085
4.08	.580	.0063	.0138	.018	1.776	.137	4.08	.590	.0095	.0150	.016	1.789	.129	4.10	.597	.0158	.0099	.010	1.823	.107
4.08	.593	-.0070	.0179	.034	1.681	.220	4.08	.592	.0075	.0169	.026	1.716	.189	4.10	.590	.0073	.0139	.020	1.745	.165
4.08	.585	-.0189	.0208	.048	1.606	.278	4.08	.594	-.0089	.0194	.036	1.643	.236	4.10	.583	.0017	.0170	.028	1.691	.201
[a]5.11	.438	.0222	-.0307	- - -	- - -	- - -	[a]5.12	.455	.0235	-.0357	- - -	- - -	- - -	[a]5.13	.473	.0276	-.0390	- - -	- - -	- - -
5.10	.630	.0229	-.0126	-.003	1.929	- - -	5.11	.645	.0251	-.0123	-.004	1.943	- - -	5.13	.678	.0330	-.0182	-.005	1.947	- - -
5.10	.633	.0164	-.0067	.008	1.842	.082	5.11	.649	.0209	-.0081	.006	1.871	.078	5.13	.670	.0308	-.0150	-.008	1.931	.021
5.11	.635	.0096	-.0049	.017	1.783	.129	5.11	.633	.0123	-.0039	.016	1.790	.129	5.13	.672	.0207	-.0085	.009	1.832	.104
5.11	.621	-.0021	.0011	.034	1.695	.224	5.12	.637	.0039	-.0002	.026	1.717	.183	5.13	.676	.0122	-.0044	.019	1.758	.166
5.11	.624	-.0156	.0047	.047	1.617	.278	5.12	.640	-.0050	.0005	.038	1.647	.236	5.13	.677	.0062	-.0017	.026	1.699	.201
[a]6.13	.508	.0255	-.0242	- - -	- - -	- - -	[a]6.14	.524	.0270	-.0281	- - -	- - -	- - -	[a]6.16	.572	.0365	-.0350	- - -	- - -	- - -
6.13	.702	.0290	-.0269	-.003	1.932	- - -	6.14	.724	.0319	-.0288	-.003	1.944	- - -	6.16	.724	.0411	-.0387	-.005	1.954	- - -
6.13	.808	.0218	-.0226	.006	1.842	.066	6.14	.829	.0241	-.0243	.006	1.866	.069	6.16	.824	.0387	-.0362	-.005	1.886	.019
6.13	.872	.0126	-.0202	.016	1.785	.130	6.14	.833	.0162	-.0210	.016	1.793	.132	6.16	.826	.0294	-.0308	.010	1.822	.105
6.14	.920	-.0013	-.0151	.034	1.685	.221	6.14	.838	.0076	-.0167	.026	1.727	.189	6.16	.830	.0210	-.0273	.020	1.756	.165
6.14	.925	-.0120	-.0119	.046	1.616	.276	6.14	.843	-.0009	-.0143	.038	1.646	.239	6.16	.832	.0142	-.0246	.027	1.701	.205
[a]7.15	.584	.0291	-.0206	- - -	- - -	- - -	[a]7.16	.611	.0325	-.0269	- - -	- - -	- - -	[a]7.18	.648	.0500	-.0299	- - -	- - -	- - -
7.15	.794	.0336	-.0404	-.005	1.936	- - -	7.16	.819	.0373	-.0437	-.004	1.949	- - -	7.19	.876	.0536	-.0471	-.005	1.961	- - -
7.15	.897	.0297	-.0360	.006	1.868	.067	7.17	.885	.0297	-.0389	.006	1.870	.069	7.19	.884	.0499	-.0474	-.002	1.888	.084
7.16	.955	.0178	-.0343	.016	1.791	.130	7.17	.930	.0221	-.0359	.016	1.796	.133	7.19	.887	.0422	-.0425	.009	1.839	.105
7.16	.973	.0039	-.0296	.034	1.688	.222	7.17	.936	.0132	-.0313	.027	1.716	.183	7.19	.889	.0363	-.0389	.020	1.773	.156
7.16	.980	-.0069	-.0254	.048	1.612	.278	7.17	.944	.0053	-.0269	.038	1.647	.242	7.19	.890	.0298	-.0357	.028	1.708	.200
[a]8.17	.663	.0346	-.0115	- - -	- - -	- - -	[a]8.18	.692	.0417	-.0147	- - -	- - -	- - -	[a]8.19	.700	.0679	-.0160	- - -	- - -	- - -
8.18	.885	.0396	-.0507	-.003	1.933	- - -	8.19	.919	.0460	-.0556	-.004	1.928	- - -	8.20	.948	.0713	-.0419	-.005	1.907	- - -
8.18	.993	.0317	-.0456	.009	1.838	.087	8.19	.984	.0383	-.0520	.006	1.889	.073	8.20	.930	.0688	-.0409	-.002	1.888	.090
8.19	.999	.0235	-.0471	.020	1.774	.150	8.20	.931	.0317	-.0480	.015	1.800	.131	8.20	.929	.0620	-.0370	.010	1.844	.106
8.19	.711	.0054	-.0437	.036	1.673	.230	8.20	.939	.0233	-.0456	.027	1.720	.188	8.20	.929	.0539	-.0336	.020	1.767	.162
8.19	.718	.0006	-.0408	.049	1.611	.278	8.20	.943	.0165	-.0422	.039	1.648	.236	8.21	.929	.0452	-.0325	.027	1.718	.197
[a]9.19	.735	.0429	-.0011	- - -	- - -	- - -	[a]9.19	.790	.0507	-.0103	- - -	- - -	- - -	[a]9.19	.743	.0884	-.0024	- - -	- - -	- - -
9.20	.865	.0474	-.0597	-.003	1.942	- - -	9.21	.802	.0556	-.0629	-.005	1.936	- - -	9.21	.802	.0926	-.0397	-.005	1.973	- - -
9.20	.778	.0387	-.0573	.009	1.849	.085	9.22	.811	.0523	-.0593	.007	1.871	.077	9.22	.806	.0900	-.0374	-.005	1.949	.089
9.21	.765	.0310	-.0541	.020	1.771	.149	9.22	.816	.0426	-.0566	.016	1.799	.137	9.22	.816	.0846	-.0326	.010	1.843	.114
9.21	.799	.0188	-.0465	.036	1.676	.230	9.22	.823	.0316	-.0536	.027	1.719	.192	9.22	.823	.0723	-.0295	.020	1.767	.168
9.22	.805	.0111	-.0463	.047	1.619	.275	9.22	.826	.0311	-.0522	.038	1.651	.239	9.22	.830	.0700	-.0278	.026	1.716	.203
[a]10.20	.798	.0599	.0102	- - -	- - -	- - -	[a]10.21	.806	.0603	-.0007	- - -	- - -	- - -	[a]10.19	.788	.1081	-.0045	- - -	- - -	- - -
10.22	.843	.0598	-.0674	-.003	1.932	- - -	10.22	.856	.0608	-.0588	-.005	1.952	- - -	10.22	.842	.1130	-.0433	-.006	1.984	- - -
10.22	.852	.0525	-.0624	.009	1.853	.089	10.22	.864	.0783	-.0603	.007	1.876	.081	10.22	.855	.1120	-.0376	-.001	1.948	.039
10.22	.861	.0434	-.0575	.019	1.785	.152	10.23	.876	.0666	-.0554	.017	1.798	.142	10.23	.855	.1032	-.0336	.011	1.843	.115
10.23	.875	.0310	-.0512	.036	1.684	.232	10.24	.886	.0595	-.0528	.027	1.727	.197	10.23	.863	.0970	-.0422	.020	1.777	.168
10.23	.883	.0242	-.0483	.048	1.623	.276	10.24	.892	.0532	-.0508	.038	1.663	.239	10.23	.874	.0922	-.0407	.026	1.728	.208

[a]Props off.

TABLE XIX.- LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10; TAIL HEIGHT = 0, i_t = -2°, β = 51°, R = 1,000,000

(a) M = 0.70, 0.80, 0.83

M, 0.70							M, 0.80							M, 0.83						
α	C_L	C_X	C_m	$E_{o_{av}}$	J_{av}	$C_{P_{av}}$	α	C_L	C_X	C_m	$E_{o_{av}}$	J_{av}	$C_{P_{av}}$	α	C_L	C_X	C_m	$E_{o_{av}}$	J_{av}	$C_{P_{av}}$
[a]2.04	0.159	0.0016	-0.0218	- - -	- - -	- - -	[a]2.04	0.170	0.0020	-0.0220	- - -	- - -	- - -	[a]2.04	0.173	0.0061	-0.0199	- - -	- - -	- - -
2.04	.148	.0242	-.0343	-0.003	2.728	- - -	2.04	.157	.0272	-.0387	-0.004	2.751	- - -	2.04	.165	.0225	-.0394	-0.004	2.745	- - -
2.04	.147	.0139	-.0272	.009	2.532	0.231	2.04	.157	.0182	-.0257	.007	2.538	0.199	2.04	.162	.0183	-.0326	.010	2.510	0.207
2.03	.143	.0024	-.0118	.024	2.323	.313	2.04	.155	.0091	-.0257	.019	2.350	.257	2.04	.160	.0091	-.0126	.021	2.311	.276
2.03	.142	-.0103	-.0068	.041	2.128	.364	2.04	.154	-.0039	-.0108	.034	2.139	.299	2.04	.159	-.0016	-.0065	.036	2.112	.299
2.03	.141	-.0236	-.0013	.058	1.944	.399	2.04	.153	-.0148	-.0049	.049	1.964	.334	2.04	.159	-.0136	-.0025	.049	1.917	.364
[a]3.07	.259	.0222	-.0405	- - -	- - -	- - -	[a]3.08	.279	.0273	-.0417	- - -	- - -	- - -	[a]3.08	.287	.0269	-.0422	- - -	- - -	- - -
3.07	.254	.0149	-.0379	-.002	2.772	- - -	3.07	.271	.0183	-.0367	-.004	2.749	- - -	3.08	.282	.0300	-.0338	-.003	2.726	- - -
3.06	.251	.0144	-.0399	.010	2.509	.234	3.07	.271	.0126	-.0436	.007	2.510	.161	3.08	.285	.0224	-.0438	.007	2.522	.222
3.06	.251	.0031	-.0341	.024	2.320	.315	3.07	.278	.0068	-.0367	.019	2.351	.254	3.08	.283	.0118	-.0368	.018	2.328	.251
3.06	.252	-.0161	-.0268	.041	2.123	.368	3.07	.273	-.0015	-.0314	.034	2.153	.296	3.08	.284	-.0006	-.0305	.033	2.125	.302
3.07	.255	-.0328	-.0057	.057	1.940	.399	3.07	.276	-.0189	-.0273	.048	1.974	.332	3.08	.286	-.0184	-.0275	.046	1.925	.368
[a]4.10	.358	.0248	-.0377	- - -	- - -	- - -	[a]4.11	.390	.0277	-.0382	- - -	- - -	- - -	[a]4.11	.402	.0306	-.0329	- - -	- - -	- - -
4.09	.352	.0166	-.0322	-.008	2.774	- - -	4.10	.389	.0310	-.0377	-.004	2.743	- - -	4.11	.399	.0343	-.0321	-.003	2.742	- - -
4.09	.354	.0160	-.0338	.011	2.519	.241	4.10	.389	.0224	-.0369	.007	2.520	.187	4.11	.402	.0242	-.0327	.008	2.524	.209
4.10	.358	.0049	-.0316	.025	2.328	.283	4.11	.388	.0136	-.0331	.018	2.322	.249	4.11	.405	.0157	-.0348	.020	2.329	.273
4.10	.361	-.0080	-.0318	.042	2.128	.321	4.11	.390	.0018	-.0293	.034	2.133	.300	4.11	.411	.0042	-.0298	.034	2.135	.293
4.10	.365	-.0209	-.0232	-.037	1.930	.363	4.11	.393	-.0097	-.0264	.047	1.939	.355	4.12	.416	-.0064	-.0270	.049	1.930	.387
[a]5.12	.456	.0271	-.0767	- - -	- - -	- - -	[a]5.14	.497	.0334	-.0772	- - -	- - -	- - -	[a]5.14	.508	.0399	-.0781	- - -	- - -	- - -
5.12	.452	.0236	-.0763	-.002	2.774	- - -	5.14	.496	.0322	-.0787	-.004	2.748	- - -	5.14	.511	.0421	-.0818	-.003	2.742	- - -
5.12	.453	.0228	-.0722	.010	2.531	.287	5.14	.497	.0279	-.0751	.007	2.560	.183	5.14	.514	.0324	-.0783	.008	2.525	.216
5.12	.460	.0084	-.0676	.023	2.332	.318	5.14	.501	.0180	-.0721	.019	2.366	.238	5.15	.520	.0229	-.0749	.019	2.331	.272
5.13	.466	-.0036	-.0635	.043	2.137	.351	5.14	.507	.0064	-.0690	.034	2.154	.286	5.15	.526	.0133	-.0719	.034	2.140	.320
5.13	.471	-.0140	-.0589	.057	1.957	.382	5.14	.513	-.0048	-.0659	.049	1.960	.333	5.15	.533	.0008	-.0698	.048	1.942	.357
[a]6.15	.556	.0315	-.0928	- - -	- - -	- - -	[a]6.16	.595	.0443	-.1002	- - -	- - -	- - -	[a]6.16	.581	.0539	-.0928	- - -	- - -	- - -
6.15	.551	.0340	-.0947	-.001	2.776	- - -	6.17	.600	.0460	-.0951	-.003	2.758	- - -	6.17	.606	.0552	-.0929	-.003	2.753	- - -
6.15	.556	.0241	-.0890	.011	2.526	.238	6.17	.604	.0376	-.0930	.008	2.570	.162	6.17	.612	.0449	-.0920	.009	2.536	.185
6.15	.563	.0126	-.0846	.027	2.328	.323	6.17	.610	.0266	-.0912	.020	2.369	.260	6.17	.616	.0373	-.0889	.021	2.339	.271
6.16	.571	.0006	-.0797	.043	2.131	.379	6.17	.613	.0169	-.0871	.035	2.171	.306	6.17	.622	.0220	-.0877	.035	2.142	.323
6.16	.576	-.0105	-.0758	.057	1.958	.409	6.17	.621	.0072	-.0856	.049	2.001	.332	6.18	.631	.0136	-.0842	.049	1.949	.388
[a]7.18	.646	.0383	-.1260	- - -	- - -	- - -	[a]7.18	.673	.0593	-.1135	- - -	- - -	- - -	[a]7.18	.660	.0692	-.0999	- - -	- - -	- - -
7.17	.646	.0409	-.1126	-.001	2.785	- - -	7.19	.690	.0606	-.1049	-.004	2.764	- - -	7.19	.682	.0764	-.0972	-.004	2.770	- - -
7.18	.650	.0310	-.1099	.012	2.536	.238	7.20	.696	.0525	-.1029	.007	2.574	.184	7.19	.689	.0629	-.0943	.009	2.536	.212
7.18	.660	.0207	-.1018	.026	2.335	.265	7.20	.702	.0429	-.1009	.020	2.374	.267	7.19	.691	.0541	-.0922	.021	2.336	.277
7.18	.678	.0088	-.0969	.044	2.136	.318	7.20	.706	.0330	-.0995	.035	2.183	.310	7.20	.699	.0436	-.0907	.036	2.147	.312
7.19	.680	-.0013	-.0925	.058	1.963	.354	7.20	.713	.0244	-.0970	.048	2.004	.321	7.20	.709	.0344	-.0892	.048	1.963	.339
[a]8.20	.737	.0314	-.1432	- - -	- - -	- - -	[a]8.19	.768	.0785	-.1218	- - -	- - -	- - -	[a]8.19	.737	.0874	-.1133	- - -	- - -	- - -
8.20	.740	.0306	-.1373	-.002	2.793	- - -	8.20	.722	.0793	-.1070	-.004	2.778	- - -	8.20	.745	.0899	-.0975	-.004	2.767	- - -
8.20	.747	.0422	-.1180	.013	2.536	.241	8.21	.766	.0760	-.1041	.007	2.583	.193	8.21	.761	.0823	-.0955	.008	2.547	.213
8.20	.754	.0320	-.1119	.026	2.338	.325	8.21	.772	.0625	-.1007	.020	2.387	.255	8.21	.767	.0737	-.0979	.020	2.341	.261
8.21	.764	.0203	-.1062	.044	2.137	.353	8.21	.776	.0528	-.0991	.035	2.183	.287	8.21	.776	.0631	-.0971	.035	2.140	.317
8.21	.772	.0113	-.1038	.059	1.963	.384	8.22	.786	.0433	-.0997	.047	2.009	.306	8.21	.786	.0540	-.0982	.047	1.970	.397
[a]9.21	.799	.0718	-.1632	- - -	- - -	- - -	[a]9.20	.778	.1000	-.1471	- - -	- - -	- - -	[a]9.20	.774	.1096	-.1354	- - -	- - -	- - -
9.22	.813	.0691	-.1382	-.001	2.795	- - -	9.21	.808	.1000	-.1134	-.004	2.782	- - -	9.22	.805	.1187	-.1144	-.003	2.787	- - -
9.22	.825	.0589	-.1271	.014	2.532	.221	9.22	.828	.0920	-.1113	.006	2.573	.208	9.22	.825	.1033	-.1092	.008	2.546	.225
9.22	.833	.0492	-.1218	.027	2.332	.254	9.23	.837	.0841	-.1094	.018	2.379	.271	9.23	.841	.0976	-.1068	.020	2.355	.281
9.23	.843	.0392	-.1149	.044	2.135	.282	9.23	.839	.0760	-.1111	.033	2.170	.318	9.23	.843	.0880	-.1044	.035	2.150	.318
9.23	.855	.0293	-.1100	.059	1.970	.289	9.23	.843	.0666	-.1134	.046	2.021	.321	9.23	.857	.0778	-.1046	.047	1.988	.365
[a]10.22	.851	.0945	-.1679	- - -	- - -	- - -	[a]10.21	.826	.1288	-.1742	- - -	- - -	- - -	[a]10.22	.829	.1341	-.1777	- - -	- - -	- - -
10.23	.881	.0926	-.1463	-.001	2.813	- - -	10.22	.854	.1250	-.1521	-.004	2.796	- - -	10.22	.851	.1329	-.1276	-.003	2.802	- - -
10.23	.886	.0827	-.1347	.013	2.543	.269	10.23	.865	.1176	-.1308	.006	2.580	.210	10.23	.866	.1221	-.1263	.006	2.556	.233
10.24	.896	.0724	-.1252	.027	2.325	.291	10.23	.884	.1092	-.1241	.018	2.382	.273	10.24	.869	.1188	-.1221	.019	2.358	.305
10.24	.908	.0628	-.1160	.044	2.133	.307	10.24	.896	.0991	-.1180	.035	2.163	.331	10.23	.883	.1121	-.1173	.033	2.154	.326
10.23	.919	.0536	-.1070	.058	1.978	.367	10.24	.903	.0934	-.1178	.045	2.030	.324	10.24	.892	.1036	-.1334	.046	1.997	.396

[a]Props off.

TABLE XIX.- LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10; TAIL HEIGHT = 0, i_t = -2°, β = 51°, R = 1,000,000 - Concluded

(b) M = 0.86, 0.90

M, 0.86							M, 0.90						
α	C_L	C_X	C_m	$\Delta C_{m_{av}}$	J_{av}	$C_{P_{av}}$	α	C_L	C_X	C_m	$\Delta C_{m_{av}}$	J_{av}	$C_{P_{av}}$
[a]2.05	0.184	0.0866	-0.0186	- - -	- - -	- - -	[a]2.05	0.185	0.0388	-0.0138	- - -	- - -	- - -
2.05	.176	.0393	-.0114	-0.005	2.721	- - -	2.05	.192	.0429	-.0274	-0.005	2.781	- - -
2.04	.173	.0228	-.0300	.008	2.513	0.809	2.05	.189	.0282	-.0416	.009	2.486	0.838
2.04	.170	.0096	-.0164	.023	2.258	.402	2.05	.187	.0208	-.0319	.018	2.235	.351
2.04	.171	-.0005	-.0063	.035	2.021	.498	2.05	.186	.0106	-.0214	.027	2.037	.433
2.04	.170	-.0300	-.0003	.047	1.897	.555	2.05	.186	.0020	-.0127	.037	1.868	.482
[a]3.08	.303	.0318	-.0423	- - -	- - -	- - -	[a]3.08	.275	.0443	-.0347	- - -	- - -	- - -
3.08	.297	.0341	-.0254	-.005	2.756	- - -	3.08	.298	.0461	-.0775	-.005	2.726	- - -
3.08	.298	.0297	-.0475	.008	2.516	.230	3.09	.305	.0350	-.0658	.008	2.457	.235
3.08	.301	.0245	-.0307	.031	2.133	.493	3.09	.307	.0257	-.0573	.017	2.253	.353
3.08	.303	.0021	-.0256	.036	2.021	.508	3.09	.306	.0176	-.0526	.027	2.078	.437
3.08	.304	-.0080	-.0251	.046	1.910	.565	3.09	.313	.0097	-.0489	.036	1.889	.479
[a]4.11	.410	.0379	-.0693	- - -	- - -	- - -	[a]4.10	.369	.0525	-.0546	- - -	- - -	- - -
4.12	.415	.0396	-.0731	-.004	2.747	- - -	4.11	.399	.0558	-.0914	-.005	2.736	- - -
4.12	.401	.0321	-.0663	.009	2.503	.288	4.11	.396	.0462	-.0812	.009	2.452	.235
4.12	.406	.0189	-.0606	.023	2.260	.405	4.11	.406	.0339	-.0760	.018	2.274	.373
4.12	.431	.0096	-.0571	.036	2.064	.509	4.11	.422	.0243	-.0735	.027	2.069	.455
4.12	.434	-.0006	-.0541	.046	1.923	.569	4.12	.417	.0184	-.0727	.036	1.893	.485
[a]5.14	.502	.0494	-.0740	- - -	- - -	- - -	[a]5.12	.455	.0668	-.0666	- - -	- - -	- - -
5.15	.526	.0386	-.0890	-.004	2.758	- - -	5.13	.476	.0677	-.0931	-.004	2.747	- - -
5.15	.518	.0406	-.0819	.009	2.518	.223	5.13	.483	.0557	-.0866	.011	2.419	.261
5.15	.523	.0303	-.0775	.024	2.259	.416	5.14	.490	.0460	-.0848	.019	2.223	.393
5.15	.529	.0200	-.0747	.037	2.059	.521	5.14	.500	.0386	-.0826	.029	2.022	.460
5.15	.533	.0135	-.0746	.046	1.929	.563	5.14	.505	.0316	-.0839	.036	1.886	.493
[a]6.16	.574	.0642	-.0825	- - -	- - -	- - -	[a]6.14	.552	.0758	-.0792	- - -	- - -	- - -
6.17	.596	.0557	-.0924	-.004	2.760	- - -	6.15	.547	.0829	-.0932	-.004	2.730	- - -
6.17	.601	.0466	-.0908	.009	2.518	.289	6.15	.561	.0708	-.0931	.011	2.421	.273
6.17	.607	.0437	-.0877	.024	2.266	.417	6.16	.568	.0615	-.0942	.020	2.232	.366
6.17	.614	.0369	-.0856	.036	2.076	.519	6.16	.583	.0518	-.0949	.030	2.064	.472
6.17	.620	.0287	-.0847	.046	1.931	.570	6.16	.591	.0467	-.0955	.036	1.891	.503
[a]7.17	.642	.0817	-.0934	- - -	- - -	- - -	[a]7.16	.602	.0977	-.0934	- - -	- - -	- - -
7.18	.670	.0743	-.0987	-.004	2.738	- - -	7.17	.630	.1011	-.1064	-.004	2.762	- - -
7.18	.669	.0744	-.0940	.010	2.519	.233	7.17	.636	.0883	-.1025	.011	2.439	.271
7.19	.682	.0628	-.0919	.024	2.268	.464	7.18	.647	.0796	-.1056	.021	2.229	.397
7.19	.689	.0537	-.0909	.037	2.072	.588	7.18	.656	.0731	-.1075	.030	2.038	.468
7.19	.696	.0465	-.0910	.047	1.940	.576	7.18	.664	.0694	-.1082	.039	1.926	.496
[a]8.19	.705	.0997	-.1181	- - -	- - -	- - -	[a]8.18	.687	.1169	-.1248	- - -	- - -	- - -
8.20	.731	.0930	-.1019	-.004	2.768	- - -	8.19	.696	.1204	-.1283	-.004	2.775	- - -
8.10	.746	.0847	-.1027	.009	2.526	.236	8.19	.716	.1064	-.1213	.011	2.440	.279
8.10	.756	.0769	-.1019	.023	2.274	.384	8.19	.724	.1002	-.1395	.020	2.243	.401
8.11	.764	.0743	-.1021	.037	2.068	.531	8.20	.732	.0922	-.1371	.029	2.055	.467
8.11	.772	.0688	-.1027	.048	1.937	.571	8.20	.741	.0882	-.1361	.035	1.939	.485
[a]9.20	.768	.1212	-.1421	- - -	- - -	- - -	[a]9.19	.746	.1313	-.1636	- - -	- - -	- - -
9.21	.793	.1253	-.1218	-.005	2.791	- - -	9.20	.765	.1403	-.1451	-.005	2.764	- - -
9.22	.814	.1172	-.1170	.009	2.530	.244	9.21	.787	.1360	-.1465	.010	2.469	.260
9.22	.827	.1044	-.1164	.024	2.270	.434	9.21	.799	.1296	-.1480	.020	2.252	.406
9.23	.835	.1008	-.1139	.037	2.072	.530	9.22	.808	.1161	-.1371	.029	2.065	.489
9.23	.842	.0927	-.1135	.045	1.968	.570	9.22	.811	.1140	-.1423	.035	1.960	.514
[a]10.21	.805	.1476	-.1348	- - -	- - -	- - -	[a]10.21	.808	.1655	-.1983	- - -	- - -	- - -
10.22	.821	.1405	-.1365	-.005	2.816	- - -	10.22	.837	.1698	-.1746	-.005	2.807	- - -
10.23	.850	.1403	-.1289	.011	2.526	.252	10.23	.869	.1604	-.1707	.011	2.489	.276
10.24	.858	.1334	-.1250	.025	2.276	.437	10.23	.876	.1501	-.1669	.021	2.253	.415
10.24	.901	.1230	-.1233	.038	2.082	.537	10.23	.879	.1448	-.1625	.029	2.088	.479
10.24	.903	.1189	-.1217	.046	1.972	.568	10.24	.885	.1398	-.1657	.036	1.960	.517

[a]Props off.

TABLE XX.- LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10; TAIL HEIGHT = 0, i_t = -4°, β = 51°, R = 1,000,000

(a) M = 0.70, 0.80, 0.83

M, 0.70						
α	C_L	C_X	C_m	$T_{c_{eq}}$	J_{eq}	$C_{P_{eq}}$
[a]2.03	0.140	0.0216	0.0446	- - -	- - -	- - -
2.03	.131	.0248	.0233	-0.003	2.770	- - -
2.03	.127	.0237	.0221	.009	2.530	0.243
2.03	.124	.0207	.0255	.025	2.254	.338
2.03	.121	-.0133	.0297	.044	2.066	.388
2.03	.120	-.0254	.0276	.059	1.926	.424
[a]3.06	.243	.0220	.0195	- - -	- - -	- - -
3.06	.233	.0272	.0072	-.002	2.775	- - -
3.06	.235	.0141	.0162	.010	2.524	.244
3.06	.232	-.0004	.0296	.029	2.276	.329
3.06	.236	-.0129	.0368	.044	2.069	.393
3.06	.236	-.0247	.0422	.059	1.931	.449
[a]4.09	.341	.0237	.0009	- - -	- - -	- - -
4.09	.335	.0270	-.0057	-.002	2.771	- - -
4.09	.335	.0168	.0011	.009	2.540	.221
4.09	.339	.0026	.0089	.027	2.295	.142
4.09	.338	-.0108	.0141	.044	2.049	.293
4.09	.345	-.0225	.0183	.059	1.927	.366
[a]5.12	.440	.0264	-.0169	- - -	- - -	- - -
5.12	.435	.0297	-.0189	-.002	2.767	- - -
5.12	.437	.0195	-.0151	.010	2.524	.218
5.12	.444	.0056	-.0079	.029	2.285	.176
5.12	.450	-.0069	-.0013	.049	2.021	.252
5.12	.455	-.0187	.0014	.059	1.928	.265
[a]6.14	.538	.0303	-.0183	- - -	- - -	- - -
6.14	.533	.0333	-.0360	-.001	2.773	- - -
6.14	.537	.0225	-.0320	.011	2.527	.218
6.14	.544	.0095	-.0229	.029	2.290	.176
6.15	.551	-.0024	-.0158	.045	2.093	.232
6.15	.557	-.0127	-.0113	.059	1.933	.264
[a]7.17	.629	.0370	-.0249	- - -	- - -	- - -
7.17	.627	.0393	-.0469	-.001	2.779	- - -
7.17	.630	.0269	-.0394	.011	2.526	.241
7.17	.641	.0159	-.0326	.030	2.279	.268
7.18	.650	.0049	-.0264	.047	2.089	.300
7.18	.657	-.0045	-.0265	.059	1.938	.370
[a]8.19	.714	.0488	-.0679	- - -	- - -	- - -
8.19	.713	.0493	-.0545	-.001	2.783	- - -
8.20	.726	.0406	-.0528	.011	2.531	.236
8.20	.734	.0282	-.0438	.028	2.289	.258
8.20	.745	.0172	-.0362	.046	2.101	.288
8.20	.753	.0074	-.0361	.060	1.945	.317
[a]9.20	.777	.0686	-.0838	- - -	- - -	- - -
9.21	.791	.0661	-.0609	0	2.792	- - -
9.21	.805	.0566	-.0566	.012	2.547	.255
9.22	.816	.0430	-.0519	.030	2.282	.475
9.22	.826	.0338	-.0467	.046	2.092	.604
9.22	.835	.0252	-.0447	.061	1.945	.676
[a]10.21	.833	.0925	-.0939	- - -	- - -	- - -
10.22	.837	.0921	-.0619	-.001	2.806	- - -
10.23	.855	.0787	-.0622	.013	2.234	.282
10.23	.880	.0677	-.0543	.029	2.294	.478
10.24	.890	.0587	-.0435	.047	2.089	.614
10.24	.900	.0494	-.0403	.059	1.936	.679

M, 0.80						
α	C_L	C_X	C_m	$T_{c_{eq}}$	J_{eq}	$C_{P_{eq}}$
[a]2.04	0.149	0.0246	0.0426	- - -	- - -	- - -
2.03	.140	.0280	.0190	-0.004	2.755	- - -
2.03	.138	.0255	.0266	.007	2.542	0.203
2.03	.136	.0248	.0437	.024	2.278	.422
2.03	.135	-.0054	.0254	.039	2.066	.541
2.03	.135	-.0124	.0273	.046	1.958	.584
[a]3.07	.261	.0249	.0170	- - -	- - -	- - -
3.06	.251	.0287	.0031	-.004	2.755	- - -
3.06	.251	.0183	.0132	.008	2.537	.211
3.06	.252	.0064	.0247	.024	2.291	.328
3.06	.254	-.0097	.0314	.039	2.096	.339
3.07	.259	-.0111	.0349	.046	2.008	.387
[a]4.10	.370	.0270	-.0004	- - -	- - -	- - -
4.10	.362	.0307	-.0086	-.004	2.760	- - -
4.10	.365	.0211	-.0002	.008	2.536	.209
4.10	.370	.0091	.0078	.024	2.297	.409
4.10	.375	-.0017	.0133	.038	2.109	.533
4.10	.378	-.0079	.0159	.046	2.008	.584
[a]5.13	.478	.0324	-.0189	- - -	- - -	- - -
5.13	.474	.0352	-.0243	-.005	2.763	- - -
5.13	.481	.0271	-.0129	.006	2.552	.201
5.14	.485	.0194	-.0108	.025	2.291	.319
5.14	.490	.0037	-.0060	.038	2.124	.330
5.14	.494	-.0027	-.0037	.046	2.020	.387
[a]6.16	.577	.0433	-.0399	- - -	- - -	- - -
6.16	.580	.0439	-.0372	-.003	2.771	- - -
6.16	.583	.0333	-.0313	.010	2.534	.222
6.16	.592	.0226	-.0258	.026	2.292	.320
6.17	.598	.0147	-.0211	.039	2.125	.321
6.17	.600	.0095	-.0192	.047	2.050	.381
[a]7.18	.652	.0776	-.0483	- - -	- - -	- - -
7.18	.671	.0761	-.0432	-.004	2.774	- - -
7.19	.680	.0692	-.0408	.008	2.535	.208
7.19	.685	.0597	-.0345	.024	2.317	.307
7.19	.687	.0520	-.0320	.036	2.195	.317
7.19	.690	.0459	-.0295	.045	2.045	.378
[a]8.19	.705	.0788	-.0477	- - -	- - -	- - -
8.20	.733	.0769	-.0366	-.003	2.788	- - -
8.20	.744	.0699	-.0338	.008	2.560	.208
8.20	.752	.0561	-.0305	.022	2.339	.235
8.21	.756	.0517	-.0281	.036	2.143	.320
8.21	.761	.0463	-.0260	.045	2.048	.362
[a]9.19	.732	.0989	-.0646	- - -	- - -	- - -
9.20	.784	.0965	-.0579	-.005	2.794	- - -
9.21	.805	.0904	-.0560	.007	2.571	.211
9.22	.822	.0780	-.0556	.023	2.319	.427
9.22	.822	.0728	-.0525	.033	2.167	.518
9.22	.825	.0630	-.0522	.045	2.048	.582
[a]10.20	.800	.1230	-.0915	- - -	- - -	- - -
10.21	.832	.1277	-.0447	-.006	2.800	- - -
10.22	.849	.1143	-.0449	.007	2.571	.222
10.23	.857	.1061	-.0431	.021	2.337	.409
10.23	.874	.0993	-.0394	.033	2.182	.516
10.23	.880	.0927	-.0418	.044	2.056	.587

M, 0.83						
α	C_L	C_X	C_m	$T_{c_{eq}}$	J_{eq}	$C_{P_{eq}}$
[a]2.04	0.174	0.0269	0.0470	- - -	- - -	- - -
2.04	.146	.0297	.0193	-0.004	2.752	- - -
2.04	.142	.0252	.0268	.008	2.539	0.188
2.04	.141	.0227	.0391	.029	2.349	.346
2.04	.140	-.0006	.0383	.035	2.184	.496
2.04	.138	-.0127	.0510	.046	1.948	.575
[a]3.07	.268	.0272	.0230	- - -	- - -	- - -
3.07	.262	.0302	.0038	-.003	2.752	- - -
3.07	.261	.0223	.0223	.008	2.566	.171
3.07	.262	.0225	.0215	.028	2.361	.345
3.07	.263	-.0004	.0329	.035	2.121	.305
3.07	.265	-.0099	.0386	.047	1.970	.374
[a]4.10	.384	.0308	.0059	- - -	- - -	- - -
4.10	.381	.0340	-.0095	-.003	2.743	- - -
4.11	.385	.0272	-.0041	.006	2.528	.149
4.10	.384	.0160	.0095	.018	2.321	.344
4.11	.388	.0020	.0132	.036	2.132	.512
4.11	.392	-.0065	.0160	.046	1.972	.579
[a]5.14	.490	.0402	-.0141	- - -	- - -	- - -
5.14	.494	.0416	-.0269	-.003	2.743	- - -
5.14	.497	.0337	-.0195	.006	2.565	.177
5.14	.500	.0260	-.0151	.016	2.357	.251
5.14	.507	.0109	-.0093	.032	2.119	.315
5.14	.513	.0052	-.0064	.043	1.977	.379
[a]6.16	.570	.0531	-.0281	- - -	- - -	- - -
6.16	.588	.0531	-.0368	-.002	2.732	- - -
6.17	.597	.0476	-.0316	.006	2.588	.167
6.17	.596	.0372	-.0282	.019	2.369	.335
6.17	.604	.0296	-.0216	.036	2.132	.344
6.17	.610	.0175	-.0197	.047	1.981	.380
[a]7.17	.637	.0695	-.0273	- - -	- - -	- - -
7.18	.667	.0708	-.0368	-.003	2.764	- - -
7.18	.672	.0632	-.0332	.007	2.578	.176
7.18	.673	.0540	-.0289	.018	2.388	.338
7.19	.678	.0428	-.0230	.035	2.147	.310
7.19	.685	.0345	-.0219	.045	2.007	.384
[a]8.19	.695	.0873	-.0343	- - -	- - -	- - -
8.20	.726	.0883	-.0302	-.004	2.776	- - -
8.20	.739	.0804	-.0333	.007	2.574	.184
8.20	.746	.0731	-.0296	.018	2.384	.327
8.20	.753	.0610	-.0260	.033	2.131	.383
8.21	.765	.0566	-.0256	.045	2.022	.378
[a]9.19	.747	.1083	-.0488	- - -	- - -	- - -
9.20	.182	.1087	-.0368	-.004	2.752	- - -
9.21	.802	.1019	-.0359	.005	2.552	.195
9.22	.816	.0927	-.0369	.018	2.371	.372
9.22	.825	.0848	-.0389	.033	2.152	.520
9.22	.834	.0785	-.0399	.044	2.016	.584
[a]10.21	.781	.1314	-.0540	- - -	- - -	- - -
10.21	.829	.1335	-.0439	-.005	2.802	- - -
10.22	.847	.1312	-.0410	.005	2.599	.196
10.23	.872	.1209	-.0349	.017	2.381	.372
10.24	.887	.1097	-.0304	.033	2.161	.518
10.23	.897	.1020	-.0363	.044	2.033	.587

[a]Prop off.

TABLE XX.- LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10; TAIL HEIGHT = 0, i_t = -4°, β = 51°, R = 1,000,000 - Concluded

(b) M = 0.86, 0.90

M, 0.86							M, 0.90						
α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$	α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]2.04	0.166	0.0297	0.0501	- - -	- - -	- - -	[a]2.04	0.168	0.0390	0.0484	- - -	- - -	- - -
2.04	.158	.0331	.0200	-0.005	2.727	- - -	2.04	.170	.0445	-.0018	-0.004	2.705	- - -
2.04	.152	.0224	.0327	.007	2.510	0.209	2.04	.166	.0333	.0124	.006	2.479	0.194
2.04	.151	.0133	.0424	.018	2.316	.354	2.04	.164	.0216	.0303	.017	2.289	.320
2.04	.148	-.0008	.0581	.033	2.070	.506	2.04	.162	.0132	.0416	.027	2.032	.426
2.04	.150	-.0094	.0656	.046	1.881	.547	2.04	.160	.0046	.0510	.036	1.854	.470
[a]3.08	.283	.0313	.0227	- - -	- - -	- - -	[a]3.07	.282	.0489	.0259	- - -	- - -	- - -
3.08	.282	.0354	-.0018	-.005	2.734	- - -	3.08	.277	.0491	-.0146	-.003	2.708	- - -
3.08	.280	.0255	.0097	.006	2.522	.197	3.08	.277	.0389	-.0060	.005	2.490	.193
3.08	.279	.0157	.0198	.017	2.337	.317	3.08	.268	.0241	.0099	.018	2.227	.265
3.08	.281	.0029	.0315	.033	2.064	.498	3.08	.268	.0175	.0285	.027	2.040	.432
3.08	.281	-.0076	.0414	.045	1.912	.561	3.08	.266	.0127	.0066	.035	1.879	.464
[a]4.11	.392	.0379	.0227	- - -	- - -	- - -	[a]4.09	.358	.0327	.0038	- - -	- - -	- - -
4.09	.398	.0415	-.0211	-.005	2.741	- - -	4.10	.361	.0556	-.0361	-.004	2.729	- - -
4.11	.403	.0339	-.0133	.005	2.551	.134	4.10	.374	.0421	-.0208	.006	2.504	.250
4.11	.405	.0251	-.0041	.016	2.367	.329	4.10	.374	.0378	-.0166	.017	2.254	.349
4.11	.410	.0098	.0061	.034	2.064	.502	4.11	.367	.0268	-.0130	.026	2.053	.443
4.12	.415	-.0001	.0078	.045	1.914	.556	4.11	.367	.0213	-.0108	.035	1.890	.464
[a]5.13	.483	.0500	-.0227	- - -	- - -	- - -	[a]5.11	.431	.0679	-.0102	- - -	- - -	- - -
5.14	.498	.0521	-.0318	-.004	2.742	- - -	5.12	.477	.0680	-.0572	-.004	2.733	- - -
5.14	.499	.0439	-.0232	.007	2.541	.198	5.12	.450	.0599	-.0281	.006	2.513	.293
5.14	.503	.0378	-.0184	.018	2.339	.354	5.13	.466	.0468	-.0244	.018	2.243	.371
5.14	.508	.0243	-.0139	.032	2.104	.496	5.13	.467	.0404	-.0231	.027	2.054	.440
5.14	.515	.0110	-.0105	.045	1.920	.575	5.13	.469	.0379	-.0227	.035	1.900	.463
[a]6.15	.574	.0642	-.0209	- - -	- - -	- - -	[a]6.13	.506	.0796	-.0183	- - -	- - -	- - -
6.16	.577	.0653	-.0372	-.004	2.745	- - -	6.14	.534	.0606	-.0564	-.004	2.747	- - -
6.16	.581	.0718	-.0296	.006	2.555	.193	6.14	.533	.0722	-.0328	.006	2.522	.186
6.16	.584	.0491	-.0251	.018	2.341	.353	6.15	.548	.0615	-.0336	.019	2.232	.383
6.16	.589	.0406	-.0224	.032	2.289	.492	6.15	.554	.0567	-.0375	.027	2.076	.446
6.17	.597	.0283	-.0192	.045	1.932	.569	6.15	.562	.0491	-.0349	.035	1.923	.485
[a]7.16	.622	.0809	-.0359	- - -	- - -	- - -	[a]7.15	.588	.0945	-.0201	- - -	- - -	- - -
7.18	.649	.0829	-.0351	-.004	2.773	- - -	7.16	.609	.1009	-.0436	-.005	2.737	- - -
7.18	.650	.0733	-.0308	.007	2.564	.204	7.16	.613	.0928	-.0439	.006	2.542	.181
7.18	.654	.0654	-.0265	.018	2.354	.361	7.17	.627	.0810	-.0460	.019	2.263	.385
7.18	.664	.0755	-.0244	.032	2.122	.505	7.17	.635	.0763	-.0454	.028	2.066	.427
7.18	.671	.0479	-.0225	.044	1.944	.569	7.17	.638	.0719	-.0440	.034	1.954	.490
[a]8.18	.682	.0981	-.0281	- - -	- - -	- - -	[a]8.17	.654	.1156	-.0551	- - -	- - -	- - -
8.19	.706	.1002	-.0374	-.004	2.766	- - -	8.18	.677	.1200	-.0543	-.005	2.767	- - -
8.19	.724	.0947	-.0362	.007	2.555	.202	8.18	.693	.1126	-.0575	.006	2.547	.192
8.20	.729	.0874	-.0325	.018	2.359	.361	8.19	.697	.1054	-.0578	.018	2.264	.381
8.20	.740	.0758	-.0296	.034	2.105	.511	8.19	.710	.0982	-.0514	.028	2.081	.478
8.20	.748	.0680	-.0289	.045	1.949	.571	8.19	.714	.0939	-.0611	.033	1.964	.492
[a]9.19	.739	.1196	-.0369	- - -	- - -	- - -	[a]9.18	.719	.1360	-.0732	- - -	- - -	- - -
9.20	.769	.1218	-.0449	-.005	2.783	- - -	9.19	.739	.1435	-.0643	-.006	2.789	- - -
9.21	.791	.1177	-.0435	.006	2.590	.187	9.20	.761	.1328	-.0665	.006	2.548	.197
9.21	.800	.1084	-.0405	.019	2.363	.374	9.20	.773	.1193	-.0619	.019	2.289	.394
9.21	.808	.0961	-.0389	.033	2.134	.504	9.20	.779	.1162	-.0623	.028	2.095	.469
9.22	.815	.0914	-.0362	.044	1.968	.572	9.20	.782	.1151	-.0646	.034	1.981	.506
[a]10.19	.760	.1404	-.0763	- - -	- - -	- - -	[a]10.19	.764	.1618	-.1021	- - -	- - -	- - -
10.21	.823	.1432	-.0335	.005	2.799	- - -	10.21	.811	.1675	-.0840	-.006	2.794	- - -
10.22	.844	.1402	-.0471	.007	2.575	.213	10.22	.840	.1679	-.0905	.005	2.571	.189
10.22	.860	.1347	-.0430	.019	2.358	.370	10.22	.848	.1543	-.0845	.018	2.306	.369
10.23	.872	.1278	-.0426	.033	2.116	.506	10.22	.877	.1483	-.0823	.027	2.111	.478
10.23	.880	.1175	-.0384	.044	1.980	.578	10.22	.897	.1405	-.0784	.033	1.999	.517

[a]Props off.

TABLE XXI.- LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10; TAIL HEIGHT = 0, i_t = -6°, β = 51°, R = 1,000,000

(a) M = 0.70, 0.80, 0.83

M, 0.70							M, 0.80							M, 0.83						
α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$	α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$	α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
2.03	0.118	0.0225	0.1103	- - -	- - -	- - -	2.03	0.126	0.0228	0.1124	- - -	- - -	- - -	2.03	0.133	0.0278	0.1168	- - -	- - -	- - -
2.02	.105	.0232	.0990	-0.003	2.772	- - -	2.03	.115	.0234	.0979	-0.004	2.757	- - -	2.03	.123	.0280	.0979	-0.004	2.733	- - -
2.02	.107	.0160	.0942	.007	2.378	0.203	2.03	.115	.0183	.0995	.008	2.511	0.223	2.03	.121	.0241	.0951	.005	2.594	0.194
2.02	.103	.0087	.1047	.024	2.321	.413	2.02	.113	.0075	.1096	.021	2.306	.396	2.03	.118	.0224	.1082	.018	2.374	.366
2.02	.100	-.0093	.1205	.040	2.125	.562	2.02	.111	-.0038	.1234	.036	2.111	.521	2.03	.117	.0015	.1211	.033	2.154	.488
2.02	.098	-.0214	.1309	.056	1.958	.651	2.02	.110	-.0142	.1323	.050	1.949	.588	2.03	.115	-.0102	.1327	.046	1.972	.589
3.05	.221	.0229	.0851	- - -	- - -	- - -	3.06	.236	.0234	.0874	- - -	- - -	- - -	3.05	.245	.0276	.0899	- - -	- - -	- - -
3.05	.213	.0172	.0689	-.002	2.771	- - -	3.06	.229	.0250	.0703	-.004	2.730	- - -	3.06	.242	.0308	.0688	-.003	2.750	- - -
3.05	.211	.0157	.0768	.008	2.556	.210	3.06	.230	.0219	.0769	.004	2.589	.226	3.06	.240	.0233	.0736	.006	2.580	.164
3.05	.209	.0024	.0908	.025	2.330	.425	3.06	.230	.0084	.0926	.021	2.319	.366	3.06	.240	.0142	.0872	.016	2.387	.337
3.05	.209	-.0095	.1034	.041	2.130	.566	3.06	.230	-.0029	.1052	.036	2.121	.514	3.06	.241	.0032	.1007	.031	2.183	.478
3.05	.209	-.0213	.1114	.056	1.966	.652	3.06	.230	-.0133	.1121	.049	1.965	.598	3.06	.241	-.0094	.1122	.046	1.978	.581
4.08	.321	.0239	.0645	- - -	- - -	- - -	4.09	.345	.0271	.0675	- - -	- - -	- - -	4.10	.364	.0307	.0700	- - -	- - -	- - -
4.08	.314	.0207	.0535	-.002	2.774	- - -	4.09	.344	.0311	.0550	-.004	2.745	- - -	4.10	.361	.0340	.0516	-.003	2.748	- - -
4.08	.312	.0176	.0602	.008	2.564	.198	4.09	.341	.0225	.0623	.006	2.563	.182	4.10	.359	.0269	.0590	.005	2.589	.154
4.08	.314	.0074	.0692	.021	2.379	.373	4.09	.343	.0109	.0709	.021	2.330	.360	4.10	.360	.0172	.0709	.017	2.392	.333
4.08	.315	-.0022	.0794	.038	2.176	.533	4.09	.349	-.0005	.0837	.036	2.186	.515	4.10	.362	.0062	.0817	.031	2.188	.480
4.08	.318	-.0136	.0884	.055	1.973	.651	4.09	.350	-.0118	.0887	.049	1.969	.605	4.10	.365	-.0065	.0882	.049	1.986	.586
5.11	.419	.0260	.0445	- - -	- - -	- - -	5.12	.457	.0319	.0474	- - -	- - -	- - -	5.13	.469	.0362	.0478	- - -	- - -	- - -
5.11	.415	.0289	.0383	-.002	2.768	- - -	5.12	.459	.0378	.0389	-.004	2.748	- - -	5.13	.474	.0407	.0331	-.003	2.738	- - -
5.11	.415	.0218	.0437	.006	2.593	.168	5.12	.457	.0287	.0474	.006	2.574	.175	5.13	.475	.0345	.0409	.005	2.606	.149
5.11	.418	.0094	.0527	.021	2.373	.385	5.12	.463	.0196	.0566	.021	2.338	.393	5.13	.476	.0249	.0493	.017	2.395	.354
5.11	.425	-.0023	.0600	.037	2.183	.535	5.13	.467	.0060	.0617	.036	2.132	.522	5.13	.482	.0132	.0555	.031	2.192	.486
5.11	.428	-.0162	.0649	.055	1.979	.651	5.13	.470	-.0062	.0660	.048	1.966	.606	5.14	.487	.0026	.0607	.045	2.003	.587
6.14	.519	.0301	.0216	- - -	- - -	- - -	6.15	.559	.0405	.0216	- - -	- - -	- - -	6.15	.572	.0510	.0300	- - -	- - -	- - -
6.13	.513	.0322	.0229	-.001	2.769	- - -	6.16	.562	.0447	.0203	-.004	2.725	- - -	6.16	.569	.0534	.0194	-.003	2.760	- - -
6.14	.517	.0244	.0283	.008	2.592	.187	6.16	.566	.0398	.0281	.007	2.576	.175	6.16	.575	.0467	.0270	.006	2.605	.153
6.14	.520	.0142	.0336	.021	2.388	.373	6.16	.568	.0252	.0353	.020	2.368	.360	6.16	.575	.0369	.0369	.018	2.391	.340
6.14	.527	.0021	.0412	.037	2.182	.541	6.16	.572	.0138	.0395	.033	2.180	.497	6.16	.580	.0280	.0424	.031	2.202	.481
6.14	.532	-.0106	.0476	.054	1.988	.651	6.16	.577	.0046	.0450	.049	1.994	.606	6.16	.586	.0164	.0471	.049	2.015	.595
7.16	.609	.0361	.0008	- - -	- - -	- - -	7.17	.633	.0366	.0116	- - -	- - -	- - -	7.18	.622	.0681	.0278	- - -	- - -	- - -
7.16	.607	.0361	.0082	-.001	2.761	- - -	7.18	.654	.0373	.0098	-.004	2.768	- - -	7.18	.651	.0687	.0188	-.004	2.771	- - -
7.16	.612	.0301	.0142	.009	2.582	.198	7.18	.661	.0497	.0187	.007	2.582	.183	7.18	.654	.0615	.0241	.006	2.597	.167
7.16	.619	.0206	.0189	.022	2.385	.376	7.18	.662	.0420	.0250	.019	2.379	.354	7.18	.654	.0547	.0343	.017	2.399	.341
7.17	.627	.0088	.0250	.039	2.177	.542	7.18	.663	.0305	.0281	.033	2.186	.499	7.18	.657	.0442	.0395	.031	2.194	.484
7.17	.635	-.0025	.0339	.055	1.990	.654	7.18	.669	.0203	.0327	.048	2.000	.604	7.18	.662	.0346	.0486	.044	2.033	.573
8.19	.699	.0476	-.0092	- - -	- - -	- - -	8.18	.686	.0749	.0139	- - -	- - -	- - -	8.18	.676	.0854	.0207	- - -	- - -	- - -
8.19	.699	.0475	-.0047	-.001	2.789	- - -	8.19	.716	.0769	.0202	-.005	2.776	- - -	8.19	.708	.0668	.0231	-.004	2.790	- - -
8.19	.707	.0398	.0068	.010	2.569	.322	8.19	.724	.0670	.0244	.007	2.578	.180	8.19	.722	.0756	.0259	.006	2.603	.177
8.19	.711	.0301	.0120	.023	2.385	.381	8.20	.731	.0577	.0308	.019	2.373	.368	8.20	.727	.0721	.0313	.027	2.400	.345
8.19	.722	.0195	.0188	.038	2.188	.544	8.20	.734	.0492	.0330	.033	2.185	.505	8.20	.731	.0621	.0363	.031	2.199	.493
8.20	.731	.0090	.0244	.056	1.999	.654	8.20	.741	.0412	.0370	.047	2.010	.595	8.20	.741	.0550	.0400	.044	2.035	.579
9.19	.794	.0664	-.0218	- - -	- - -	- - -	9.19	.734	.0966	-.0012	- - -	- - -	- - -	9.19	.731	.1061	.0070	- - -	- - -	- - -
9.20	.773	.0640	-.0006	0	2.793	- - -	9.20	.766	.0960	.0221	-.005	2.765	- - -	9.20	.763	.1079	.0196	-.004	2.789	- - -
9.21	.785	.0554	.0020	.010	2.578	.217	9.20	.784	.0889	.0223	.008	2.577	.199	9.20	.784	.1010	.0233	.005	2.610	.183
9.21	.793	.0467	.0056	.023	2.391	.366	9.21	.797	.0781	.0259	.018	2.374	.378	9.21	.801	.0926	.0297	.016	2.405	.360
9.21	.804	.0371	.0109	.038	2.188	.541	9.21	.799	.0700	.0267	.033	2.179	.514	9.22	.805	.0850	.0329	.029	2.209	.496
9.22	.813	.0270	.0147	.055	2.010	.646	9.22	.805	.0629	.0261	.049	2.029	.600	9.22	.815	.0776	.0357	.040	2.048	.579
10.21	.810	.0903	-.0234	- - -	- - -	- - -	10.19	.776	.1193	-.0207	- - -	- - -	- - -	10.19	.761	.1286	-.0205	- - -	- - -	- - -
10.22	.840	.0872	-.0003	-.001	2.814	- - -	10.21	.809	.1198	.0178	-.006	2.798	- - -	10.21	.808	.1287	.0184	-.005	2.806	- - -
10.22	.844	.0784	-.0000	.011	2.577	.236	10.21	.823	.1191	.0137	.006	2.582	.169	10.21	.827	.1246	.0147	.004	2.613	.159
10.22	.856	.0688	.0060	.023	2.381	.402	10.22	.842	.1046	.0180	.018	2.386	.379	10.22	.833	.1173	.0264	.014	2.426	.356
10.23	.866	.0586	.0105	.039	2.179	.550	10.22	.855	.0937	.0230	.032	2.199	.510	10.22	.843	.1060	.0177	.027	2.217	.499
10.23	.877	.0499	.0153	.055	2.015	.646	10.22	.862	.0874	.0220	.045	2.030	.607	10.22	.852	.0999	.0300	.041	2.055	.587

TABLE XXI.- LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10; TAIL HEIGHT = 0, $i_t = -6^\circ$, $\beta = 51^\circ$, R = 1,000,000 - Concluded

(b) M = 0.86, 0.90

M, 0.86							M, 0.90						
α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$	α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
2.03	0.142	0.0299	0.1203	- - -	- - -	- - -	2.03	0.140	0.0411	0.1243	- - -	- - -	- - -
2.03	.139	.0394	.0900	-0.008	2.731	- - -	2.03	.144	.0480	.0710	-0.005	2.731	- - -
2.03	.130	.0260	.1009	.005	2.547	0.182	2.03	.145	.0362	.0977	.005	2.486	0.184
2.03	.129	.0187	.1145	.021	2.281	.360	2.03	.143	.0230	.1098	.018	2.223	.347
2.03	.128	.0031	.1277	.034	2.095	.486	2.03	.142	.0187	.1264	.027	2.025	.430
2.03	.126	-.0100	.1431	.047	1.874	.554	2.03	.138	.0063	.1364	.035	1.861	.469
3.07	.261	.0314	.0922	- - -	- - -	- - -	3.06	.229	.0454	.1050	- - -	- - -	- - -
3.07	.261	.0326	.0637	-.003	2.740	- - -	3.07	.257	.0483	.0900	-.005	2.727	- - -
3.07	.259	.0270	.0753	.005	2.559	.179	3.07	.262	.0375	.0687	.007	2.481	.199
3.07	.260	.0196	.0900	.020	2.307	.373	3.07	.261	.0302	.0795	.016	2.244	.349
3.07	.260	.0037	.1047	.034	2.081	.469	3.07	.263	.0201	.0887	.027	2.044	.425
3.07	.260	-.0089	.1176	.047	1.891	.567	3.07	.268	.0120	.0955	.036	1.879	.465
4.10	.371	.0370	.0702	- - -	- - -	- - -	4.08	.327	.0527	.0737	- - -	- - -	- - -
4.10	.378	.0418	.0432	-.003	2.744	- - -	4.09	.347	.0567	.0332	-.005	2.727	- - -
4.10	.380	.0334	.0299	.005	2.558	.178	4.09	.347	.0479	.0522	.007	2.470	.204
4.10	.383	.0251	.0657	.020	2.314	.380	4.09	.355	.0366	.0622	.019	2.255	.358
4.11	.386	.0089	.0783	.033	2.093	.532	4.10	.359	.0288	.0678	.027	2.045	.429
4.11	.391	-.0004	.0832	.047	1.901	.573	4.10	.360	.0242	.0722	.035	1.868	.465
5.12	.451	.0492	.0483	- - -	- - -	- - -	5.11	.420	.0627	.0609	- - -	- - -	- - -
5.13	.480	.0526	.0256	-.003	2.749	- - -	5.11	.431	.0676	.0323	-.004	2.734	- - -
5.13	.479	.0449	.0400	.006	2.566	.179	5.12	.437	.0569	.0453	.008	2.479	.227
5.13	.483	.0320	.0513	.020	2.317	.361	5.12	.441	.0487	.0501	.019	2.244	.362
5.14	.486	.0229	.0578	.032	2.121	.498	5.12	.442	.0437	.0539	.028	2.050	.430
5.14	.493	.0103	.0692	.046	1.913	.583	5.12	.449	.0353	.0596	.035	1.859	.469
6.14	.533	.0644	.0402	- - -	- - -	- - -	6.13	.489	.0795	.0476	- - -	- - -	- - -
6.15	.558	.0672	.0227	-.004	2.751	- - -	6.13	.512	.0792	.0286	-.004	2.745	- - -
6.15	.562	.0576	.0313	.005	2.576	.180	6.13	.516	.0722	.0351	.009	2.469	.239
6.15	.564	.0472	.0387	.020	2.324	.368	6.14	.525	.0629	.0376	.019	2.242	.390
6.16	.572	.0363	.0439	.034	2.104	.514	6.14	.538	.0548	.0349	.029	2.035	.468
6.16	.579	.0260	.0461	.047	1.919	.580	6.14	.543	.0501	.0354	.035	1.912	.494
7.16	.604	.0795	.0315	- - -	- - -	- - -	7.14	.566	.0922	.0309	- - -	- - -	- - -
7.14	.632	.0822	.0180	-.004	2.763	- - -	7.15	.588	.0968	.0187	-.004	2.748	- - -
7.17	.635	.0741	.0238	.006	2.580	.189	7.15	.595	.0881	.0231	.008	2.469	.240
7.17	.638	.0629	.0260	.020	2.329	.391	7.16	.605	.0785	.0248	.019	2.248	.392
7.18	.645	.0546	.0308	.032	2.131	.503	7.16	.613	.0722	.0254	.028	2.053	.464
7.18	.653	.0438	.0423	.045	1.943	.583	7.16	.617	.0667	.0263	.034	1.931	.496
8.17	.666	.0973	.0175	- - -	- - -	- - -	8.16	.638	.1115	.0071	- - -	- - -	- - -
8.18	.692	.1003	.0188	-.005	2.775	- - -	8.17	.650	.1167	.0060	-.004	2.765	- - -
8.19	.707	.0922	.0236	.006	2.579	.200	8.17	.674	.1087	.0116	.008	2.469	.248
8.19	.714	.0819	.0303	.021	2.323	.395	8.18	.682	.0997	.0161	.019	2.259	.405
8.19	.722	.0730	.0343	.033	2.127	.512	8.18	.686	.0914	.0169	.028	2.060	.469
8.20	.730	.0649	.0362	.045	1.956	.583	8.18	.693	.0862	.0167	.035	1.940	.501
9.18	.724	.1170	.0005	- - -	- - -	- - -	9.18	.699	.1369	-.0136	- - -	- - -	- - -
9.19	.752	.1219	.0128	-.005	2.787	- - -	9.18	.722	.1373	-.0002	-.005	2.779	- - -
9.20	.773	.1139	.0175	.006	2.589	.198	9.19	.740	.1373	.0021	.003	2.622	.167
9.20	.782	.1057	.0226	.021	2.331	.389	9.19	.752	.1317	.0046	.017	2.309	.381
9.21	.791	.0938	.0251	.033	2.131	.515	9.20	.758	.1148	.0074	.026	2.132	.464
9.21	.801	.0876	.0304	.045	1.977	.586	9.20	.765	.1069	.0073	.035	1.954	.517
10.19	.779	.1309	-.0100	- - -	- - -	- - -	10.19	.782	.1613	-.0277	- - -	- - -	- - -
10.21	.807	.1468	.0107	-.006	2.796	- - -	10.20	.791	.1610	-.0094	-.005	2.795	- - -
10.21	.825	.1364	.0191	.006	2.601	.202	10.21	.821	.1609	-.0079	.006	2.564	.203
10.22	.844	.1265	.0197	.021	2.341	.400	10.21	.826	.1498	-.0070	.017	2.321	.389
10.22	.855	.1225	.0233	.033	2.148	.530	10.22	.832	.1448	-.0065	.026	2.126	.471
10.22	.862	.1139	.0256	.045	1.978	.587	10.22	.838	.1396	-.0056	.036	1.951	.514

TABLE XXII.- LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10; TAIL HEIGHT = 0, i_t = -4°, β = 51°, R = 2,000,000, M = 0.70, 0.80, 0.90

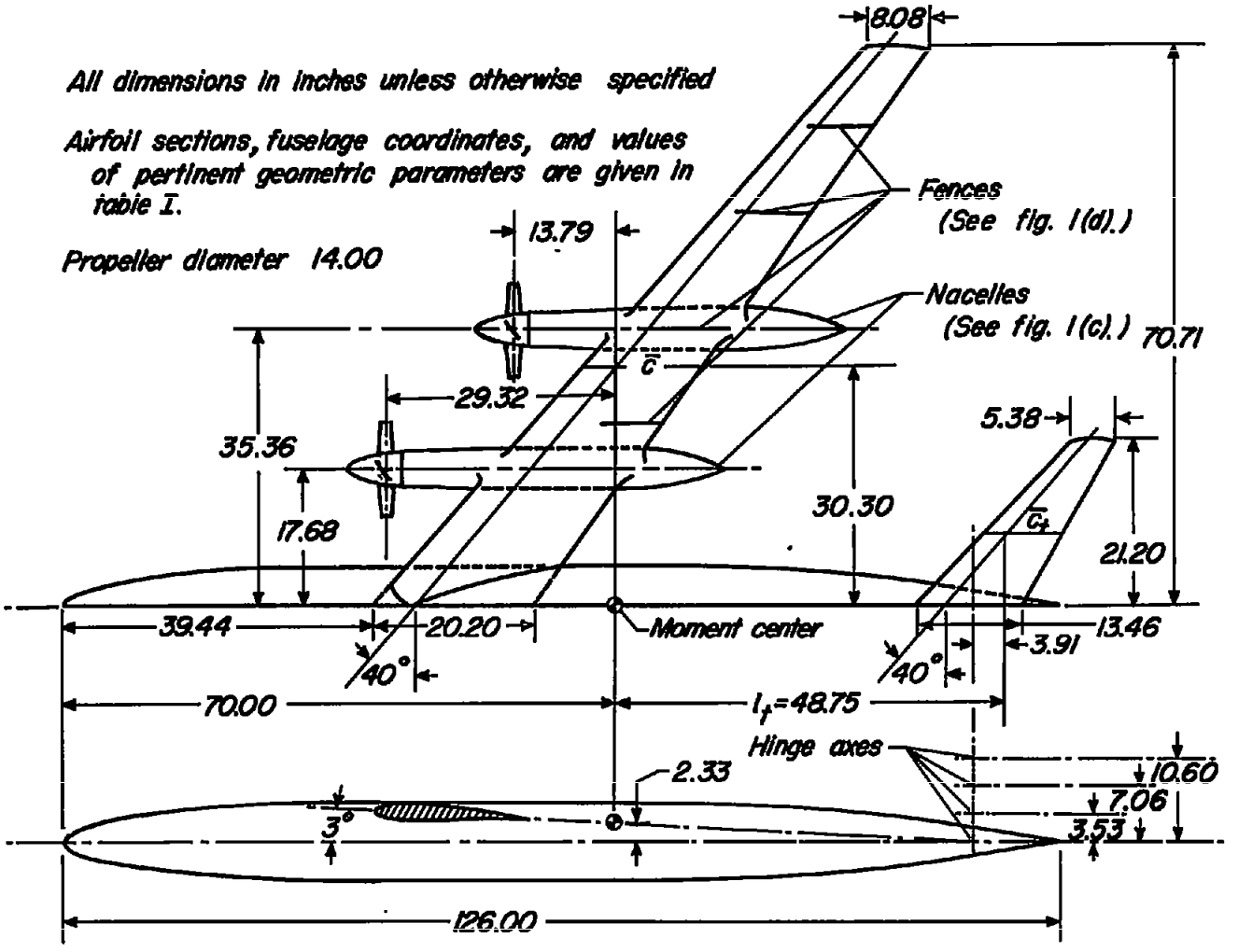
M, 0.70							M, 0.80							M, 0.90						
α	C_L	C_X	C_m	$\Delta C_{m_{av}}$	$\Delta\alpha_{av}$	$C_{T_{av}}$	α	C_L	C_X	C_m	$\Delta C_{m_{av}}$	$\Delta\alpha_{av}$	$C_{T_{av}}$	α	C_L	C_X	C_m	$\Delta C_{m_{av}}$	$\Delta\alpha_{av}$	$C_{T_{av}}$
[a]2.03	0.133	0.0297	0.0453	- - -	- - -	- - -	[a]2.03	0.139	0.0221	0.0444	- - -	- - -	- - -	[a]2.03	0.177	0.0342	0.0544	- - -	- - -	- - -
2.03	.122	.0219	.0253	-0.001	2.783	- - -	2.03	.128	.0277	.0214	-0.001	2.738	- - -	2.04	.161	.0381	.0028	-0.005	2.718	- - -
2.03	.122	.0189	.0158	.002	2.704	0.079	2.03	.129	.0205	.0264	.001	2.832	0.111	2.04	.157	.0342	.0227	-.005	2.661	0.061
2.03	.121	.0115	.0328	.011	2.550	.236	2.03	.128	.0160	.0317	.007	2.533	.215	2.04	.153	.0286	.0189	.004	2.509	.177
2.03	.120	.0038	.0410	.021	2.403	.378	2.03	.128	.0109	.0376	.015	2.434	.304	2.04	.152	.0211	.0526	.018	2.346	.296
2.03	.119	-.0012	.0457	.026	2.320	.450	2.03	.127	.0046	.0431	.020	2.323	.398	2.04	.151	.0165	.0652	.016	2.287	.328
[a]3.06	.235	.0203	.0243	- - -	- - -	- - -	[a]3.06	.249	.0228	.0242	- - -	- - -	- - -	[a]3.07	.265	.0375	.0144	- - -	- - -	- - -
3.05	.226	.0224	.0104	-.001	2.776	- - -	3.06	.249	.0228	.0094	-.001	2.743	- - -	3.07	.277	.0410	-.0221	-.005	2.718	- - -
3.06	.225	.0197	.0130	.001	2.709	.070	3.06	.241	.0213	.0136	.001	2.643	.106	3.07	.276	.0367	-.0168	-.005	2.602	.064
3.05	.224	.0126	.0193	.010	2.529	.209	3.06	.241	.0161	.0186	.007	2.511	.214	3.07	.275	.0327	-.0095	.004	2.512	.155
3.05	.224	.0047	.0257	.020	2.412	.373	3.06	.241	.0120	.0231	.012	2.453	.292	3.07	.275	.0272	-.0010	.010	2.398	.261
3.05	.224	-.0001	.0292	.026	2.301	.469	3.06	.242	.0047	.0286	.021	2.318	.404	3.07	.275	.0230	.0027	.015	2.299	.333
[a]4.08	.331	.0218	.0076	- - -	- - -	- - -	[a]4.10	.357	.0245	.0061	- - -	- - -	- - -	[a]4.10	.368	.0454	-.0112	- - -	- - -	- - -
4.08	.326	.0238	-.0008	-.001	2.776	- - -	4.09	.352	.0277	-.0026	0	2.742	- - -	4.10	.369	.0496	-.0491	-.005	2.723	- - -
4.08	.324	.0216	.0009	0	2.722	.096	4.09	.351	.0230	.0018	.001	2.651	.108	4.11	.368	.0467	-.0463	-.003	2.689	.048
4.08	.325	.0140	.0069	.011	2.554	.229	4.09	.349	.0192	.0072	.006	2.560	.198	4.11	.369	.0418	-.0413	.004	2.533	.191
4.08	.328	.0061	.0114	.020	2.415	.378	4.09	.354	.0135	.0107	.012	2.470	.295	4.11	.391	.0346	-.0346	.011	2.377	.299
4.08	.329	.0004	.0145	.027	2.324	.459	4.10	.355	.0068	.0146	.020	2.322	.407	4.11	.391	.0326	-.0336	.015	2.311	.333
[a]5.11	.431	.0247	-.0105	- - -	- - -	- - -	[a]5.13	.469	.0291	-.0223	- - -	- - -	- - -	[a]5.13	.492	.0584	-.0280	- - -	- - -	- - -
5.11	.425	.0256	-.0141	-.001	2.776	- - -	5.12	.462	.0318	-.0257	0	2.744	- - -	5.13	.484	.0615	-.0617	-.004	2.737	- - -
5.11	.425	.0244	-.0142	.001	2.705	.099	5.12	.467	.0272	-.0153	.001	2.652	.106	5.13	.476	.0620	-.0583	-.003	2.699	.091
5.11	.427	.0173	-.0095	.010	2.564	.210	5.12	.469	.0229	-.0122	.006	2.572	.202	5.13	.476	.0519	-.0523	.005	2.530	.195
5.11	.430	.0088	-.0049	.021	2.420	.369	5.12	.471	.0182	-.0067	.012	2.458	.298	5.13	.474	.0465	-.0423	.012	2.385	.281
5.11	.433	.0040	-.0025	.026	2.343	.447	5.12	.473	.0115	-.0046	.020	2.328	.408	5.13	.474	.0424	-.0423	.015	2.320	.347
[a]6.14	.537	.0265	-.0287	- - -	- - -	- - -	[a]6.16	.574	.0383	-.0332	- - -	- - -	- - -	[a]6.14	.582	.0735	-.0596	- - -	- - -	- - -
6.14	.534	.0308	-.0298	-.002	2.780	- - -	6.16	.577	.0395	-.0369	-.004	2.732	- - -	6.15	.586	.0739	-.0571	-.004	2.743	- - -
6.14	.524	.0288	-.0277	.001	2.718	.090	6.16	.577	.0354	-.0333	.002	2.652	.108	6.15	.586	.0745	-.0548	-.002	2.720	.092
6.14	.527	.0214	-.0254	.010	2.570	.216	6.16	.579	.0307	-.0323	.006	2.561	.197	6.15	.570	.0679	-.0510	.004	2.549	.200
6.14	.532	.0125	-.0205	.022	2.415	.369	6.16	.582	.0258	-.0292	.013	2.448	.310	6.15	.568	.0642	-.0506	.022	2.369	.377
6.14	.535	.0083	-.0189	.028	2.347	.453	6.16	.585	.0199	-.0252	.021	2.334	.401	6.15	.572	.0601	-.0504	.014	2.337	.348
[a]7.16	.621	.0346	-.0473	- - -	- - -	- - -	[a]7.18	.652	.0529	-.0497	- - -	- - -	- - -	[a]7.16	.597	.0898	-.0428	- - -	- - -	- - -
7.16	.620	.0360	-.0461	-.001	2.780	- - -	7.19	.676	.0583	-.0469	-.001	2.739	- - -	7.16	.617	.0913	-.0575	-.004	2.721	- - -
7.16	.619	.0333	-.0398	.001	2.720	.064	7.19	.679	.0481	-.0454	.001	2.668	.102	7.16	.617	.0839	-.0569	-.002	2.709	.063
7.16	.624	.0270	-.0366	.010	2.571	.220	7.19	.680	.0441	-.0430	.006	2.577	.200	7.16	.622	.0846	-.0526	.005	2.558	.200
7.17	.629	.0214	-.0334	.018	2.460	.345	7.18	.682	.0408	-.0408	.012	2.471	.293	7.16	.623	.0802	-.0533	.011	2.415	.305
7.17	.632	.0147	-.0309	.027	2.345	.459	7.19	.684	.0347	-.0360	.020	2.354	.395	7.17	.626	.0765	-.0552	.015	2.339	.350
[a]8.19	.710	.0447	-.0694	- - -	- - -	- - -	[a]8.19	.710	.0703	-.0473	- - -	- - -	- - -	[a]8.17	.659	.1060	-.0568	- - -	- - -	- - -
8.19	.716	.0448	-.0589	-.001	2.782	- - -	8.20	.747	.0698	-.0430	-.002	2.769	- - -	8.18	.691	.1105	-.0645	-.004	2.768	- - -
8.19	.715	.0485	-.0583	.001	2.721	.067	8.20	.744	.0659	-.0430	.001	2.672	.108	8.18	.690	.1068	-.0625	-.003	2.786	.072
8.19	.720	.0354	-.0480	.010	2.566	.210	8.20	.749	.0618	-.0393	.006	2.572	.210	8.18	.692	.1045	-.0628	.003	2.754	.176
8.19	.723	.0308	-.0469	.016	2.470	.333	8.21	.756	.0572	-.0382	.013	2.462	.313	8.18	.693	.0994	-.0596	.010	2.456	.265
8.20	.728	.0249	-.0420	.025	2.348	.451	8.21	.759	.0520	-.0360	.019	2.359	.400	8.18	.697	.0957	-.0581	.015	2.364	.344
[a]9.20	.774	.0633	-.0785	- - -	- - -	- - -	[a]9.20	.760	.0902	-.0525	- - -	- - -	- - -	[a]9.19	.786	.1271	-.0756	- - -	- - -	- - -
9.21	.798	.0585	-.0610	-.001	2.759	- - -	9.21	.802	.0904	-.0564	-.002	2.784	- - -	9.20	.737	.1318	-.0731	-.005	2.792	- - -
9.21	.800	.0569	-.0583	.002	2.729	.080	9.21	.804	.0864	-.0322	.001	2.693	.104	9.20	.779	.1300	-.0721	-.001	2.718	.082
9.22	.806	.0498	-.0561	.011	2.575	.243	9.22	.813	.0827	-.0337	.007	2.578	.213	9.20	.761	.1230	-.0699	.005	2.786	.210
9.22	.809	.0433	-.0520	.017	2.477	.337	9.22	.822	.0802	-.0341	.013	2.477	.311	9.20	.765	.1161	-.0640	.020	2.463	.294
9.22	.815	.0393	-.0493	.025	2.346	.459	9.22	.827	.0726	-.0318	.020	2.363	.408	9.20	.767	.1158	-.0623	.015	2.373	.348
[a]10.21	.831	.0346	-.0916	- - -	- - -	- - -	[a]10.21	.808	.1143	-.0615	- - -	- - -	- - -	[a]10.20	.790	.1577	-.0559	- - -	- - -	- - -
10.23	.866	.0801	-.0833	-.002	2.816	- - -	10.22	.849	.1142	-.0377	-.005	2.785	- - -	10.21	.866	.1602	-.0873	-.005	2.807	- - -
10.22	.864	.0777	-.0793	.002	2.732	.088	10.22	.853	.1097	-.0359	.001	2.684	.122	10.21	.867	.1609	-.0906	-.002	2.747	.069
10.23	.869	.0732	-.0742	.004	2.579	.258	10.22	.860	.1040	-.0322	.006	2.591	.212	10.21	.831	.1469	-.0784	.005	2.583	.210
10.23	.873	.0671	-.0723	.018	2.463	.359	10.23	.868	.1027	-.0396	.013	2.476	.318	10.21	.830	.1482	-.0805	.011	2.474	.295
10.23	.881	.0637	-.0709	.025	2.392	.434	10.23	.874	.0960	-.0380	.019	2.365	.408	10.22	.839	.1414	-.0744	.015	2.386	.362

[a]Props off.

TABLE XXIII.- LONGITUDINAL CHARACTERISTICS OF A FOUR-ENGINE PROPELLER-DRIVEN AIRPLANE CONFIGURATION HAVING A 40° SWEPT WING OF ASPECT RATIO 10; TAIL HEIGHT = 0.10 b/2, i_t = -4°, β = 51°, R = 1,000,000, M = 0.70, 0.80, 0.90

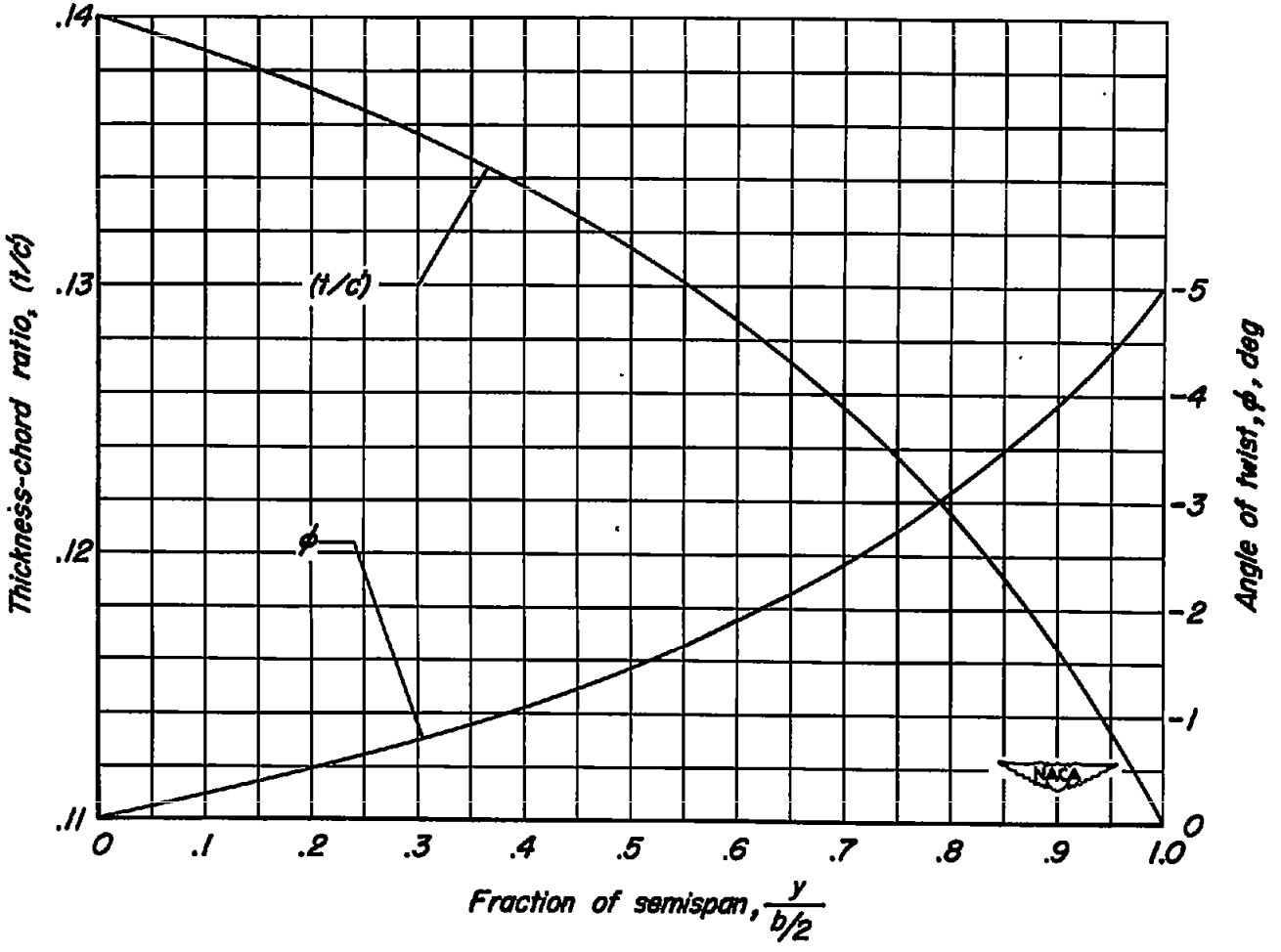
M, 0.70							M, 0.80							M, 0.90						
α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$	α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$	α	C_L	C_X	C_m	$T_{c_{av}}$	J_{av}	$C_{P_{av}}$
[a]2.03	0.109	0.0208	0.0004	- - -	- - -	- - -	[a]2.03	0.109	0.0212	0.0005	- - -	- - -	- - -	[a]2.03	0.143	0.0407	0.1134	- - -	- - -	- - -
2.02	.113	.0247	.0789	-0.005	2.777	- - -	2.03	.122	.0262	.0850	-0.004	2.743	- - -	2.04	.154	.0439	.0937	-0.005	2.719	- - -
2.02	.109	.0155	.0788	.008	2.575	0.207	2.03	.118	.0193	.0788	.006	2.554	0.187	2.04	.151	.0234	.0973	.009	2.321	0.171
2.02	.106	.0059	.0873	.021	2.370	.363	2.03	.116	.0096	.0889	.018	2.354	.333	2.04	.148	.0236	.0828	.016	2.270	.329
2.02	.105	-.0077	.0996	.037	2.133	.539	2.03	.115	-.0015	.1002	.032	2.163	.490	2.04	.146	.0141	.0937	.026	2.080	.485
2.02	.102	-.0237	.1091	.057	1.959	.713	2.02	.113	-.0138	.1075	.047	1.974	.592	2.04	.145	.0077	.0988	.035	1.894	.462
[a]3.06	.226	.0231	.0697	- - -	- - -	- - -	[a]3.06	.244	.0253	.0640	- - -	- - -	- - -	[a]3.06	.242	.0443	.0776	- - -	- - -	- - -
3.05	.217	.0251	.0497	-.002	2.761	- - -	3.06	.236	.0282	.0436	-.004	2.745	- - -	3.07	.260	.0492	.0224	-.005	2.732	- - -
3.05	.214	.0157	.0564	.008	2.569	.199	3.06	.234	.0197	.0541	.006	2.559	.183	3.07	.263	.0399	.0355	.005	2.393	.161
3.05	.213	.0054	.0618	.021	2.377	.381	3.06	.234	.0095	.0642	.018	2.358	.339	3.07	.267	.0251	.0477	.019	2.249	.347
3.05	.213	-.0074	.0719	.036	2.173	.539	3.06	.235	-.0013	.0757	.032	2.165	.491	3.07	.268	.0185	.0540	.027	2.071	.518
3.05	.212	-.0234	.0877	.057	1.962	.699	3.06	.235	-.0127	.0833	.046	1.992	.585	3.07	.272	.0122	.0610	.034	1.913	.459
[a]4.08	.326	.0244	.0427	- - -	- - -	- - -	[a]4.10	.355	.0261	.0417	- - -	- - -	- - -	[a]4.08	.330	.0535	.0508	- - -	- - -	- - -
4.08	.322	.0266	.0277	-.002	2.778	- - -	4.09	.351	.0306	.0260	-.004	2.744	- - -	4.09	.354	.0583	.0082	-.005	2.728	- - -
4.08	.318	.0181	.0349	.008	2.576	.186	4.09	.349	.0218	.0370	.006	2.565	.181	4.09	.351	.0321	.0219	.008	2.391	.182
4.08	.318	.0068	.0429	.021	2.376	.360	4.09	.350	.0123	.0473	.018	2.367	.338	4.10	.350	.0407	.0302	.013	2.349	.494
4.08	.320	-.0061	.0523	.037	2.160	.543	4.09	.353	.0014	.0584	.032	2.172	.488	4.10	.352	.0112	.0375	.023	2.143	.502
4.08	.321	-.0281	.0714	.056	1.964	.663	4.09	.354	-.0105	.0672	.046	1.995	.599	4.10	.370	.0226	.0454	.033	1.957	.465
[a]5.11	.424	.0269	.0216	- - -	- - -	- - -	[a]5.13	.466	.0331	.0218	- - -	- - -	- - -	[a]5.10	.417	.0653	.0357	- - -	- - -	- - -
5.11	.420	.0289	.0145	-.002	2.772	- - -	5.12	.463	.0370	.0110	-.004	2.738	- - -	5.11	.434	.0698	.0258	-.005	2.743	- - -
5.11	.418	.0202	.0280	.007	2.573	.184	5.12	.464	.0270	.0286	.007	2.568	.179	5.12	.438	.0609	.0159	.004	2.562	.163
5.11	.421	.0089	.0343	.021	2.377	.388	5.13	.465	.0167	.0343	.019	2.372	.355	5.12	.445	.0516	.0154	.014	2.352	.310
5.11	.424	-.0036	.0501	.036	2.177	.545	5.13	.468	.0056	.0468	.033	2.173	.497	5.12	.443	.0455	.0338	.024	2.148	.404
5.11	.427	-.0189	.0606	.055	1.969	.665	5.13	.472	-.0046	.0538	.046	2.006	.592	5.12	.448	.0360	.0390	.033	1.960	.457
[a]6.14	.523	.0309	.0013	- - -	- - -	- - -	[a]6.15	.563	.0440	.0006	- - -	- - -	- - -	[a]6.13	.493	.0759	.0325	- - -	- - -	- - -
6.14	.519	.0327	-.0019	-.002	2.784	- - -	6.16	.567	.0431	-.0047	-.004	2.756	- - -	6.13	.518	.0622	.0068	-.004	2.727	- - -
6.14	.519	.0265	.0076	.008	2.573	.186	6.16	.570	.0353	.0091	.007	2.572	.186	6.14	.517	.0743	.0179	.005	2.562	.174
6.14	.522	.0137	.0210	.022	2.383	.389	6.16	.573	.0265	.0218	.019	2.377	.359	6.14	.517	.0699	.0229	.014	2.370	.310
6.14	.526	.0014	.0347	.039	2.181	.548	6.16	.577	.0165	.0337	.033	2.183	.494	6.14	.522	.0586	.0303	.023	2.174	.413
6.14	.533	-.0226	.0448	.057	1.966	.657	6.16	.580	.0061	.0406	.047	2.011	.590	6.14	.540	.0511	.0354	.033	1.974	.460
[a]7.16	.616	.0371	-.0157	- - -	- - -	- - -	[a]7.14	.635	.0398	-.0054	- - -	- - -	- - -	[a]7.14	.559	.0940	.0305	- - -	- - -	- - -
7.16	.614	.0326	-.0184	-.001	2.785	- - -	7.18	.688	.0373	-.0123	-.004	2.767	- - -	7.15	.592	.0954	.0035	-.004	2.766	- - -
7.16	.616	.0304	-.0086	.009	2.575	.197	7.18	.669	.0482	-.0026	.007	2.579	.188	7.15	.594	.0907	.0148	.006	2.574	.186
7.16	.621	.0205	.0031	.023	2.384	.387	7.18	.668	.0407	.0107	.019	2.379	.359	7.16	.596	.0859	.0194	.014	2.377	.321
7.17	.627	.0069	.0163	.038	2.184	.548	7.18	.669	.0309	.0209	.033	2.183	.505	7.16	.600	.0807	.0225	.023	2.194	.405
7.17	.635	-.0053	.0253	.056	1.992	.665	7.18	.672	.0211	.0262	.047	2.011	.595	7.16	.613	.0742	.0277	.032	1.997	.474
[a]8.19	.701	.0490	-.0318	- - -	- - -	- - -	[a]8.18	.688	.0779	-.0009	- - -	- - -	- - -	[a]8.16	.627	.1132	.0266	- - -	- - -	- - -
8.19	.706	.0481	-.0265	-.001	2.789	- - -	8.19	.722	.0730	-.0096	-.005	2.792	- - -	8.17	.652	.1193	.0096	-.005	2.780	- - -
8.19	.711	.0404	-.0189	.008	2.589	.200	8.20	.728	.0632	.0064	.007	2.583	.198	8.17	.667	.1130	.0138	.003	2.617	.153
8.19	.716	.0312	-.0095	.023	2.386	.392	8.20	.733	.0525	.0158	.018	2.389	.360	8.17	.674	.1057	.0154	.013	2.415	.289
8.19	[illegible]	[illegible]	[illegible]	[illegible]	2.186	[illegible]	8.20	[illegible]	[illegible]	[illegible]	[illegible]	2.190	[illegible]	8.18	[illegible]	[illegible]	[illegible]	[illegible]	2.212	[illegible]
8.20	.730	.0087	.0114	.037	1.980	.660	8.20	.743	.0406	.0280	.046	2.015	.597	8.18	.683	.0956	.0184	.032	2.008	.477
[a]9.20	.799	.0685	-.0378	- - -	- - -	- - -	[a]9.19	.789	.0986	-.0021	- - -	- - -	- - -	[a]9.17	.689	.1346	.0214	- - -	- - -	- - -
9.20	.781	.0648	-.0301	0.	2.804	- - -	9.20	.772	.0963	.0032	-.005	2.786	- - -	9.18	.716	.1401	.0126	-.005	2.795	- - -
9.21	.787	.0549	-.0251	.010	2.586	.207	9.21	.767	.0832	.0094	.005	2.600	.189	9.19	.734	.1358	.0069	.005	2.626	.154
9.21	.798	.0472	-.0189	.023	2.391	.383	9.21	.799	.0758	.0161	.018	2.390	.365	9.19	.742	.1300	.0090	.013	2.430	.309
9.21	.806	.0351	-.0083	.040	2.175	.558	9.21	.808	.0704	.0223	.033	2.188	.518	9.19	.754	.1209	.0124	.022	2.233	.421
9.22	.819	.0257	-.0008	.058	1.981	.658	9.21	.804	.0629	.0298	.046	2.027	.602	9.20	.755	.1158	.0152	.032	2.011	.494
[a]10.21	.810	.0918	-.0298	- - -	- - -	- - -	[a]10.19	.778	.1811	-.0072	- - -	- - -	- - -	[a]10.18	.749	.1572	.0080	- - -	- - -	- - -
10.22	.846	.0882	-.0223	-.001	2.816	- - -	10.21	.815	.1321	.0149	-.006	2.799	- - -	10.19	.760	.1618	.0077	-.005	2.799	- - -
10.22	.847	.0776	-.0133	.009	2.590	.200	10.21	.823	.1223	.0147	.005	2.599	.195	10.21	.811	.1599	-.0006	.003	2.623	.169
10.22	.850	.0689	-.0132	.022	2.379	.416	10.22	.844	.1037	.0261	.018	2.395	.378	10.21	.817	.1528	.0019	.012	2.433	.314
10.23	.872	.0582	-.0084	.040	2.181	.573	10.22	.855	.0957	.0223	.032	2.200	.518	10.21	.827	.1476	-.0006	.022	2.236	.429
10.23	.882	.0456	-.0002	.056	1.999	.688	10.22	.860	.0879	.0274	.045	2.042	.601	10.18	.832	.1436	.0025	.032	2.036	.508

[a]Props off.



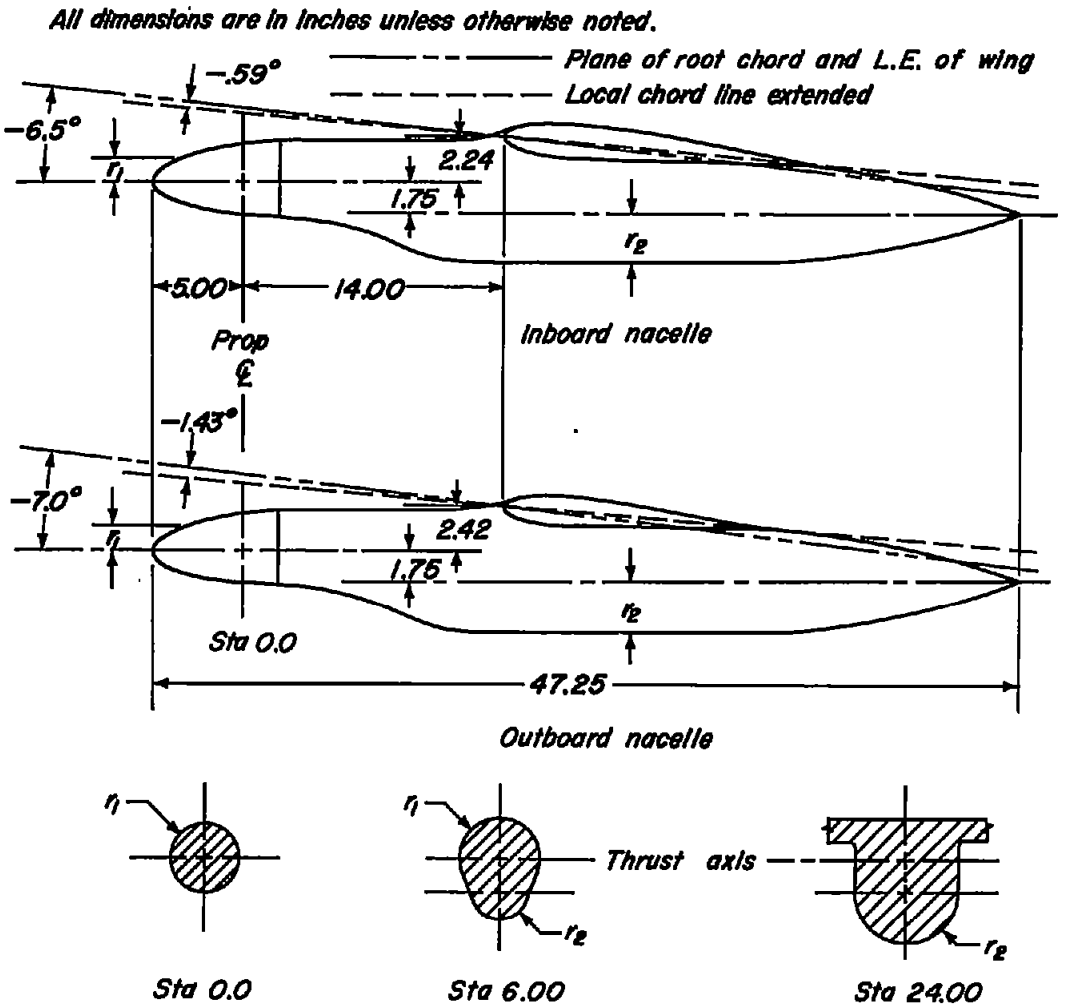
(a) Dimensions.

Figure 1.- Geometry of the model.



(b) Wing twist and thickness-chord ratio.

Figure 1.- Continued.

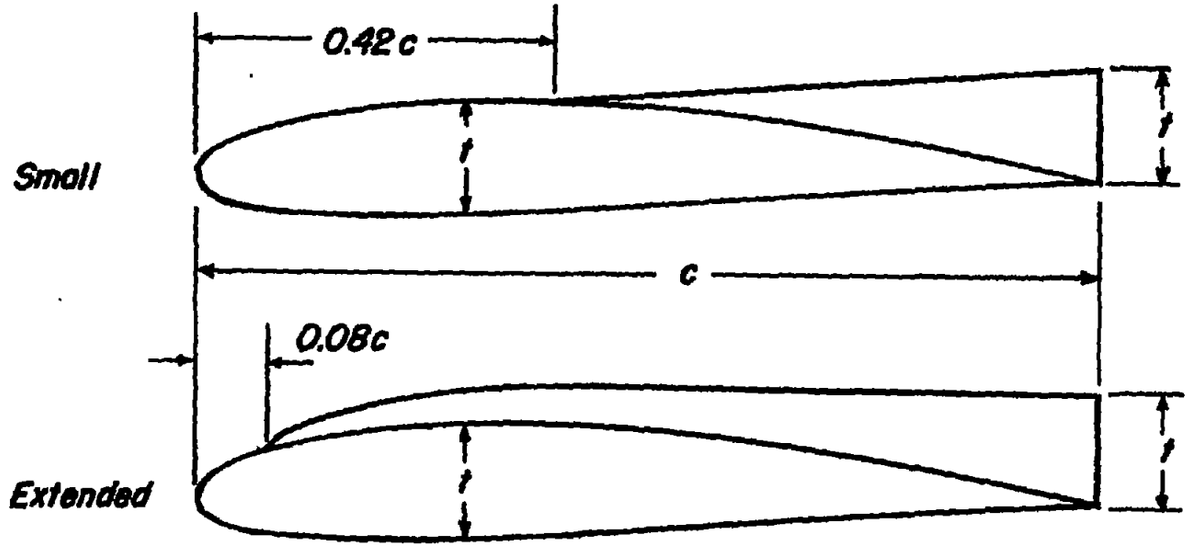


Nacelle coordinates

Sta	r_1	Sta	r_2
-5.00	0	2.00	0.350
-4.79	.385	3.00	.419
-4.58	.567	4.00	.616
-4.25	.788	5.00	.919
-3.95	.951	6.00	1.290
-3.25	1.242	7.00	1.685
-2.55	1.472	8.00	2.056
-1.80	1.670	9.00	2.359
- .80	1.871	10.00	2.556
0	1.985	11.00	2.625
2.00	2.100	30.50	2.625
12.00	2.100	32.50	2.450
		34.50	2.220
		36.50	1.825
		38.50	1.270
		40.50	.675
		41.50	.275
		42.25	0

(c) Dimensions of the nacelles.

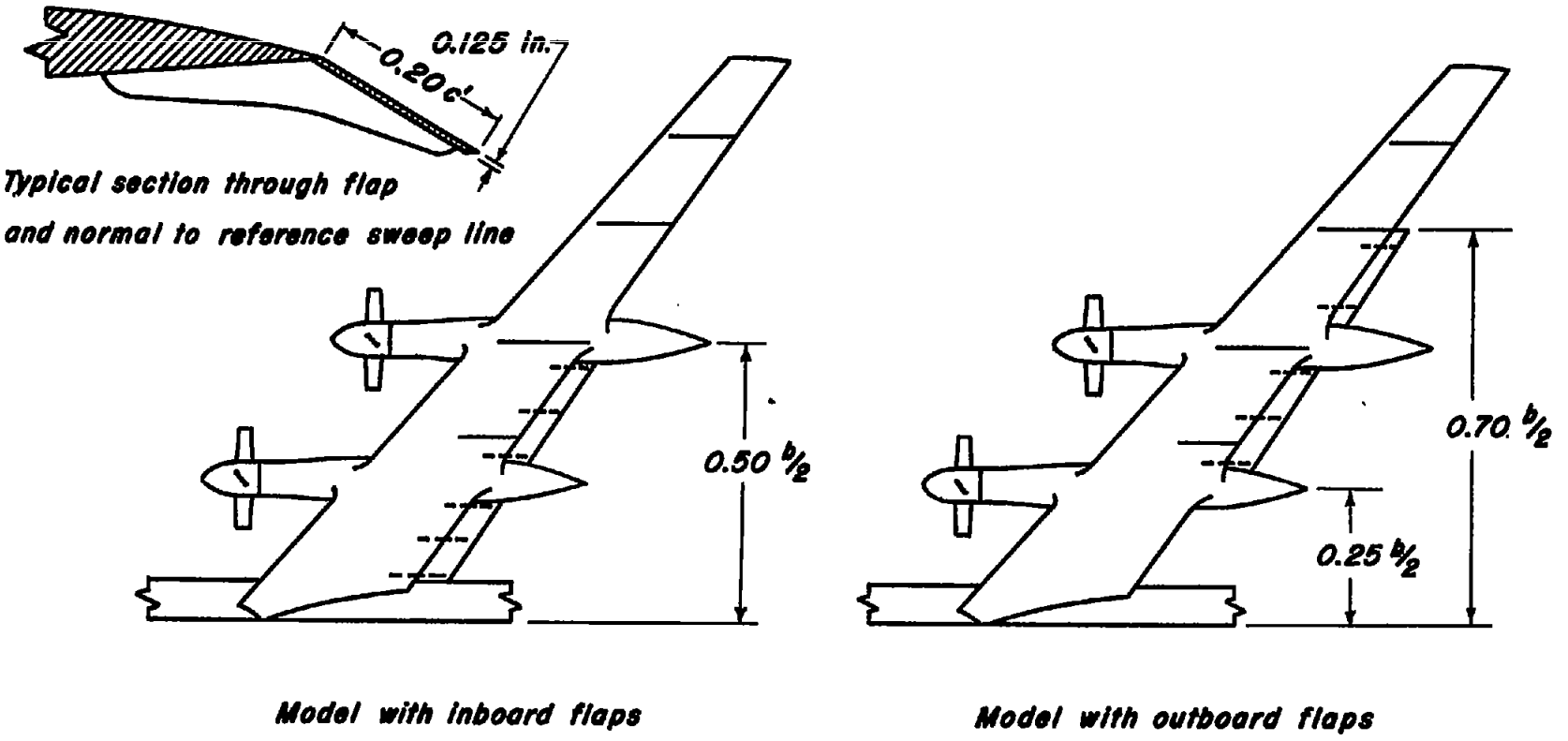
Figure 1.- Continued.



Type and location
Small at $\frac{y}{b/2} = 0.33$
Extended at $\frac{y}{b/2} = 0.50, 0.70, \text{and } 0.85$

(d) Fence details.

Figure 1.- Continued.



(e) Flap details.

Figure 1.- Concluded.

Figure 2.- Model mounted in the wind tunnel.

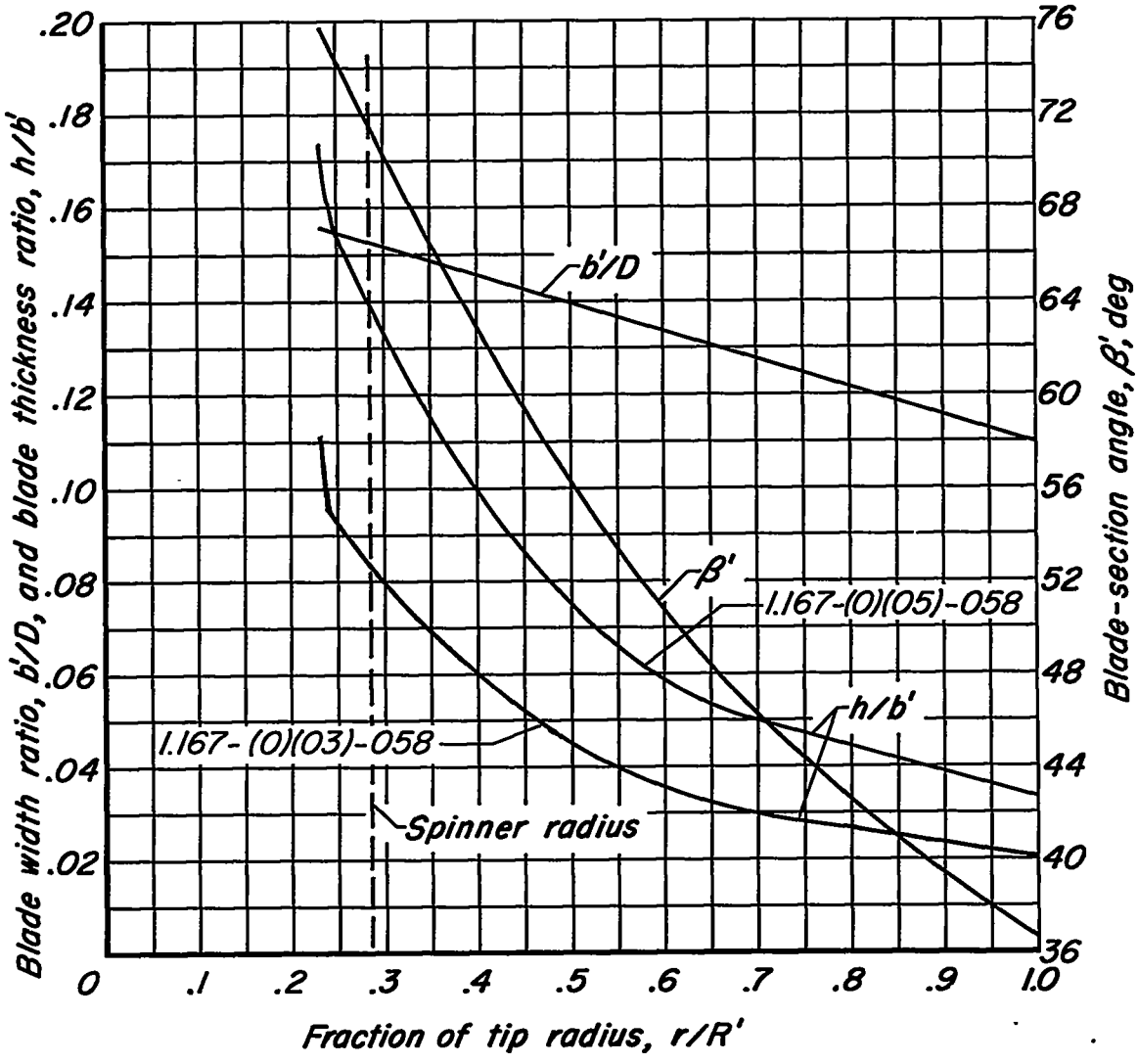


Figure 3.- Blade-form curves for the NACA 1.167-(0)(03)-058 and the NACA 1.167-(0)(05)-058 three-blade propellers.

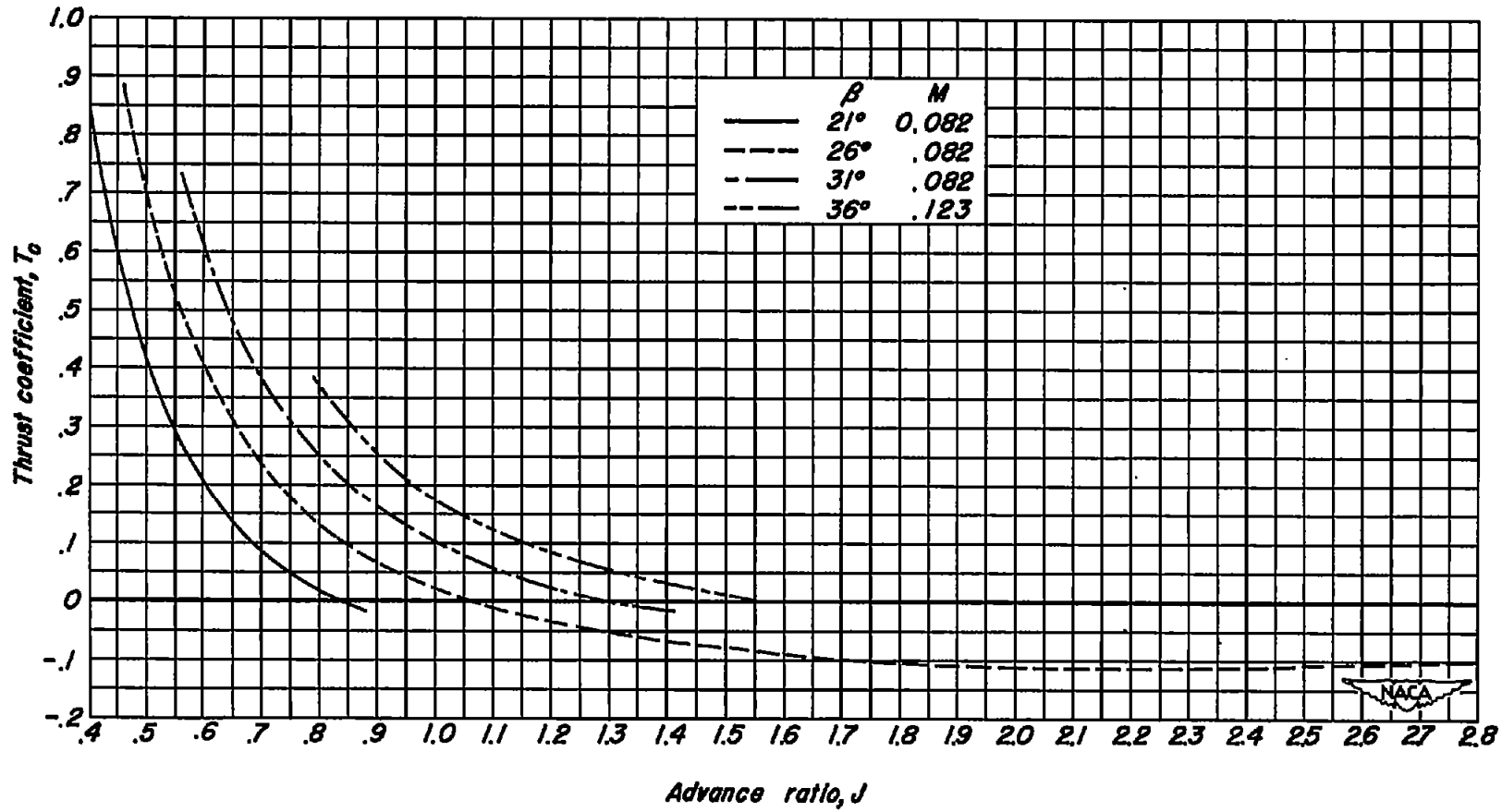
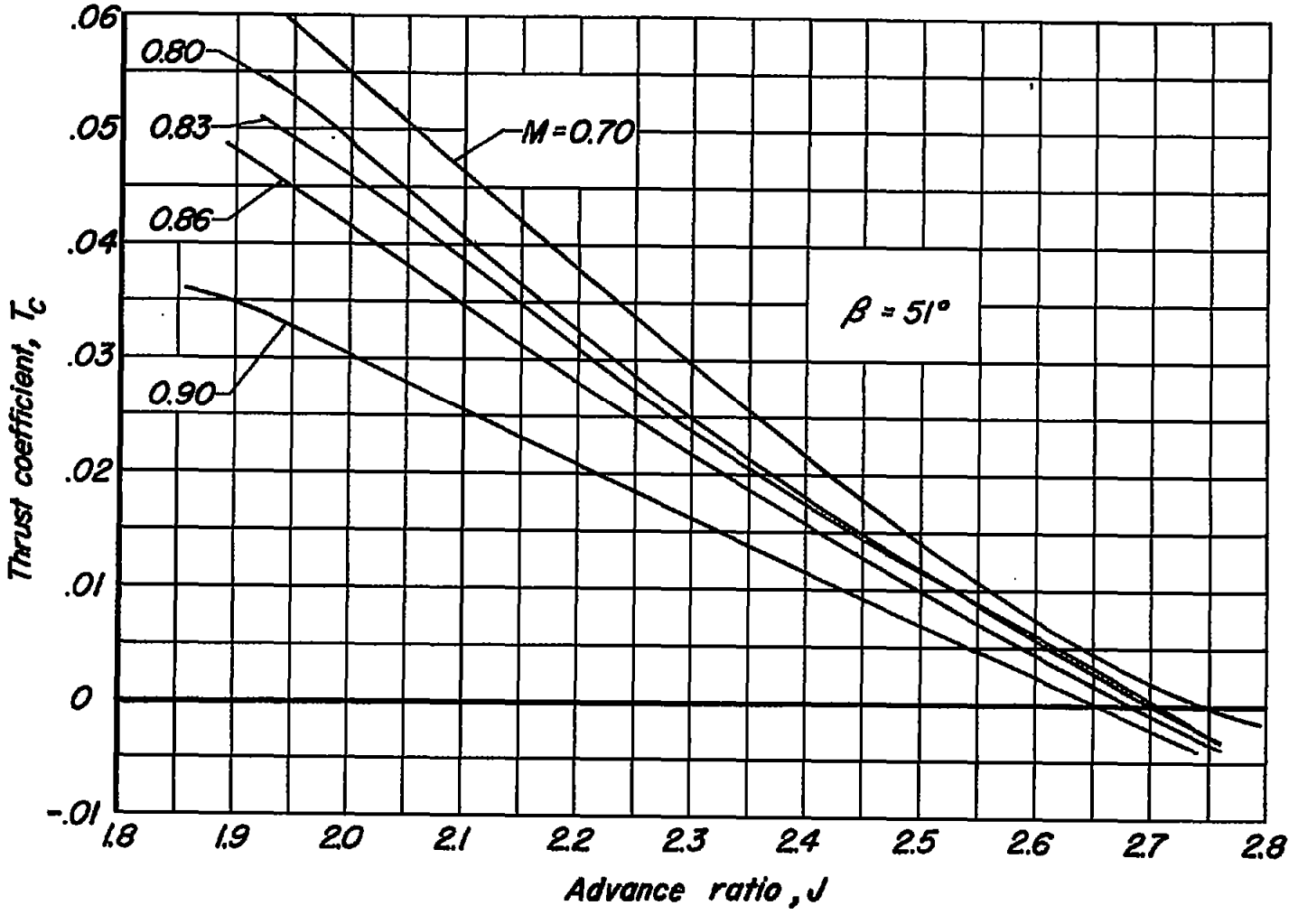
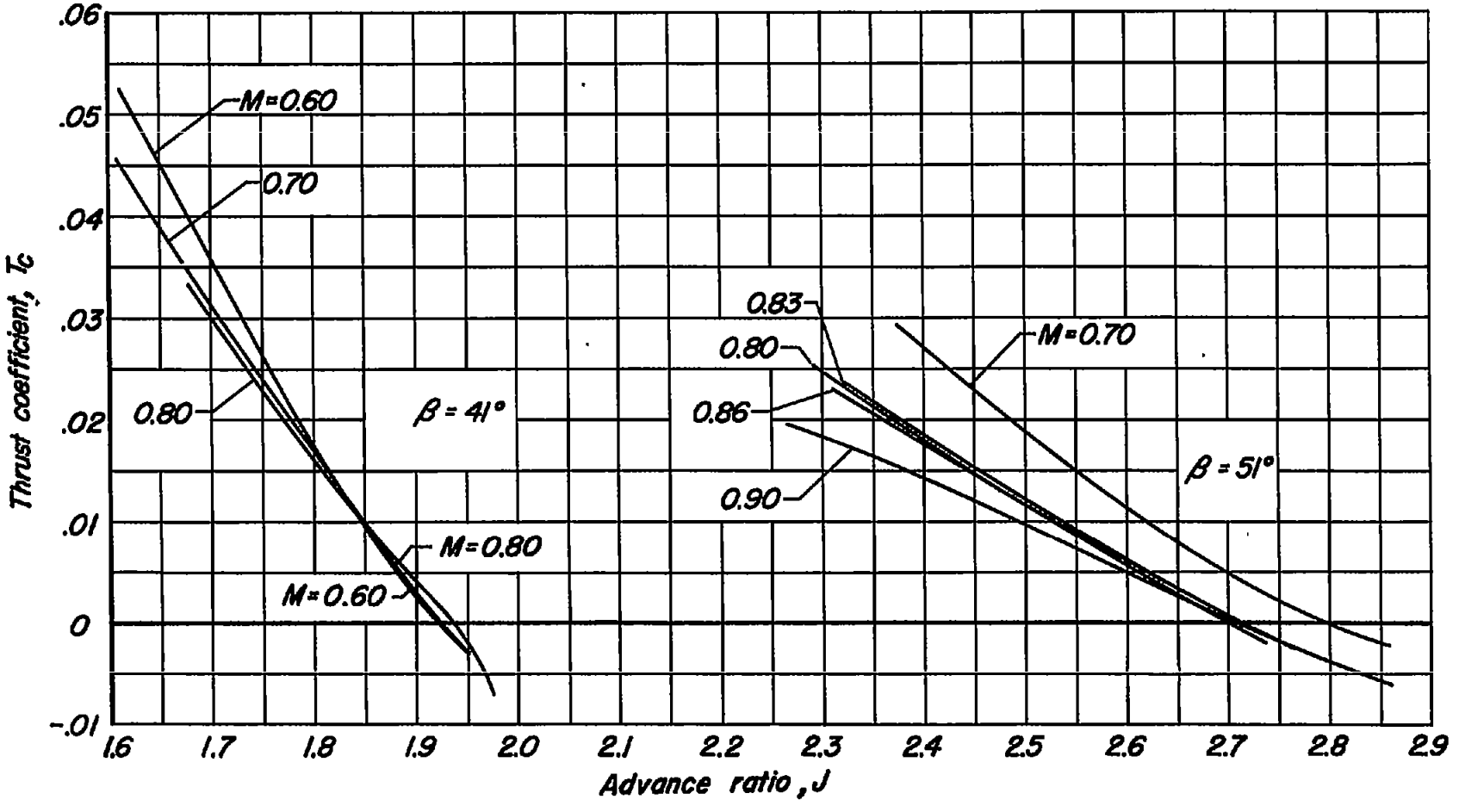


Figure 4.- The variation of T_c with J for the NACA 1.167-(0)(05)-058 propeller. A = 0; R = 4,000,000.



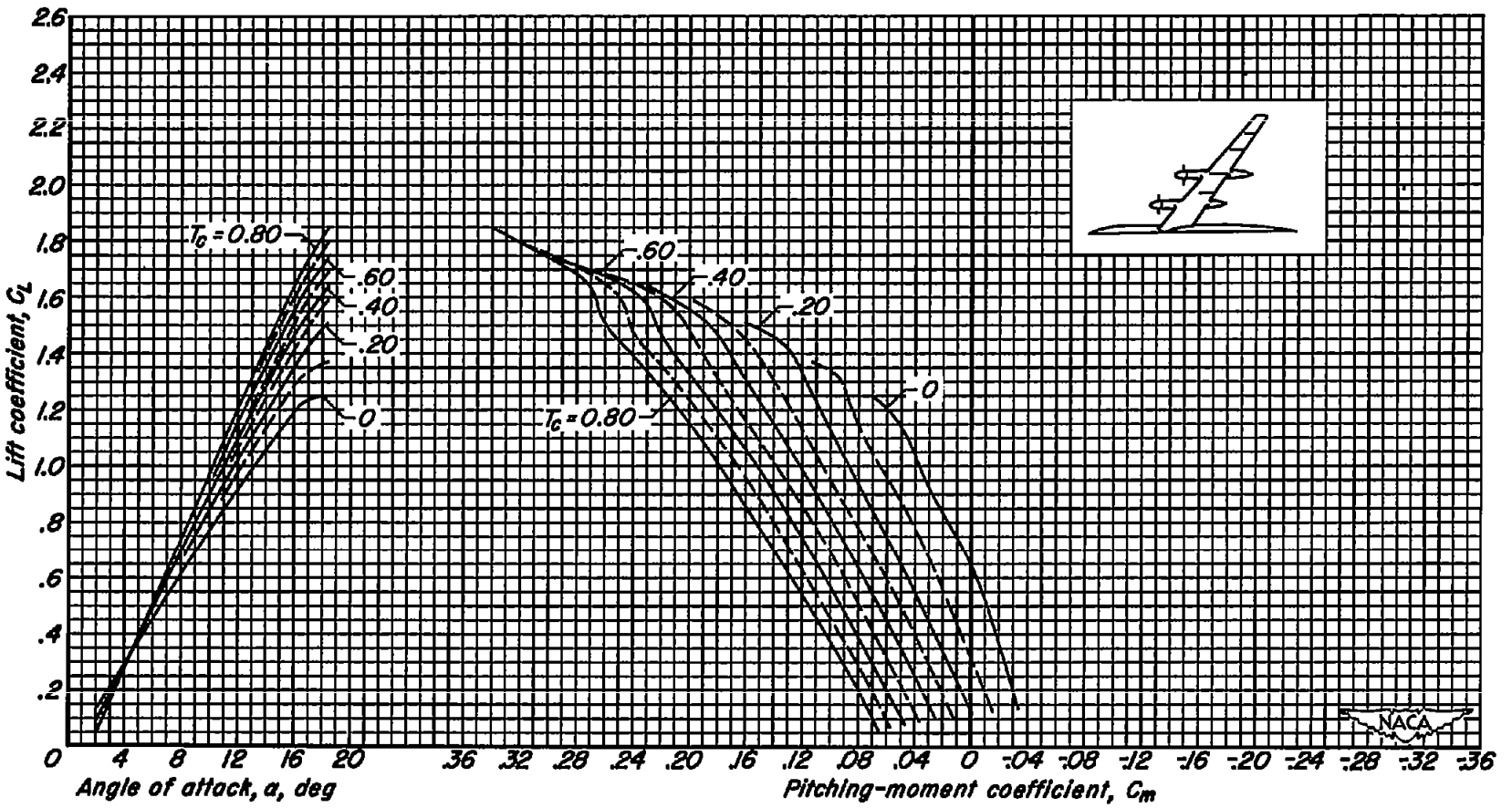
(a) R = 1×10^6

Figure 5.- The variation of T_c with J for the NACA 1.167-(0)(03)-058 propeller; A = 0°.



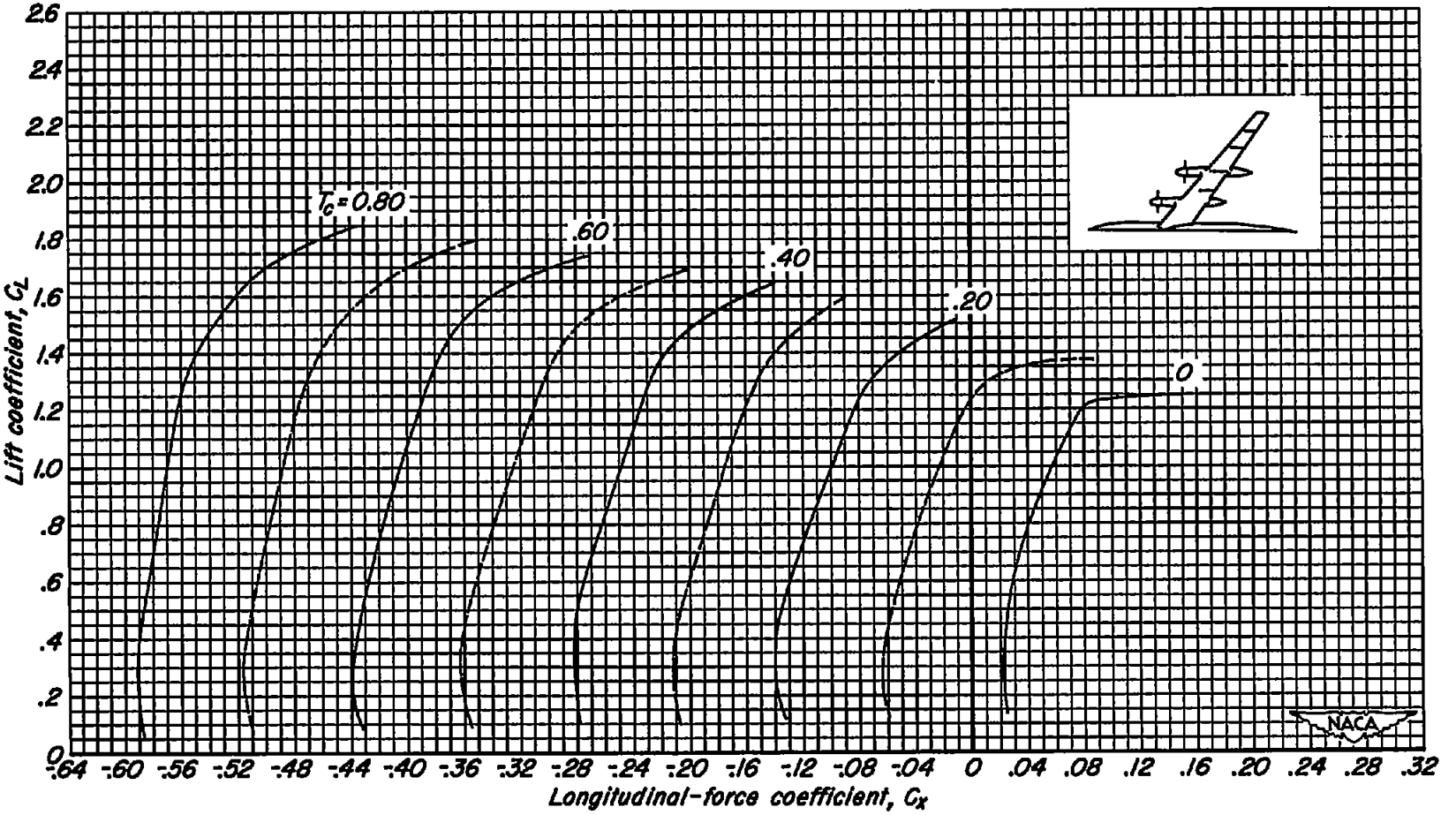
(b) R = 2×10^6

Figure 5.- Concluded.



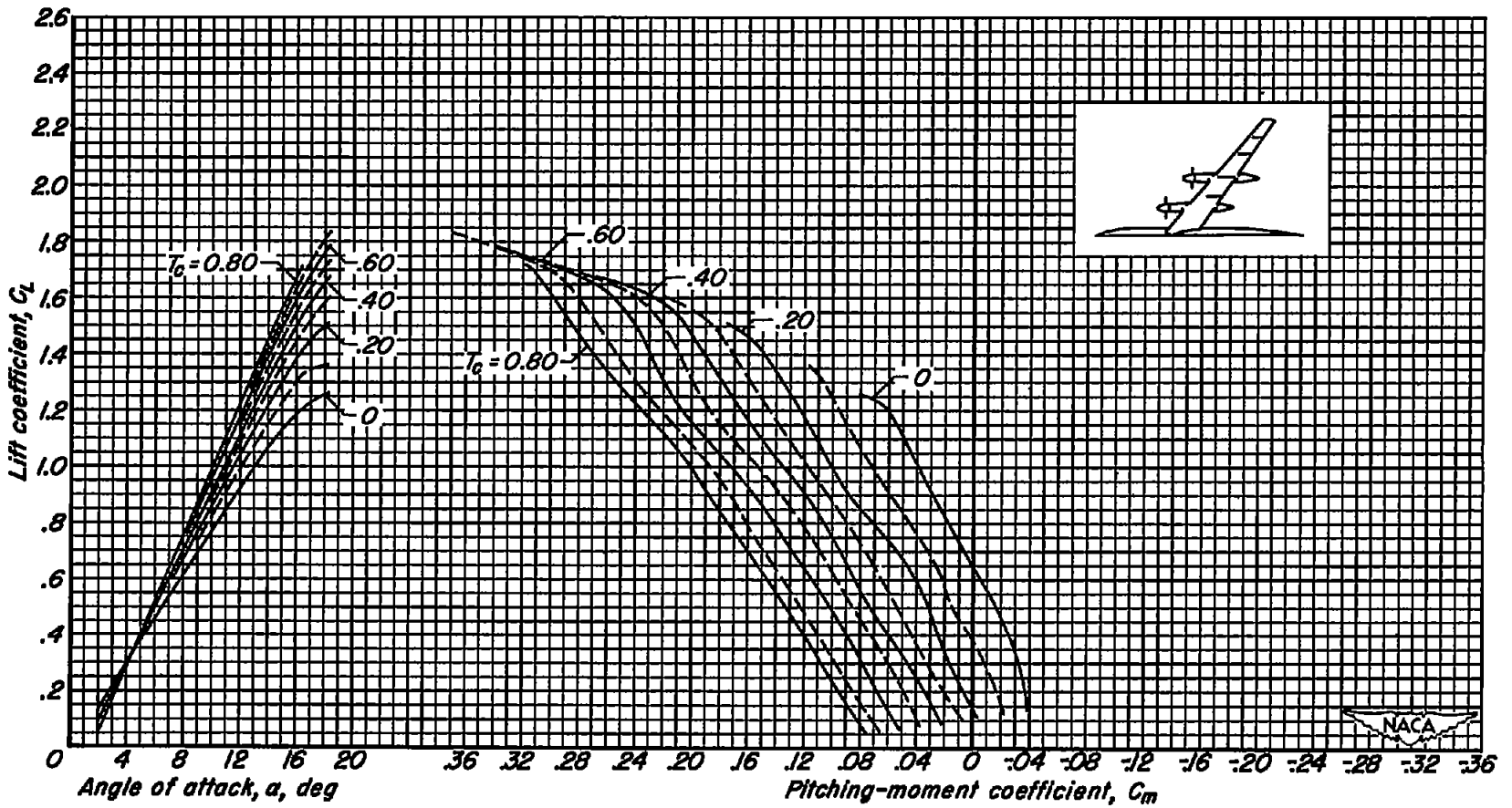
(a) C_L vs α and C_m

Figure 6.- The longitudinal characteristics of the model. Tail removed; flaps up; M = 0.082; R = 4,000,000; $\beta = 21^\circ$.



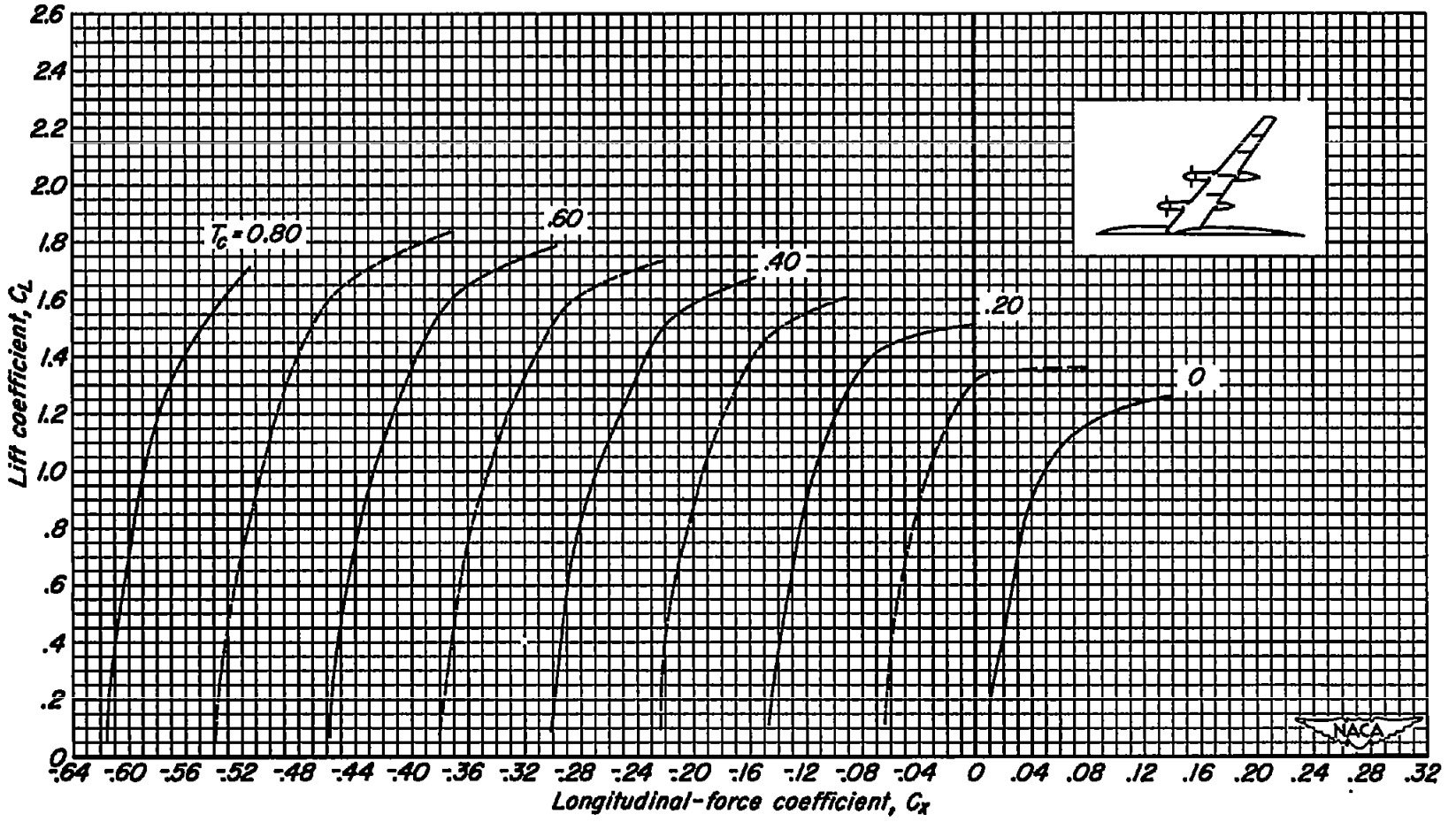
(b) C_L vs C_X

Figure 6.- Concluded.



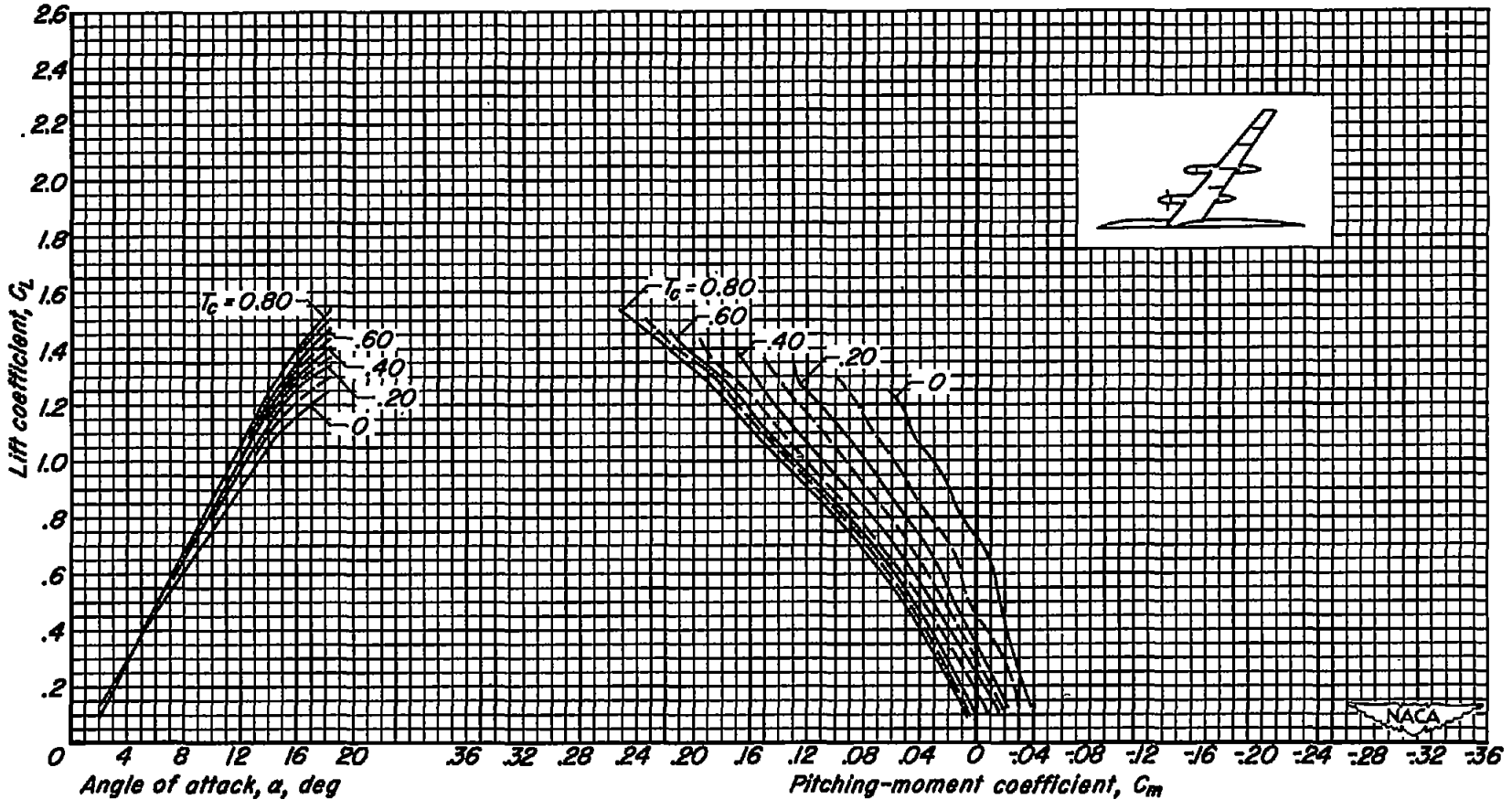
(a) C_L vs α and C_m

Figure 7.- The longitudinal characteristics of the model. Tail removed; flaps up; M = 0.082; R = 4,000,000; β = 26°.



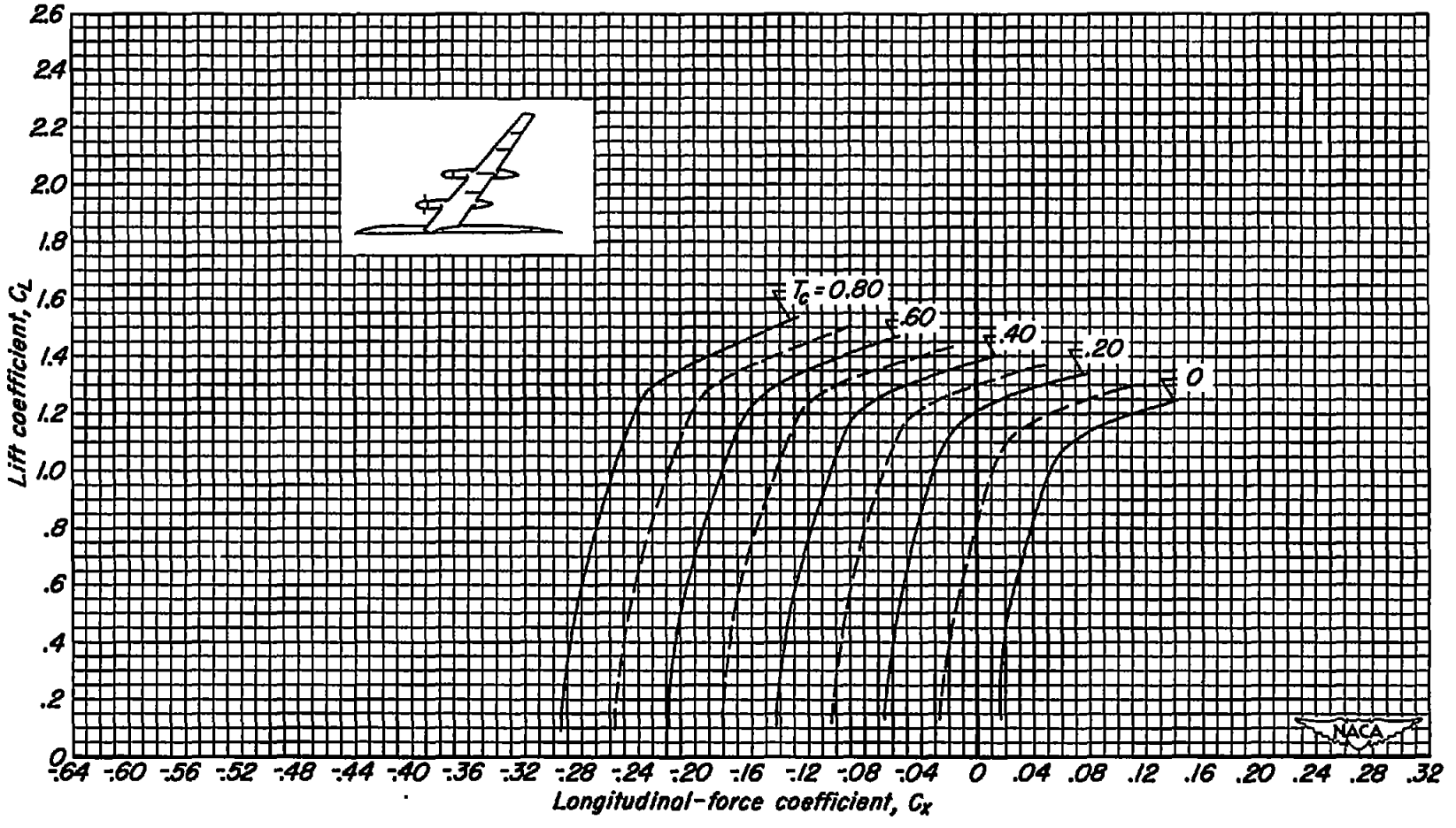
(b) C_L vs C_X

Figure 7.- Concluded.



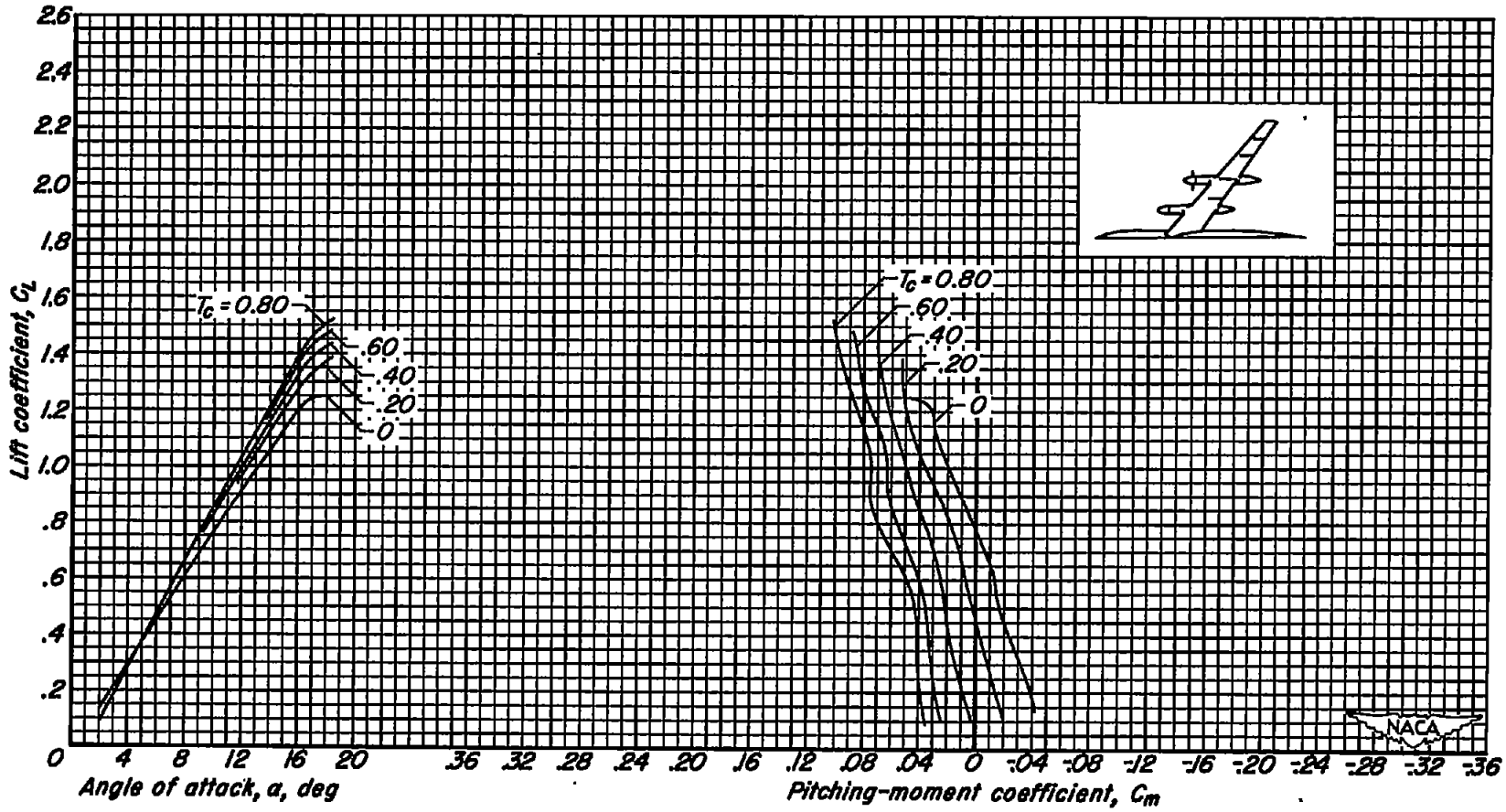
(a) C_L vs α and C_m

Figure 8.- The longitudinal characteristics of the model. Tail removed; flaps up; M = 0.082; R = 4,000,000; β = 26°; inboard propeller only.



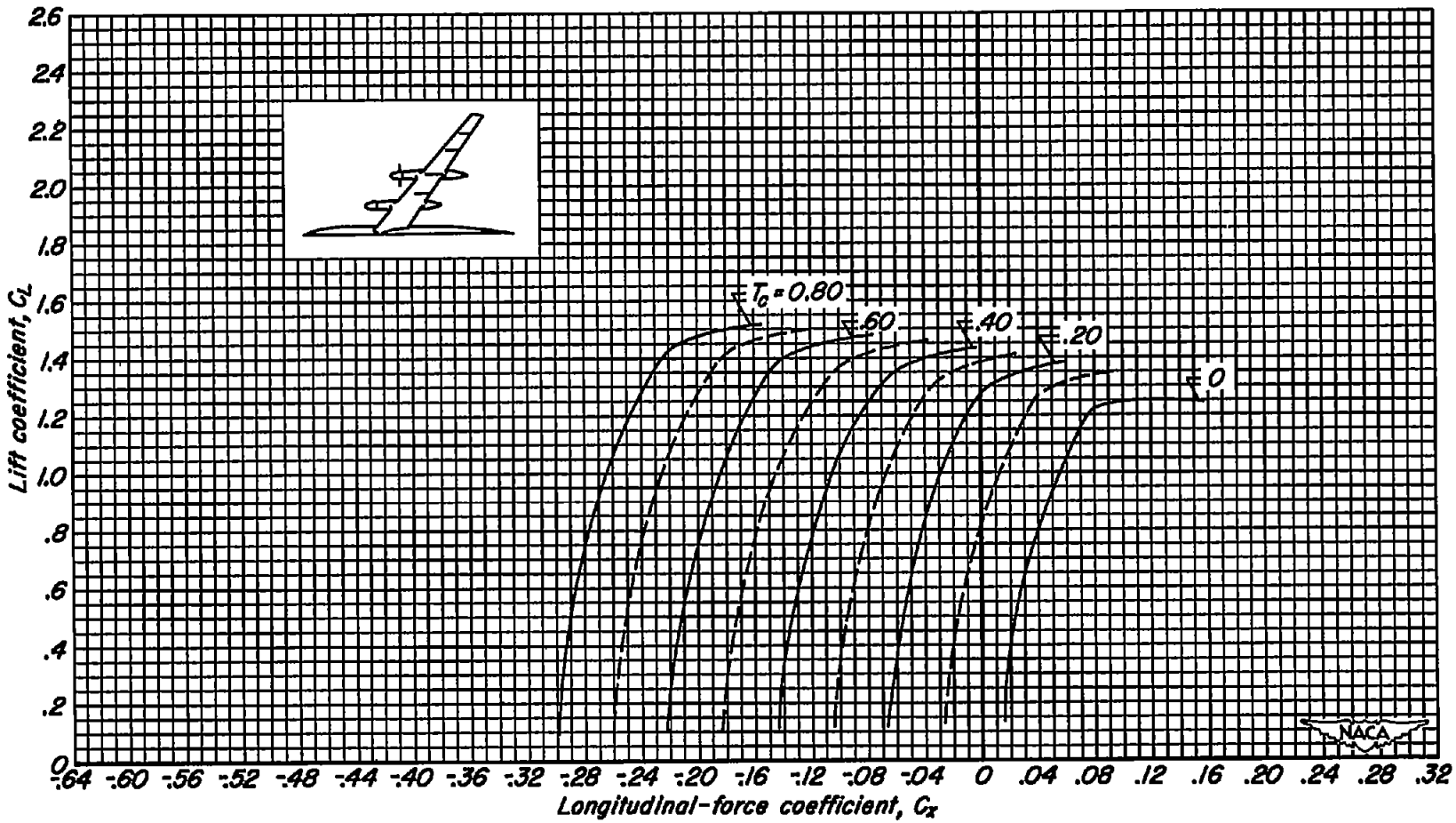
(b) C_L vs C_X

Figure 8.- Concluded.



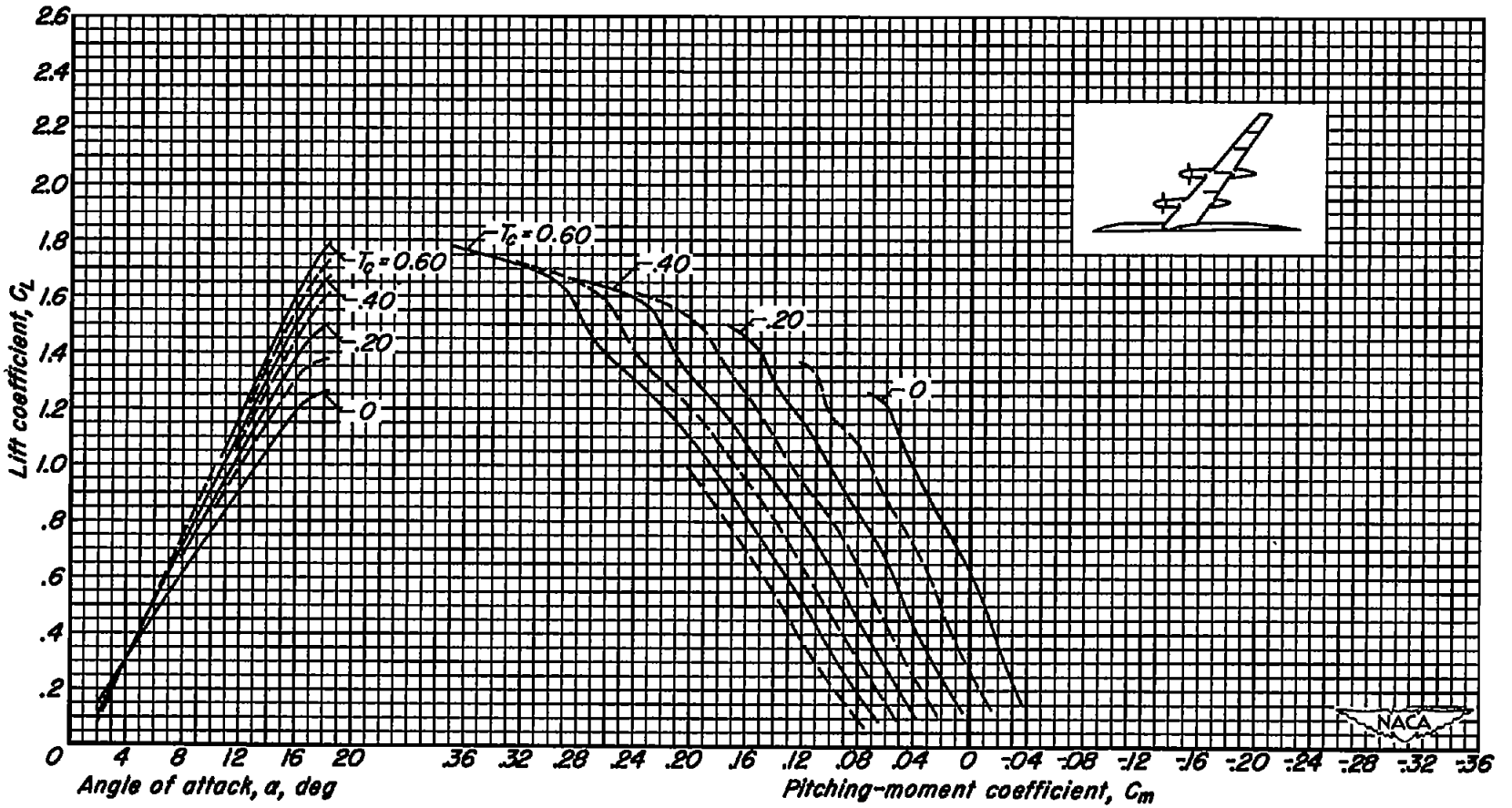
(a) C_L vs α and C_m

Figure 9.- The longitudinal characteristics of the model. Tail removed; flaps up; M = 0.082; R = 4,000,000; $\beta = 26^{\circ}$; outboard propeller only.



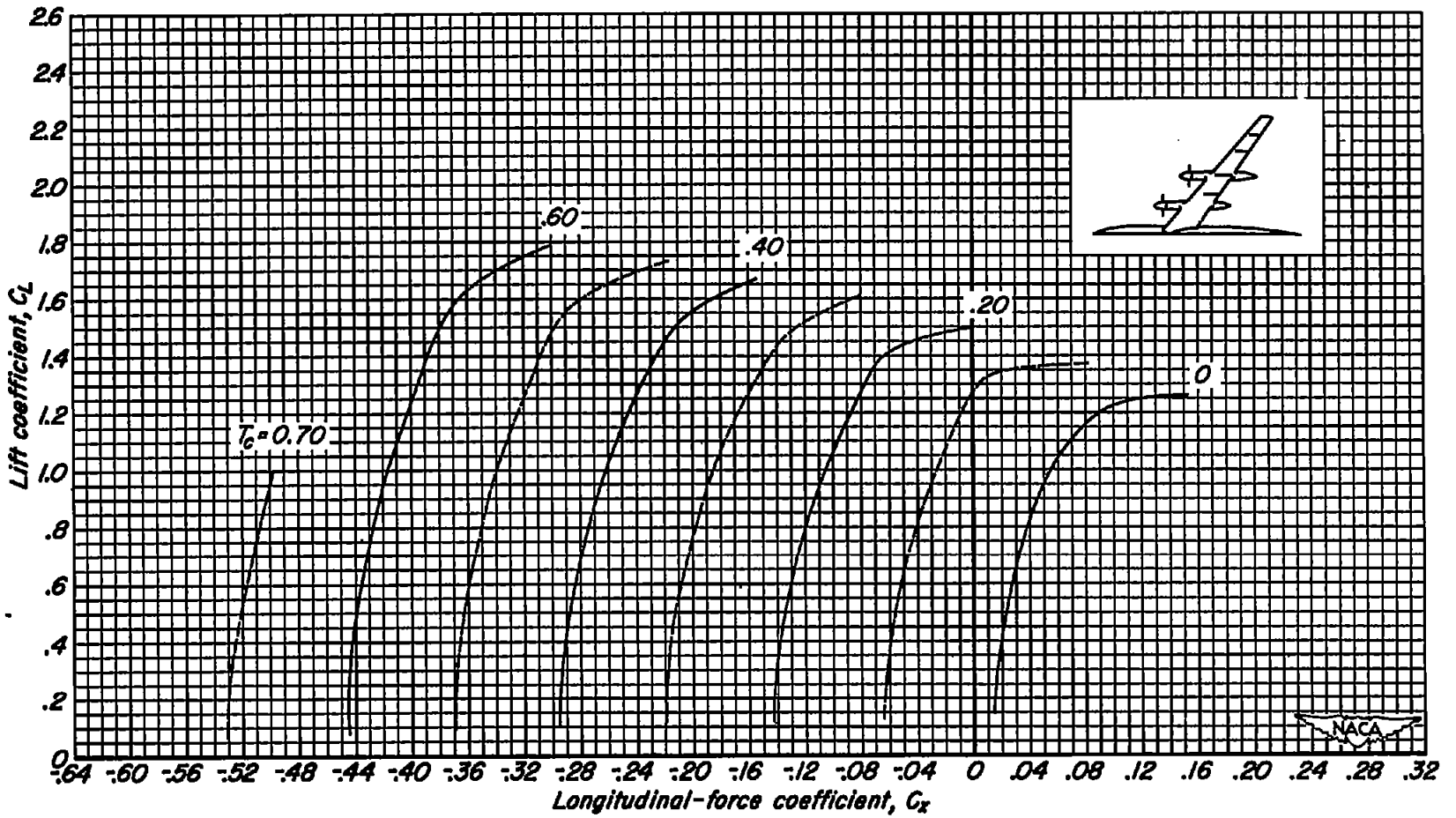
(b) C_L vs C_X

Figure 9.- Concluded.



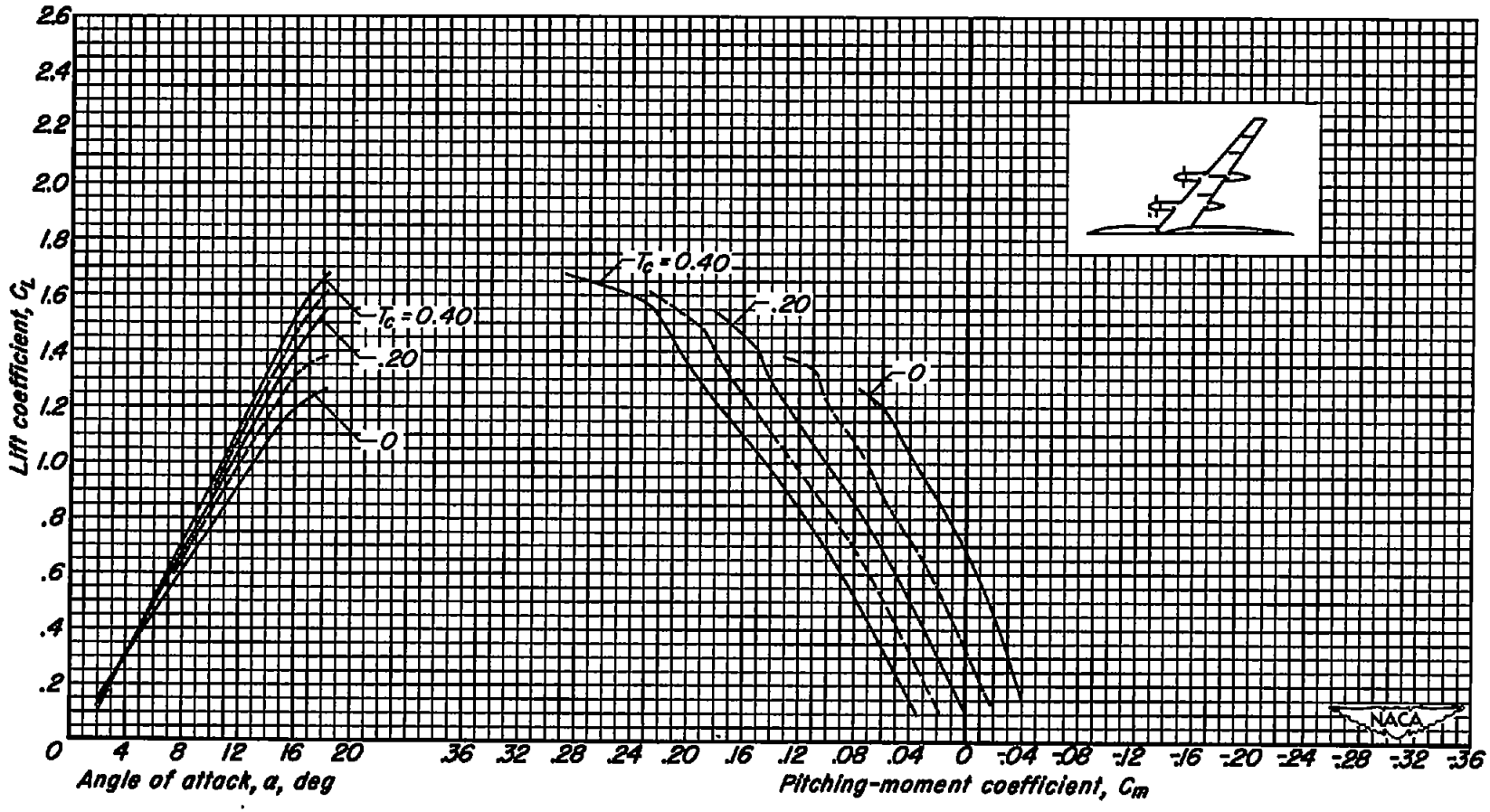
(a) C_L vs α and C_m

Figure 10.- The longitudinal characteristics of the model. Tail removed; flaps up; M = 0.082; R = 4,000,000; β = 31°.



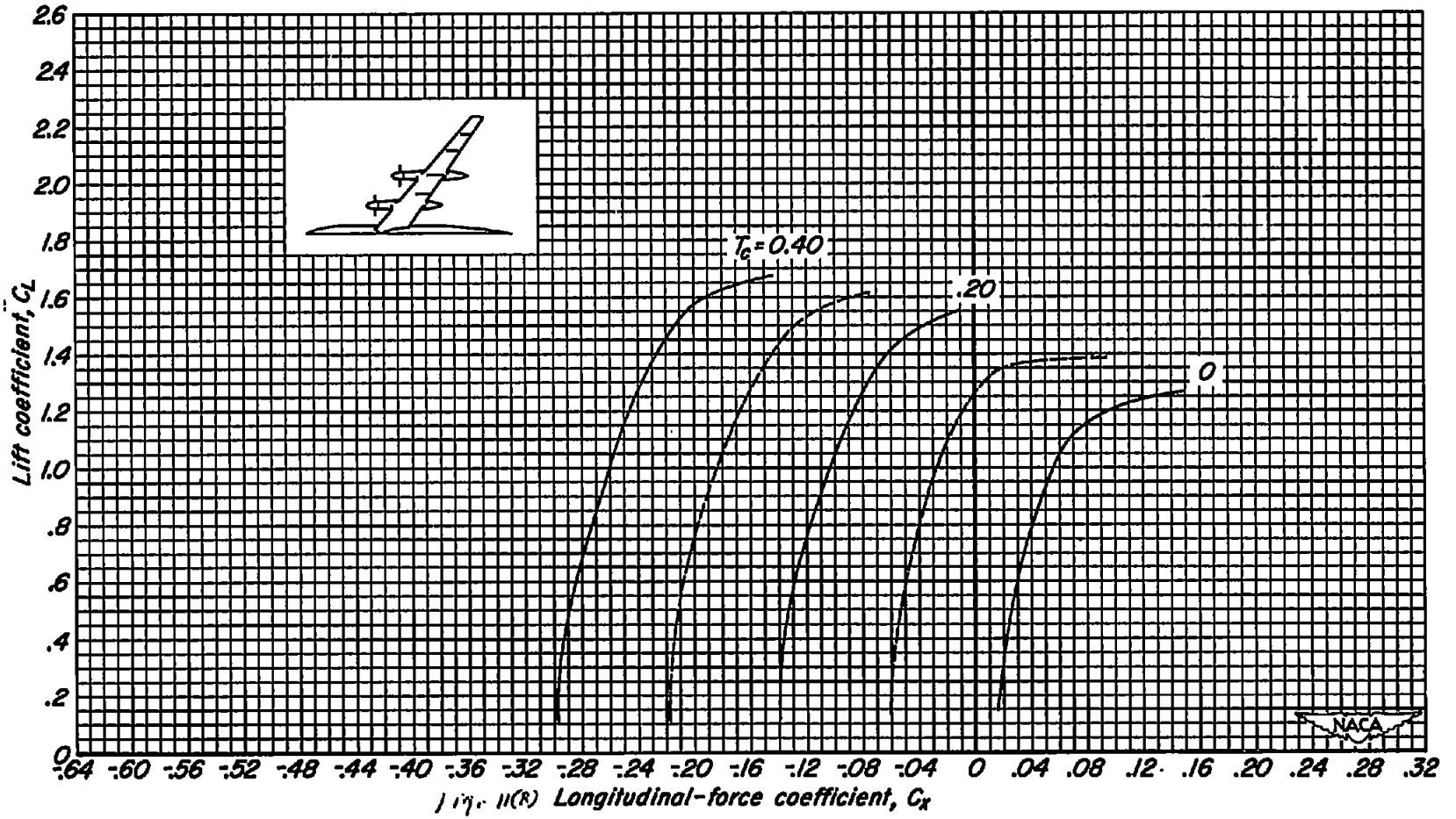
(b) C_L vs C_X

Figure 10.- Concluded.



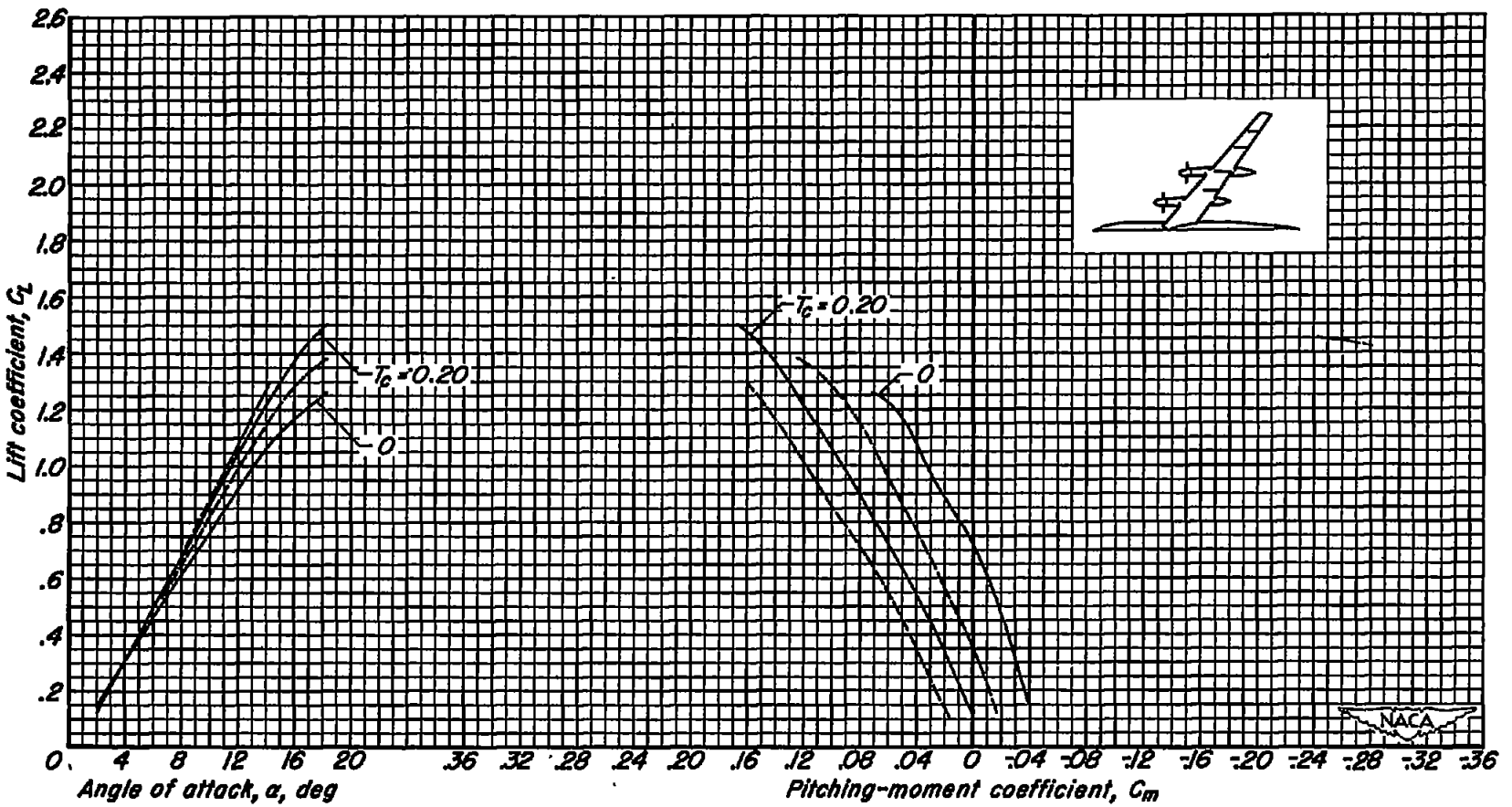
(a) C_L vs α and C_m

Figure 11.- The longitudinal characteristics of the model. Tail removed; flaps up; M = 0.123; R = 4,000,000; β = 31°.



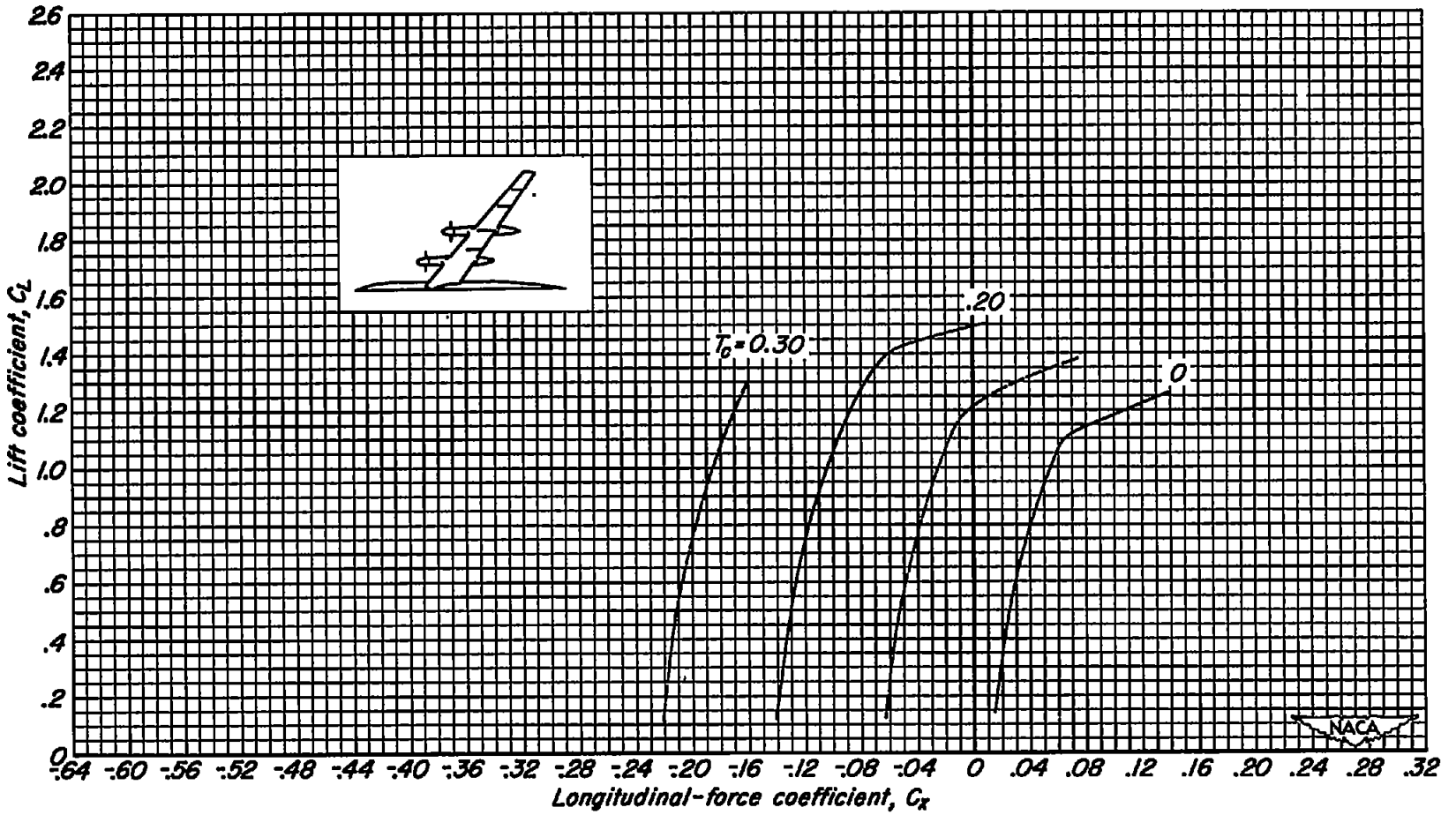
(b) C_L vs C_X

Figure 11.- Concluded.



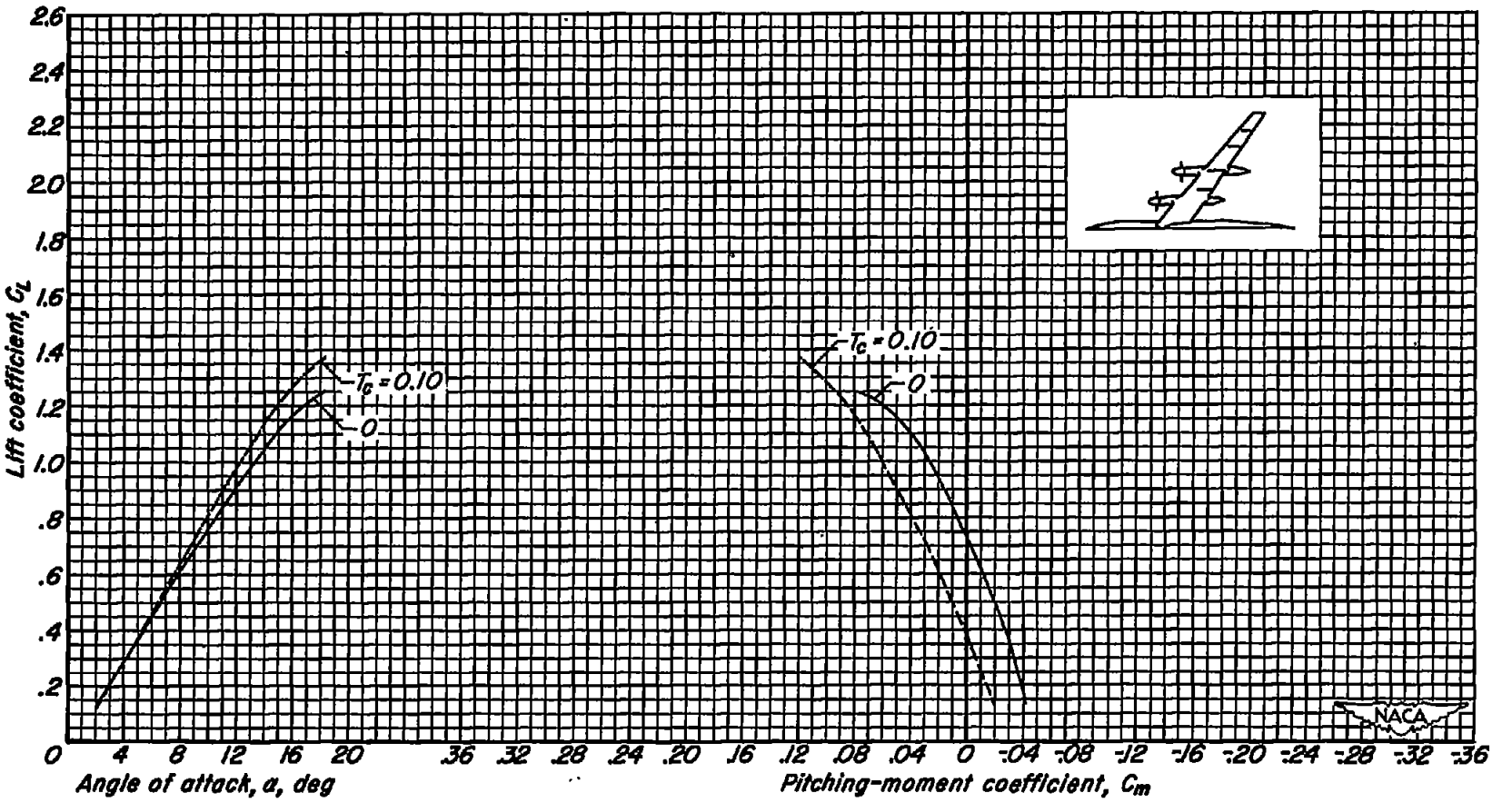
(a) C_L vs α and C_m

Figure 12.- The longitudinal characteristics of the model. Tail removed; flaps up; M = 0.123; R = 6,000,000; β = 31°.



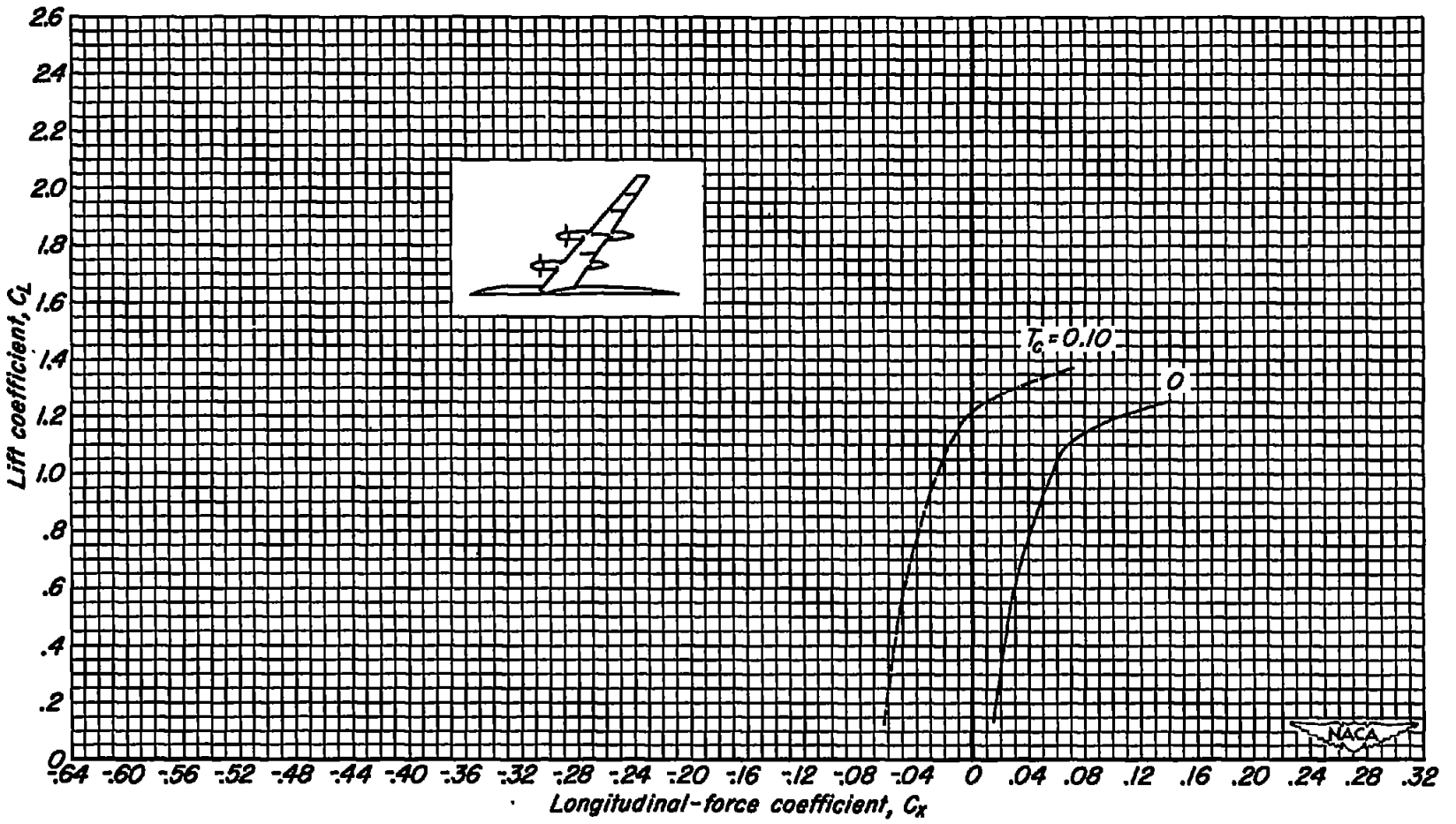
(b) C_L vs C_X

Figure 12.- Concluded.



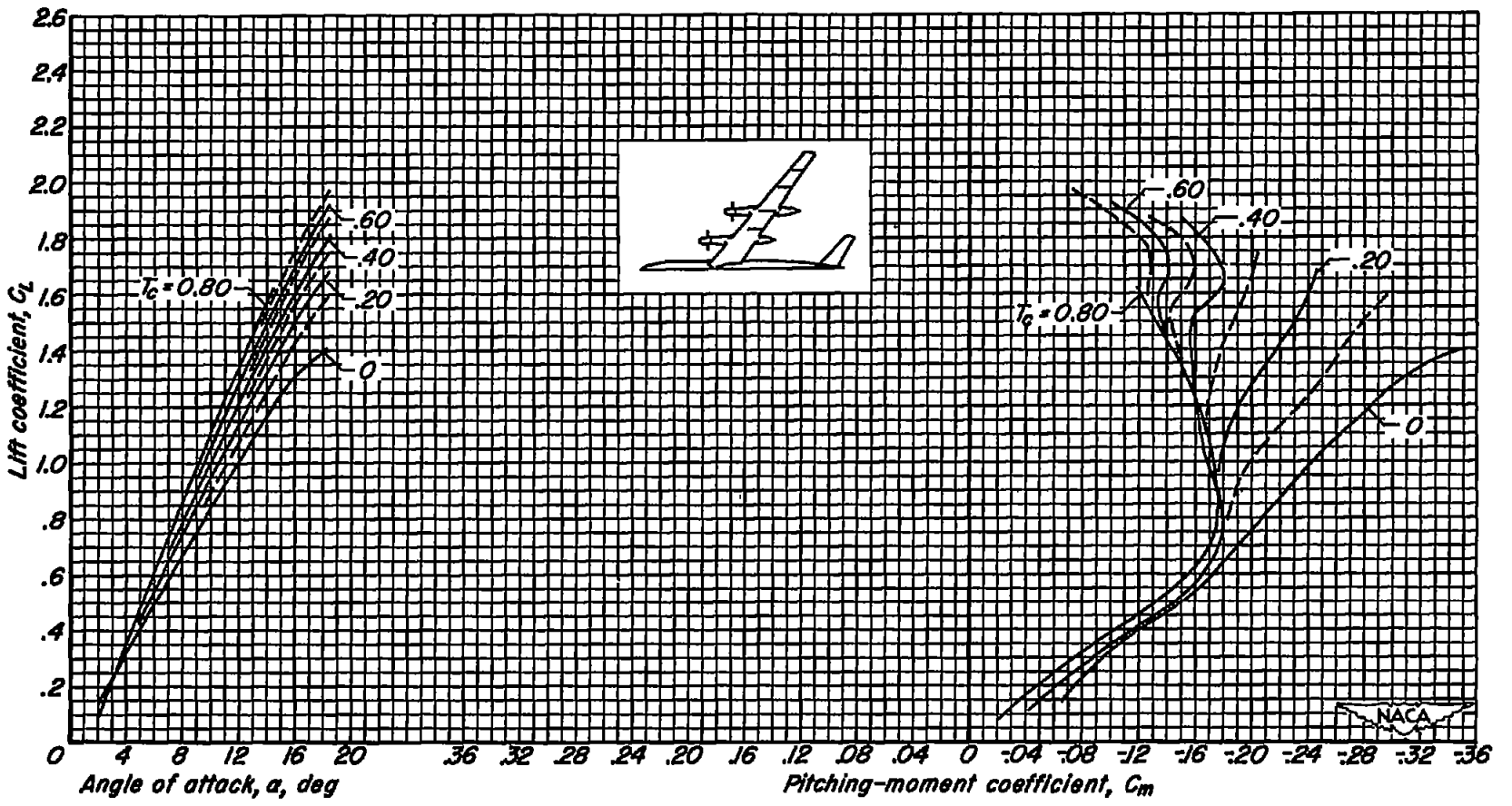
(a) C_L vs α and C_m

Figure 13.- The longitudinal characteristics of the model. Tail removed; flaps up; M = 0.165; R = 8,000,000; $\beta = 31^{\circ}$.



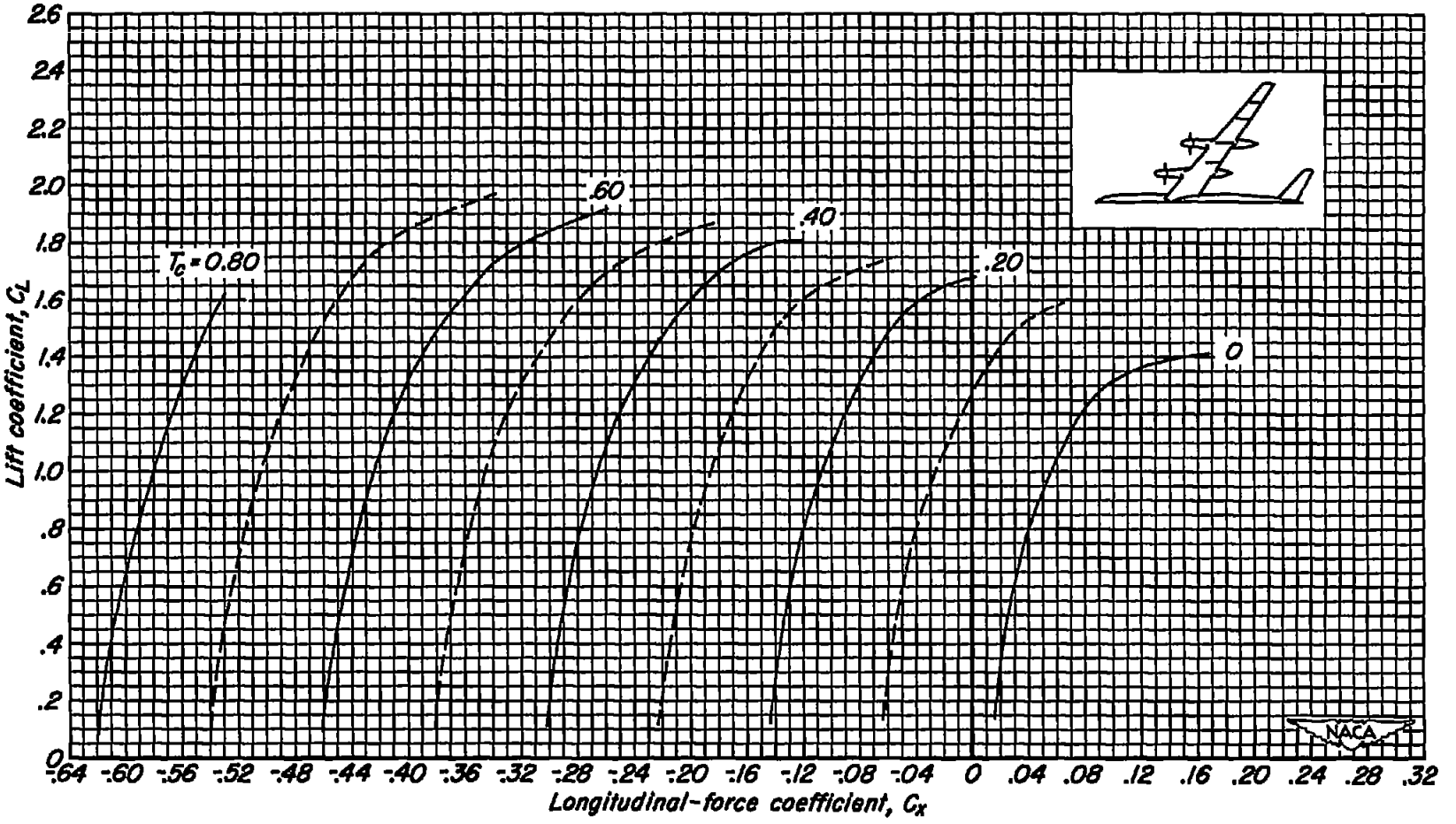
(b) C_L vs C_X

Figure 13.- Concluded.



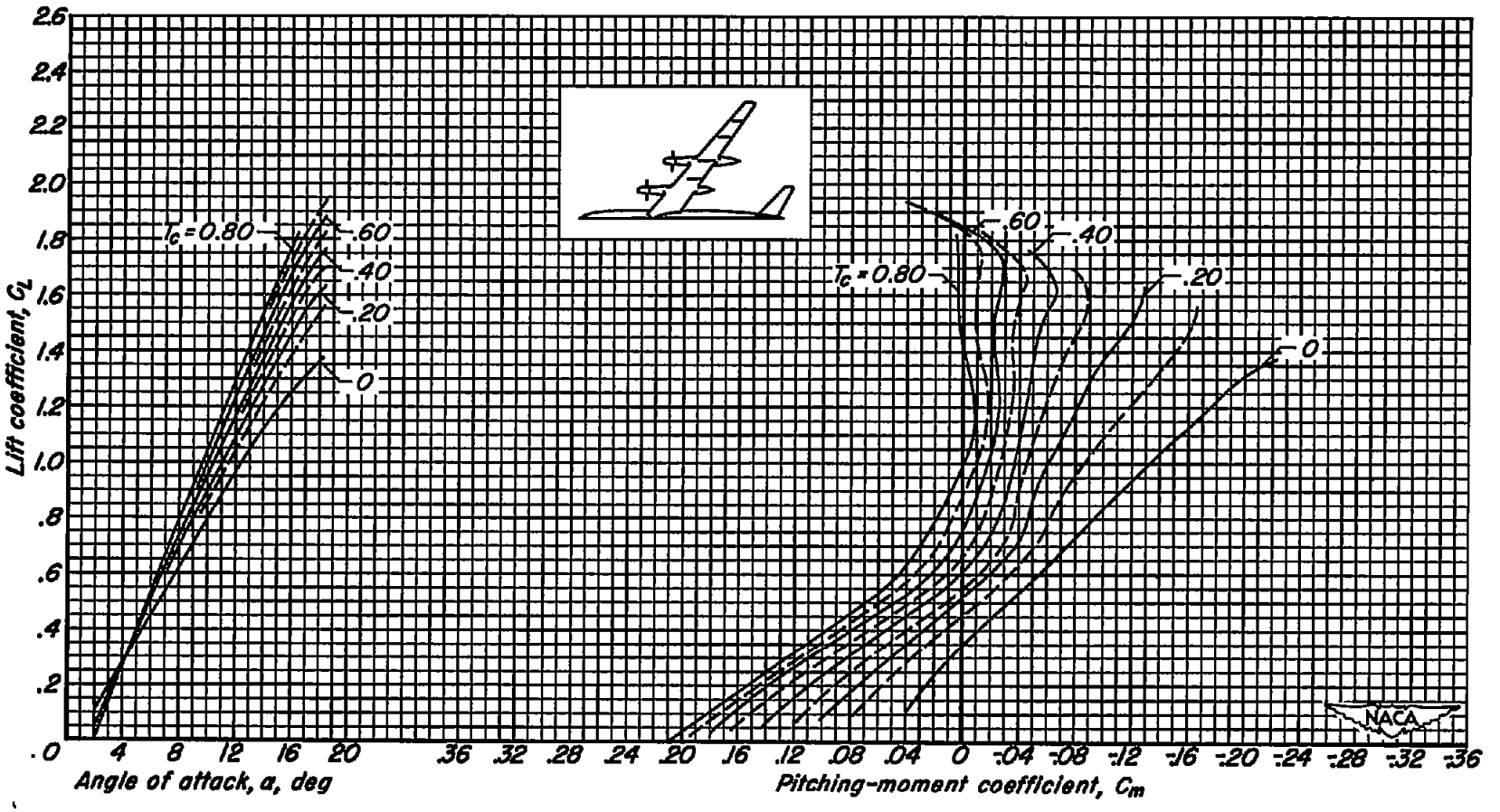
(a) C_L vs α and C_m

Figure 14.- The longitudinal characteristics of the model. Tail height = 0; flaps up; M = 0.082; R = 4,000,000; β = 26°; i_t = 0°.



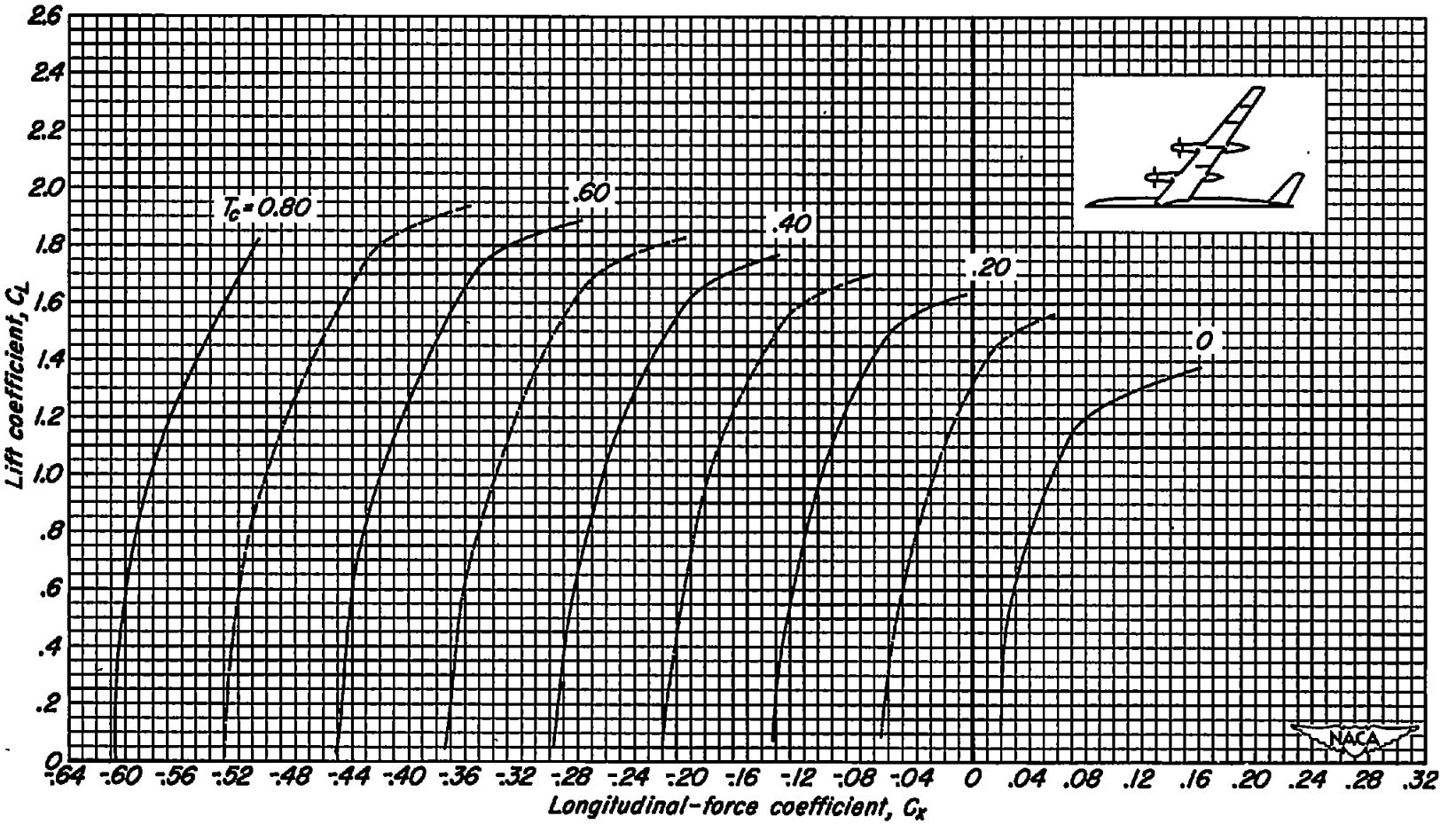
(b) C_L vs C_X

Figure 14.- Concluded.



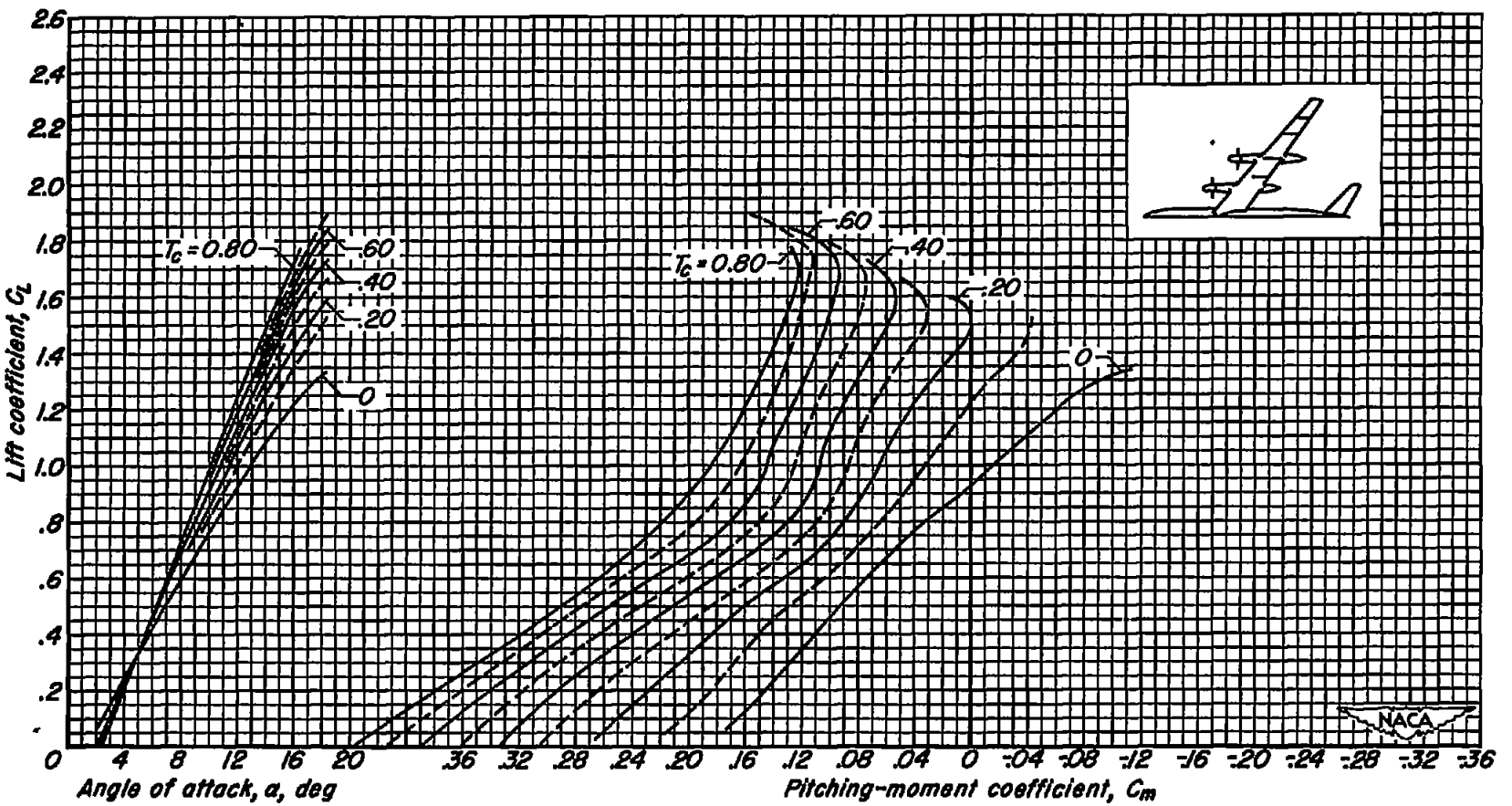
(a) C_L vs α and C_m

Figure 15.- The longitudinal characteristics of the model. Tail height = 0; flaps up; M = 0.082; R = 4,000,000; β = 26°; i_t = -4°.



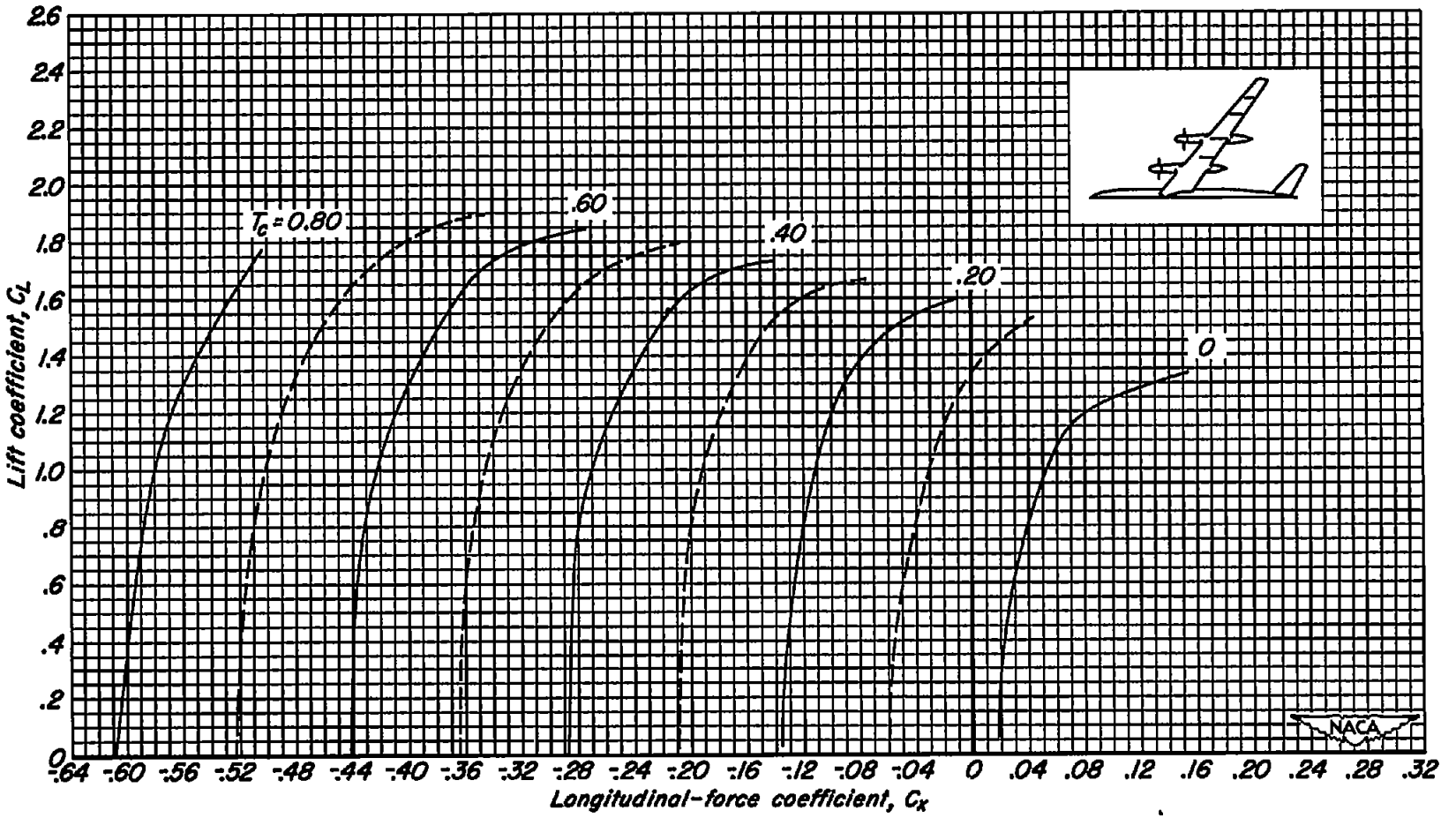
(b) C_L vs C_X

Figure 15.- Concluded.



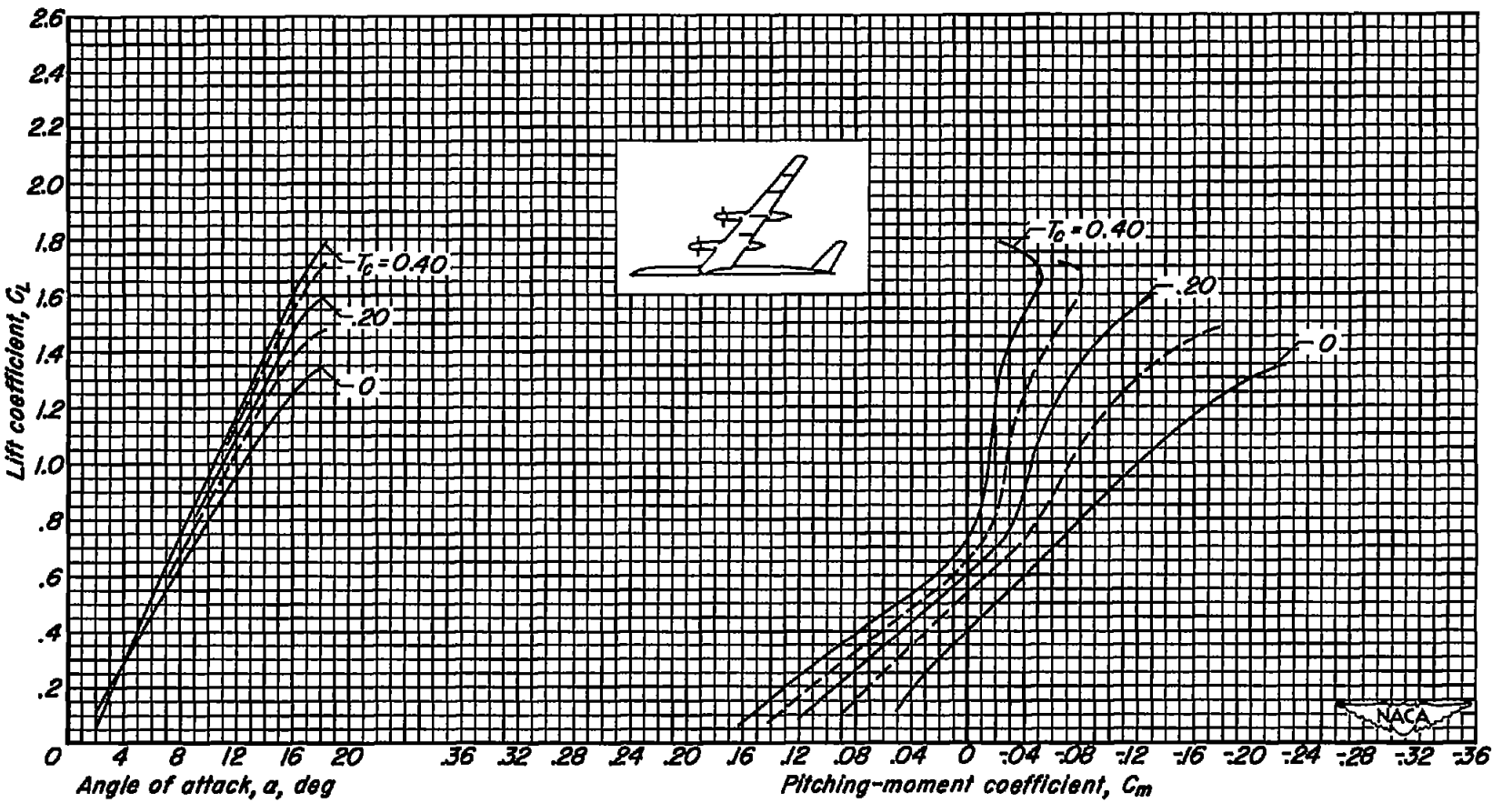
(a) C_L vs α and C_m

Figure 16.- The longitudinal characteristics of the model. Tail height = 0; flaps up; M = 0.082; R = 4,000,000; $\beta = 26^\circ$; $i_t = -8^\circ$.



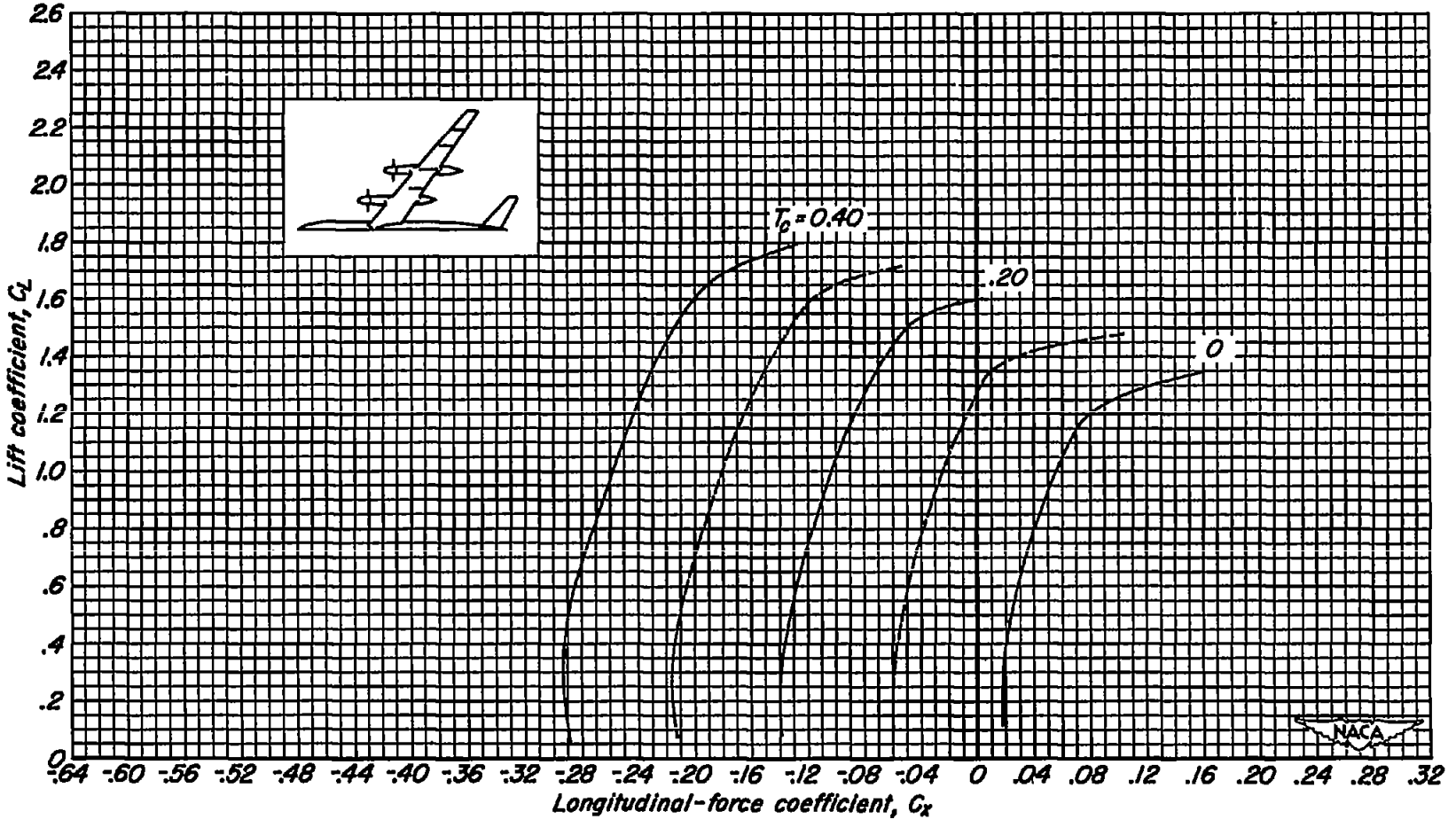
(b) C_L vs C_X

Figure 16.- Concluded.



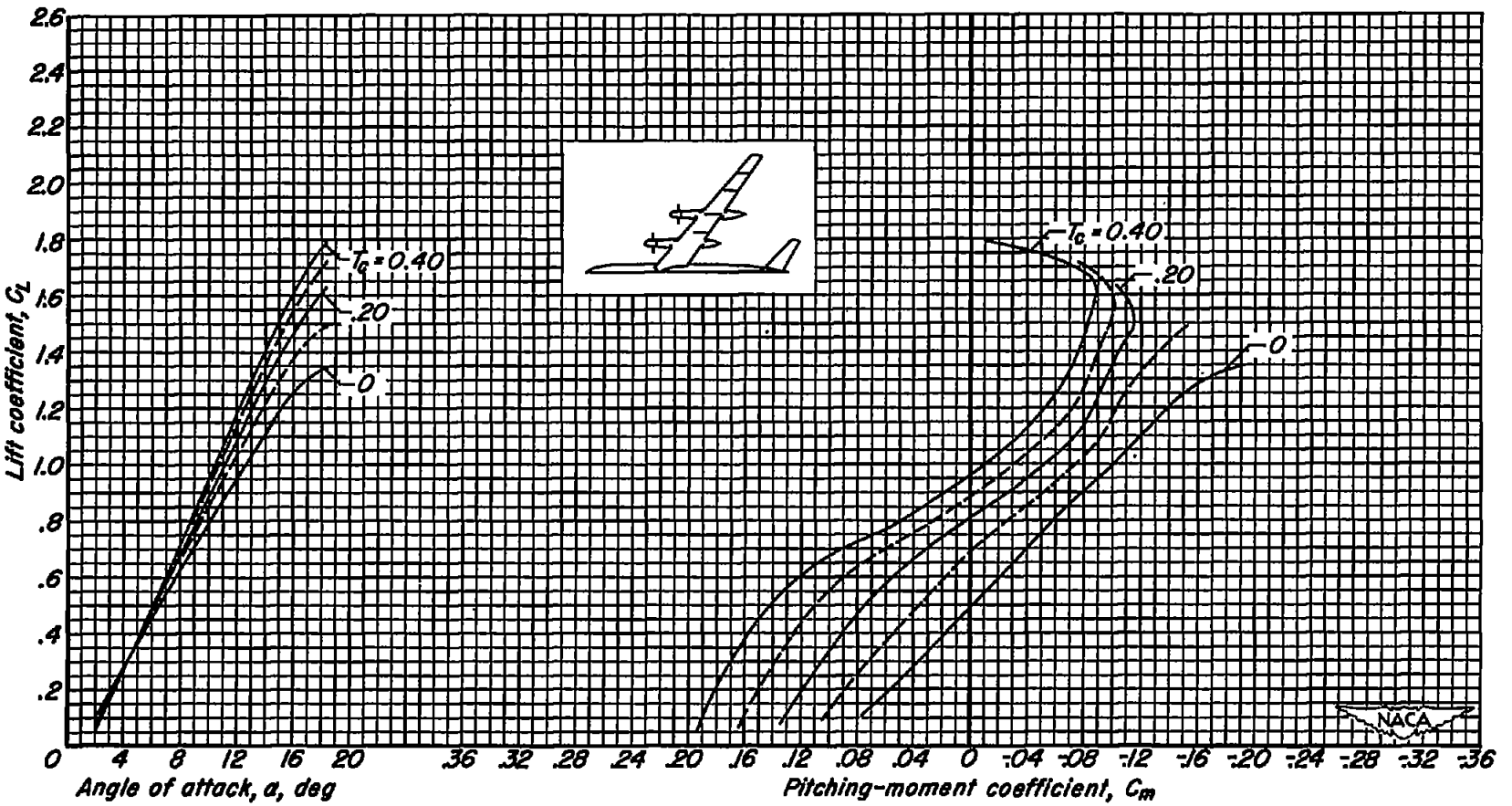
(a) C_L vs α and C_m

Figure 17.- The longitudinal characteristics of the model. Tail height = 0; flaps up; M = 0.123; R = 4,000,000; β = 31°; i_t = -4°.



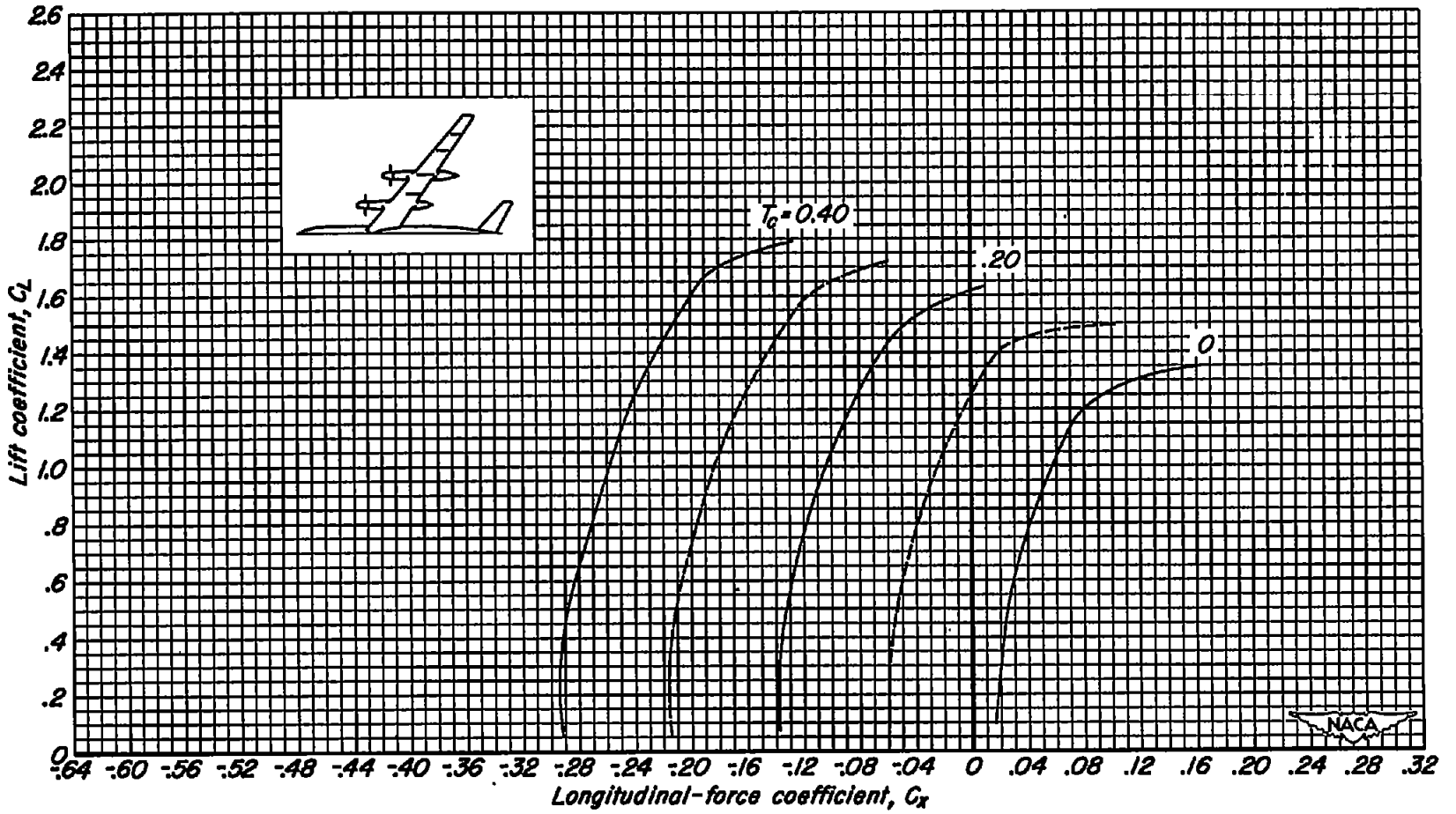
(b) C_L vs C_X

Figure 17.- Concluded.



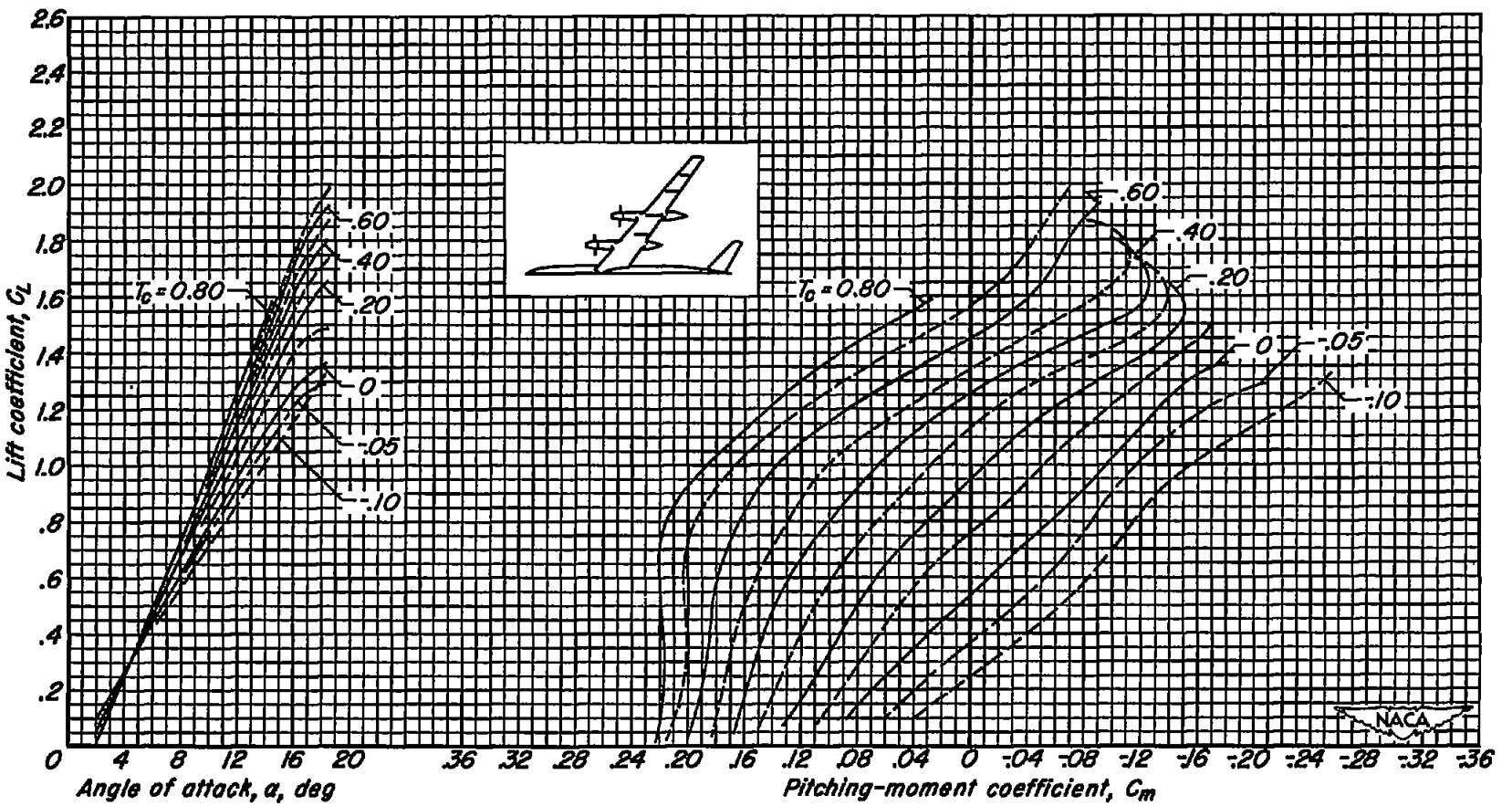
(a) C_L vs α and C_m

Figure 18.- The longitudinal characteristics of the model. Tail height = 0.05 b/2; flaps up; M = 0.123; R = 4,000,000; β = 31°; i_t = -4°.



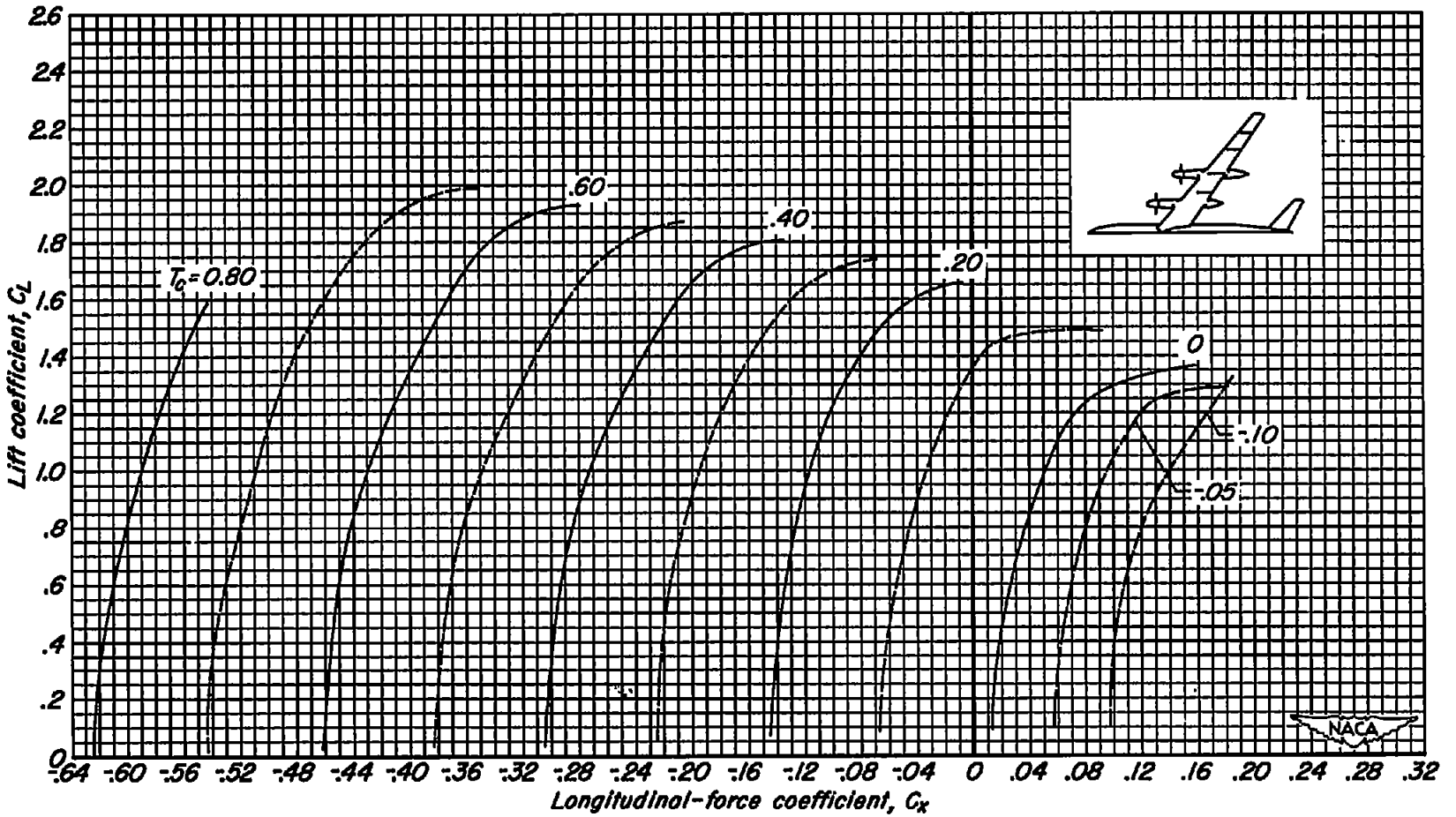
(b) C_L vs C_X

Figure 18.- Concluded.



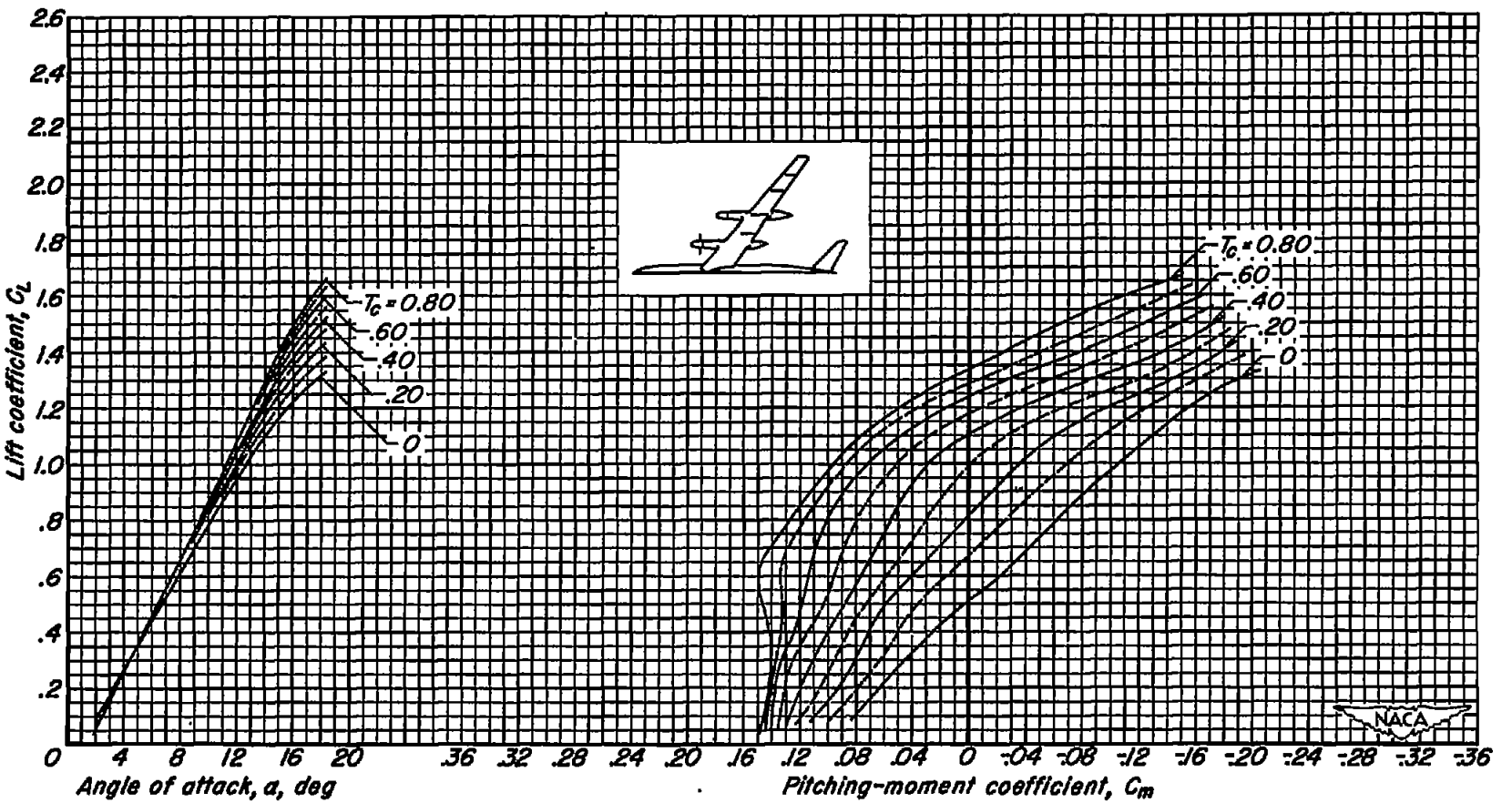
(a) C_L vs α and C_m

Figure 19.- The longitudinal characteristics of the model. Tail height = 0.10 b/2; flaps up; M = 0.082; R = 4,000,000; β = 26°; i_t = -4°.



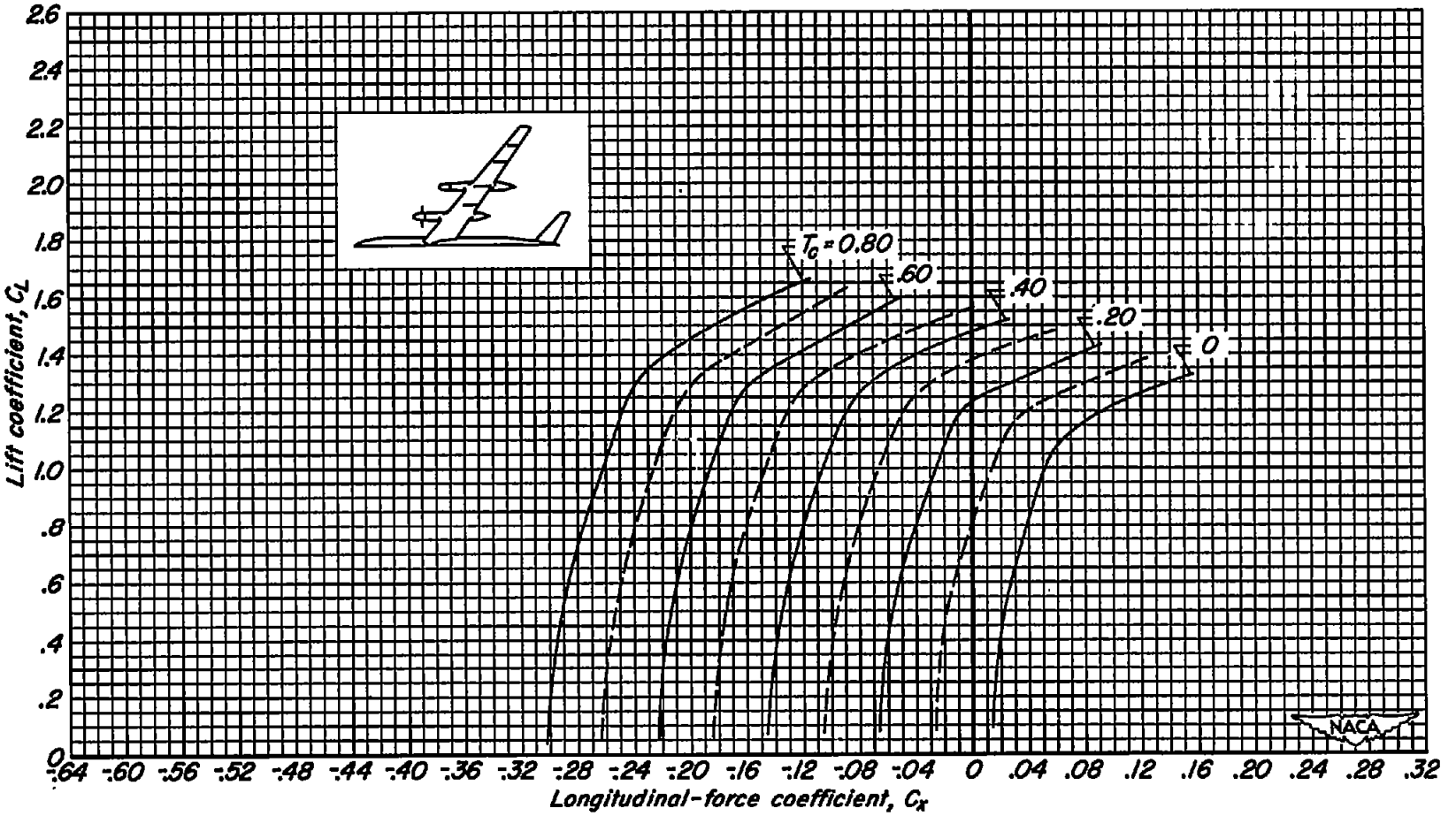
(b) C_L vs C_X

Figure 19.- Concluded.



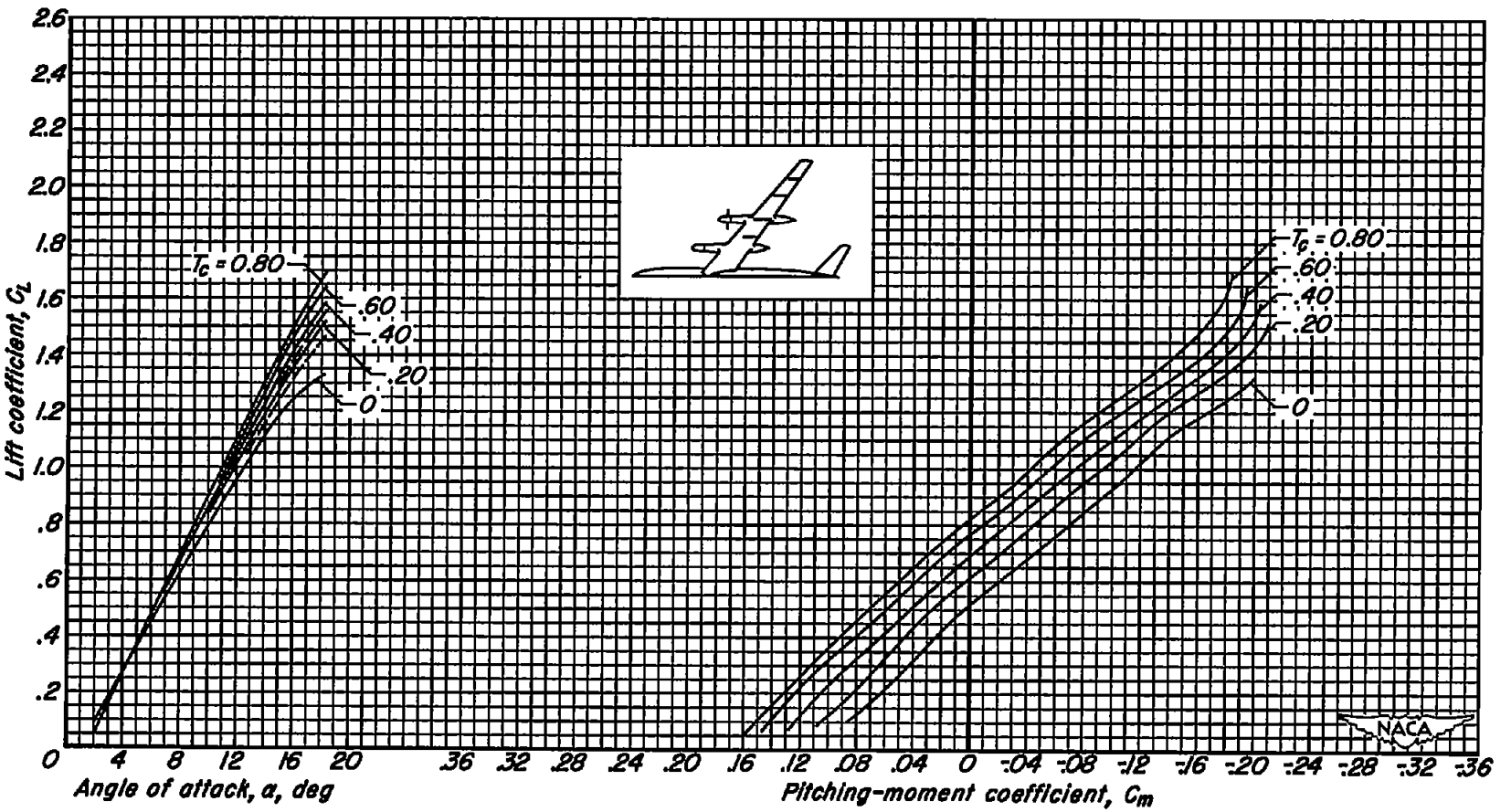
(a) C_L vs α and C_m

Figure 20.- The longitudinal characteristics of the model. Tail height = 0.10 b/2; flaps up; M = 0.082; R = 4,000,000; β = 26°; i_t = -4°; inboard propeller only.



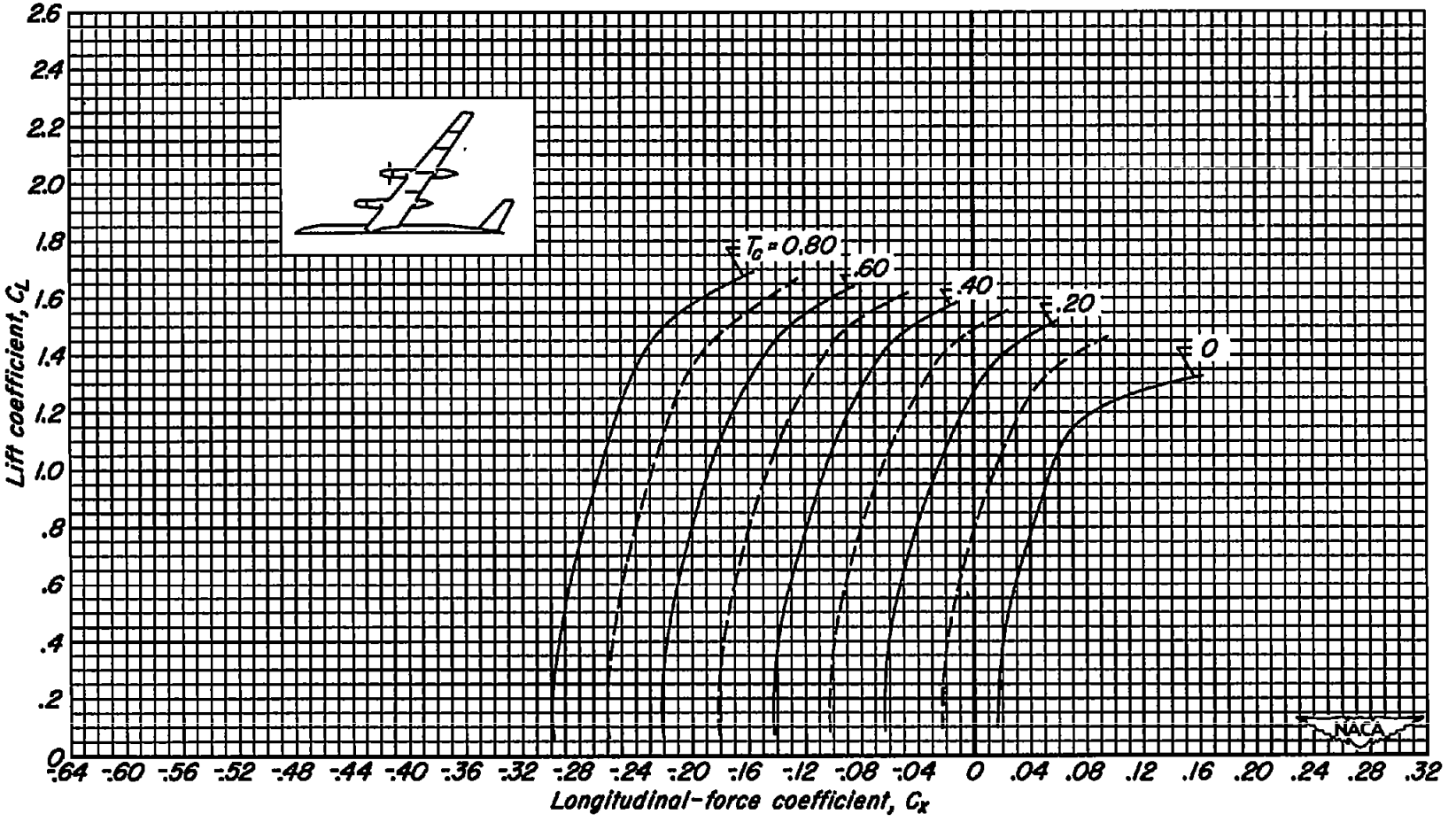
(b) C_L vs C_X

Figure 20.- Concluded.



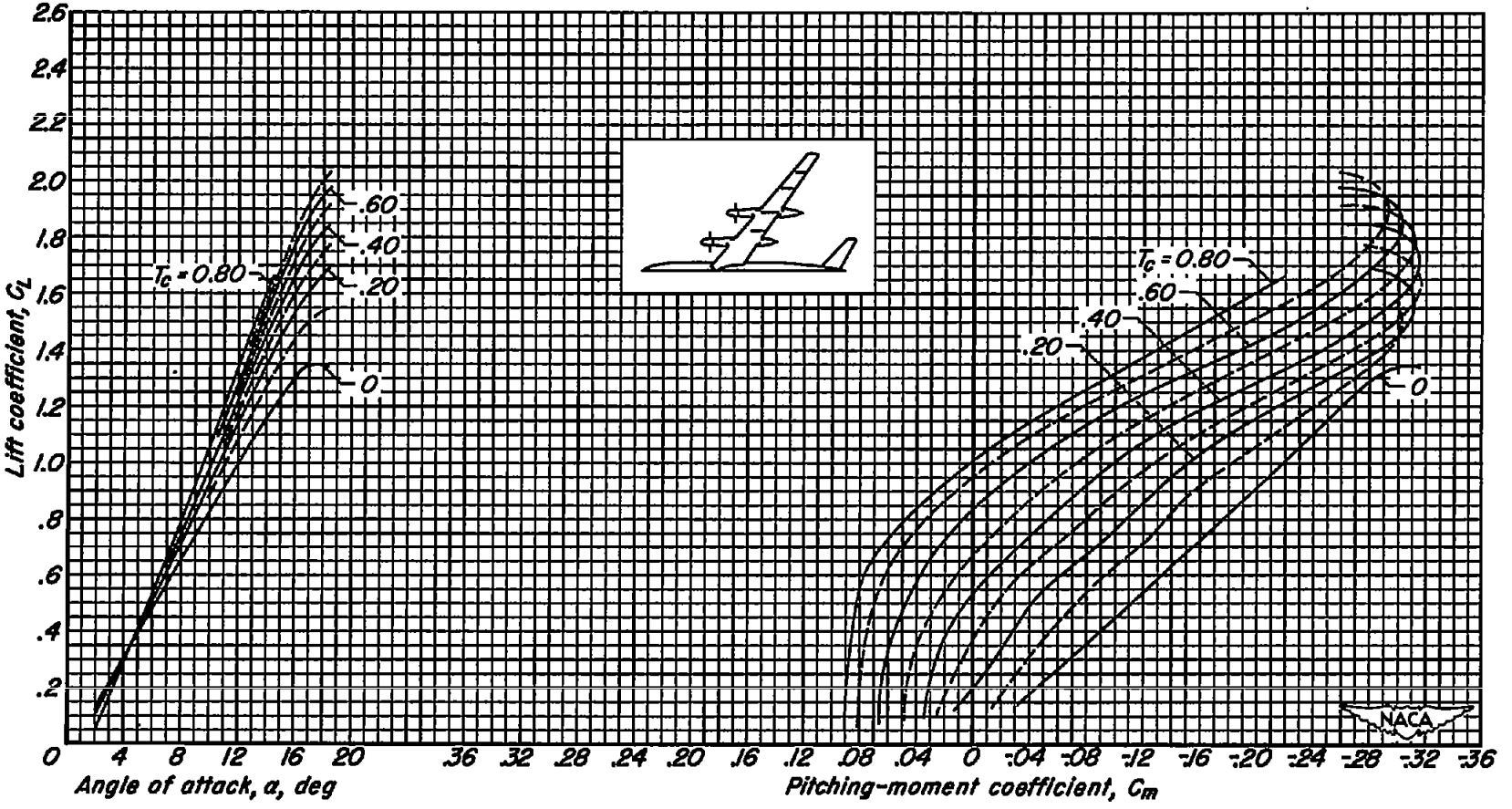
(a) C_L vs α and C_m

Figure 21.- The longitudinal characteristics of the model. Tail height = 0.10 b/2; flaps up; M = 0.082; R = 4,000,000; $\beta = 26^{\circ}$; $i_t = -4^{\circ}$; outboard propeller only.



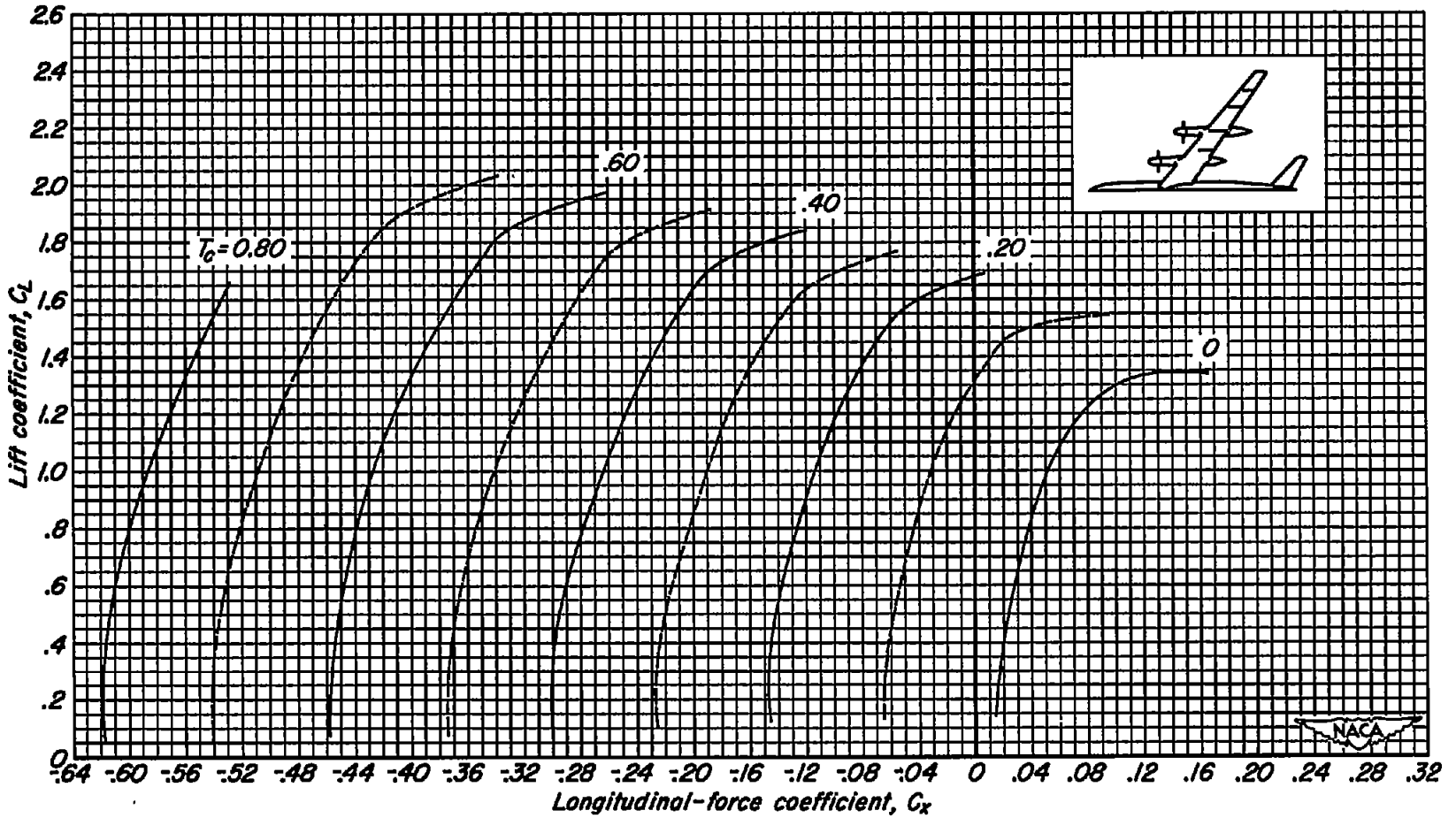
(b) C_L vs C_X

Figure 21.- Concluded.



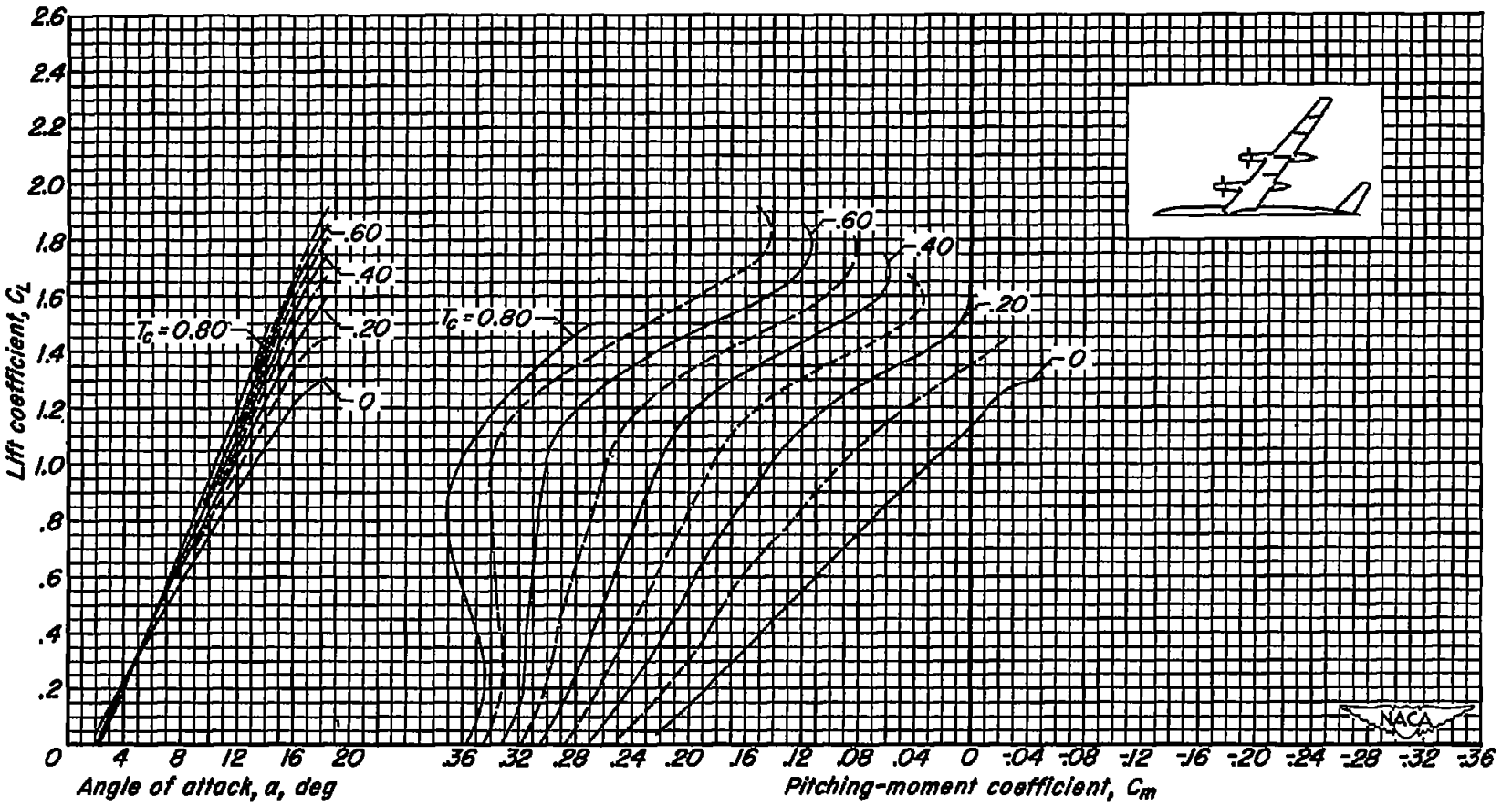
(a) C_L vs α and C_m

Figure 22.- The longitudinal characteristics of the model. Tail height = 0.10 b/2; flaps up; M = 0.082; R = 4,000,000; β = 26°; i_t = 0°.



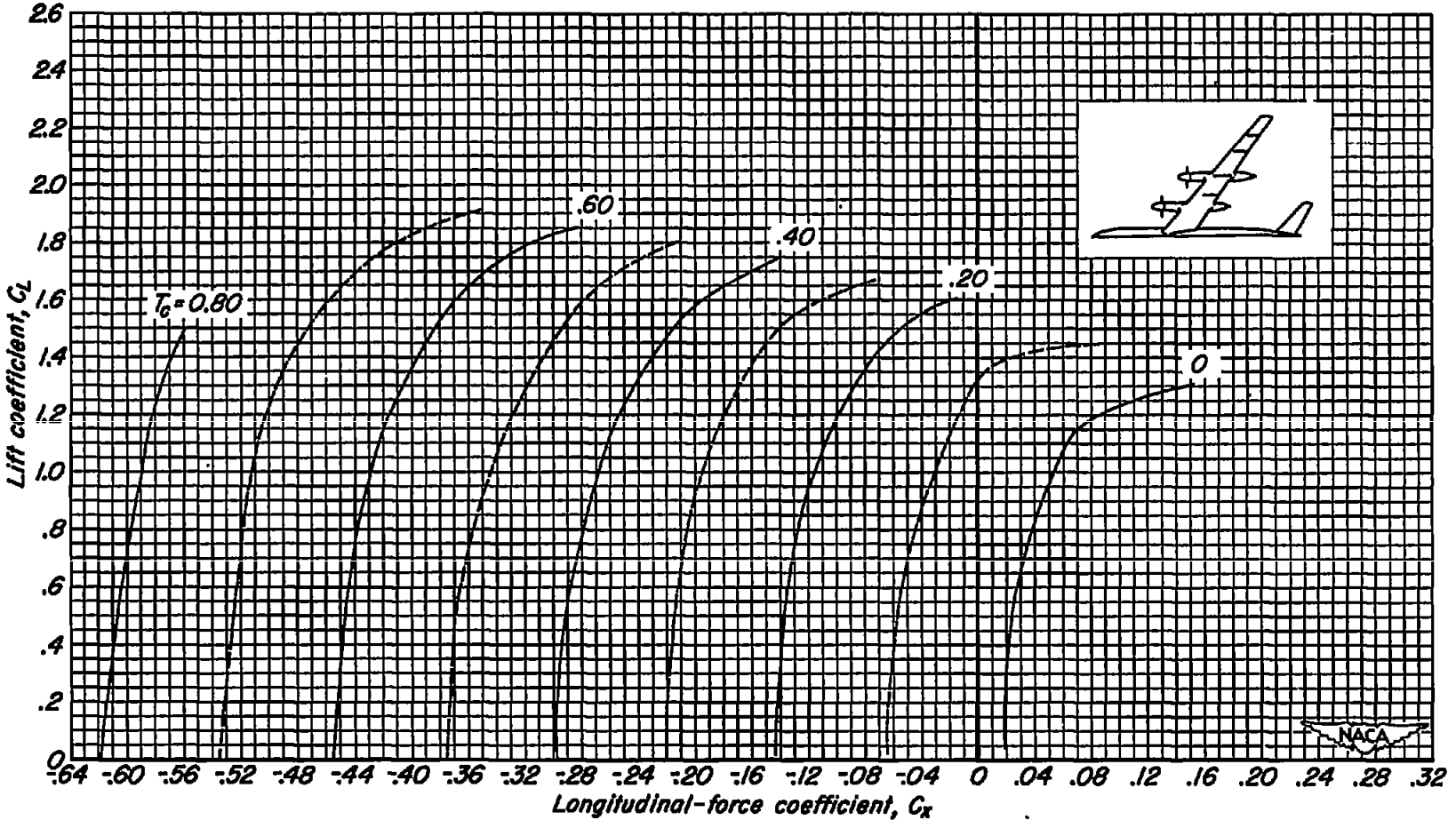
(b) C_L vs C_X

Figure 22.- Concluded.



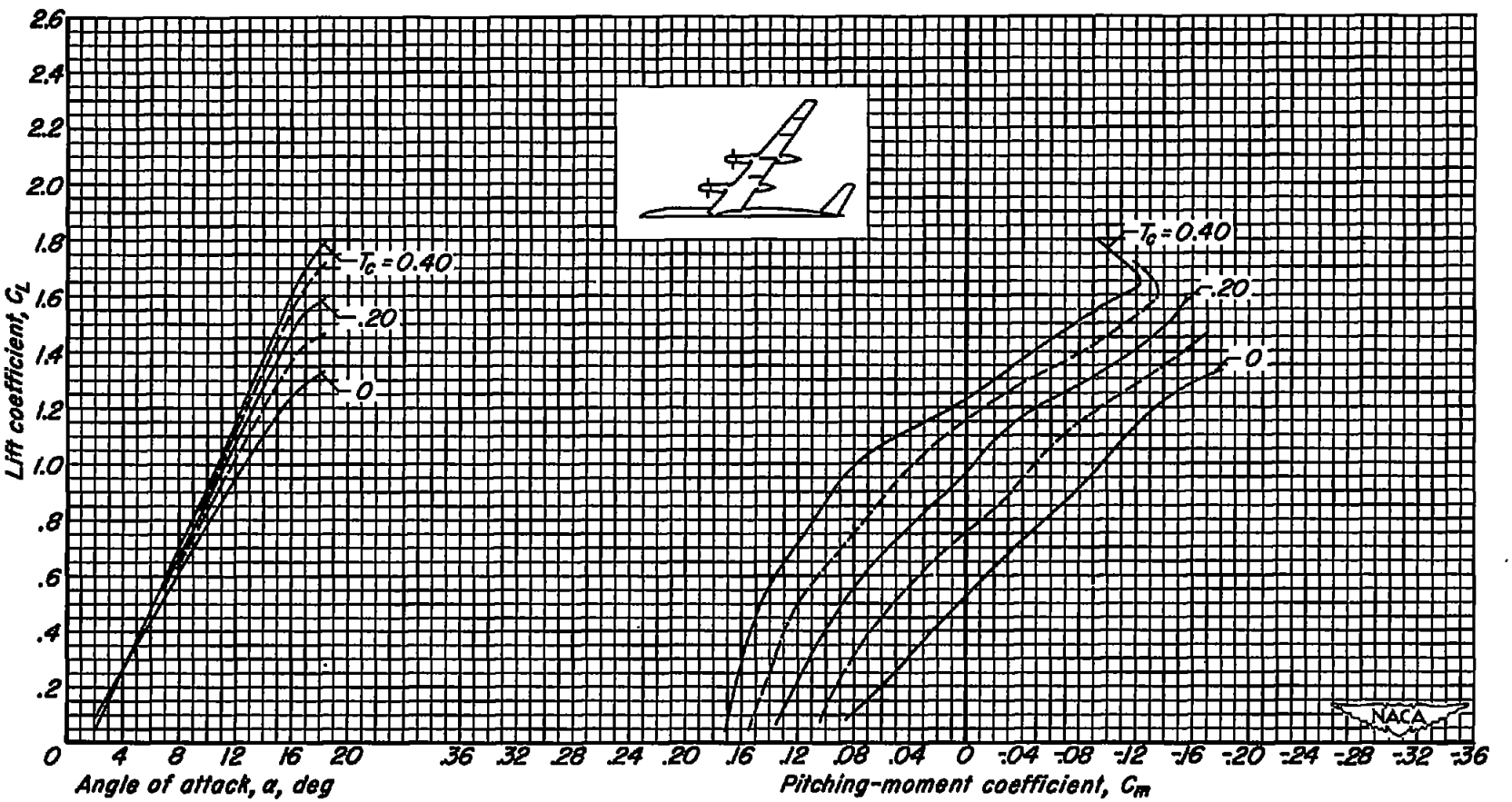
(a) C_L vs α and C_m

Figure 23.- The longitudinal characteristics of the model. Tail height = 0.10 b/2; flaps up; M = 0.082; R = 4,000,000; β = 26°; i_t = -8°.



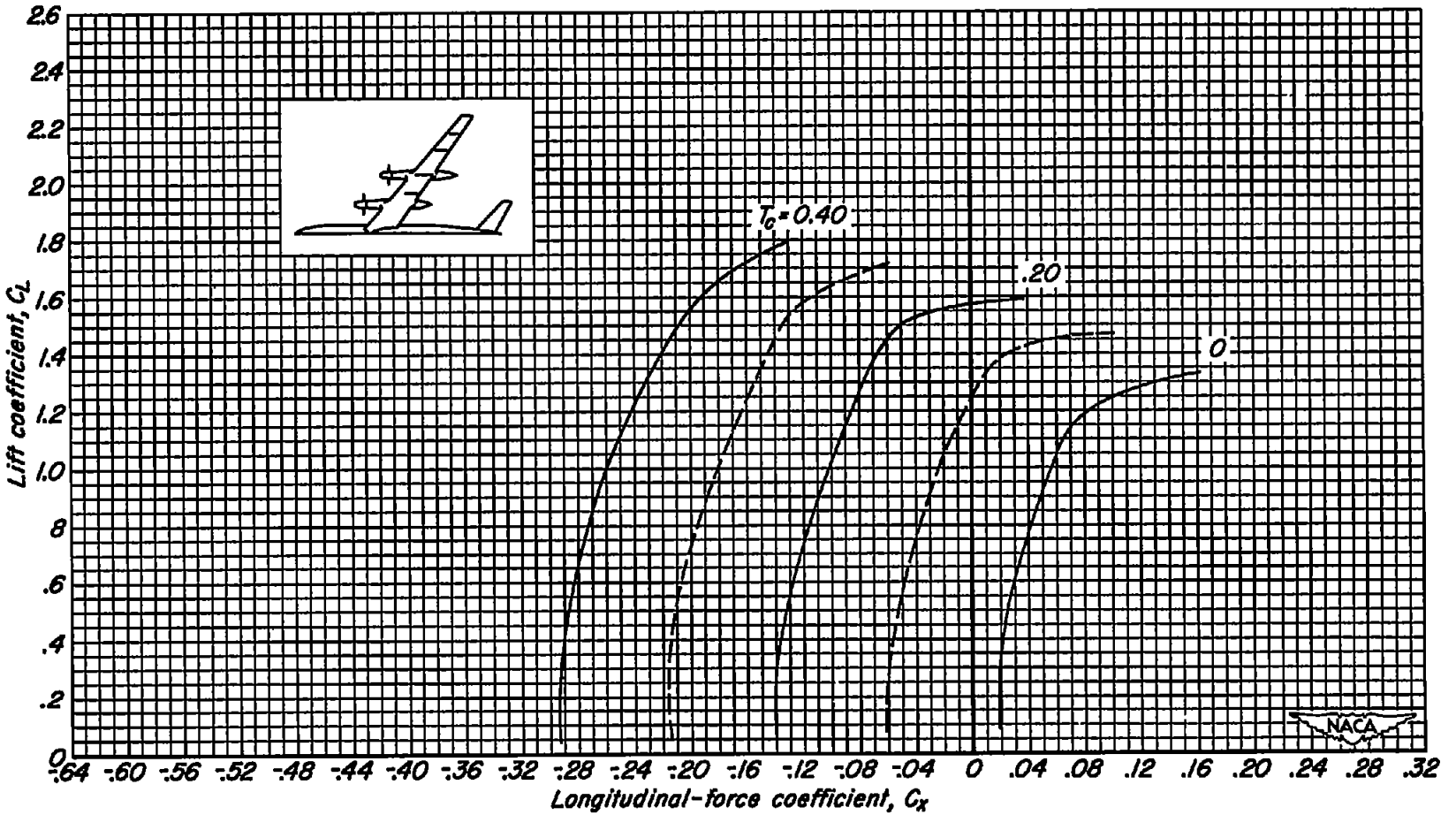
(b) C_L vs C_X

Figure 23.- Concluded.



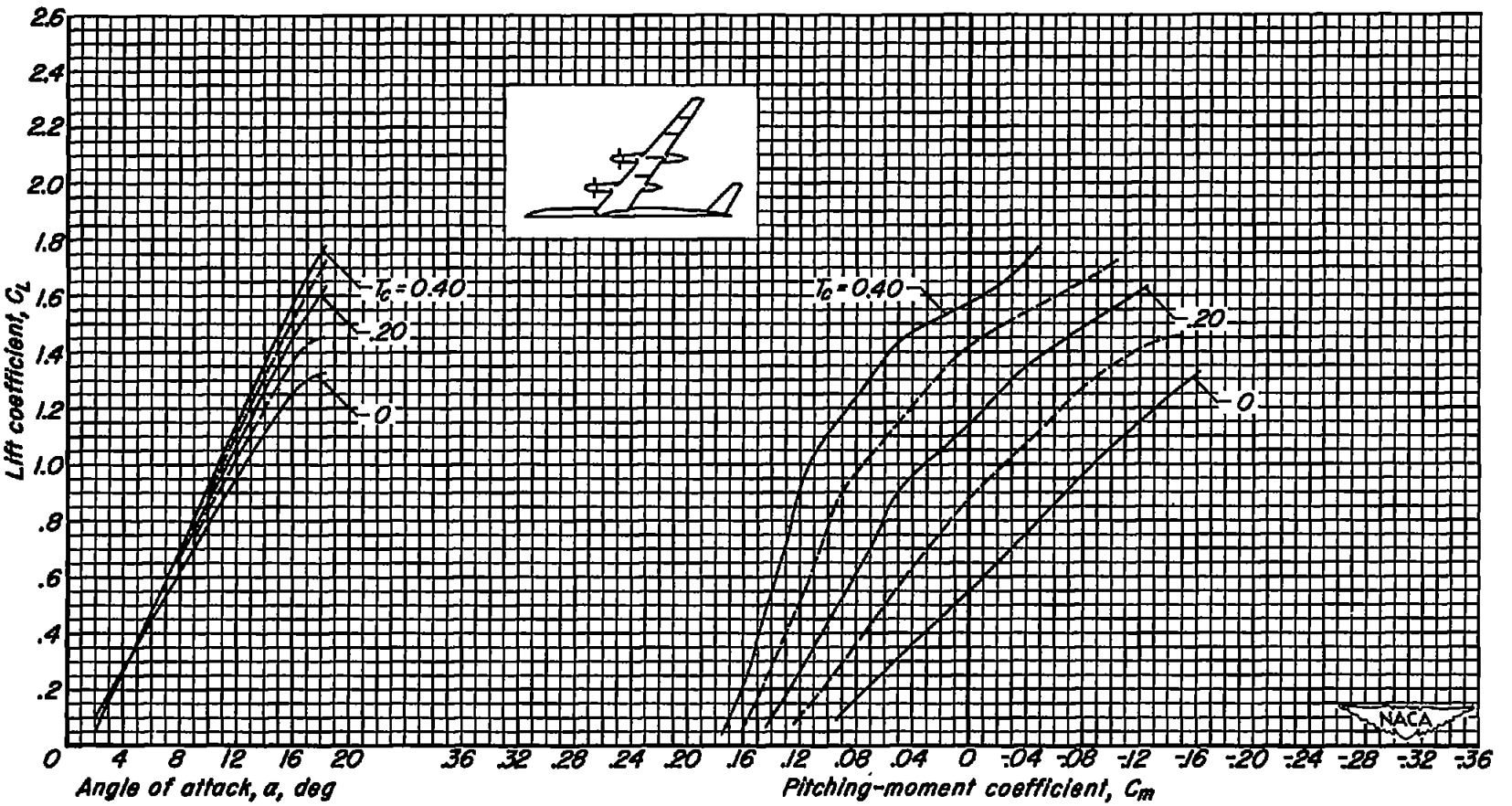
(a) C_L vs α and C_m

Figure 24.- The longitudinal characteristics of the model. Tail height = 0.10 b/2; flaps up; M = 0.123; R = 4,000,000; β = 31°; i_t = -4°.



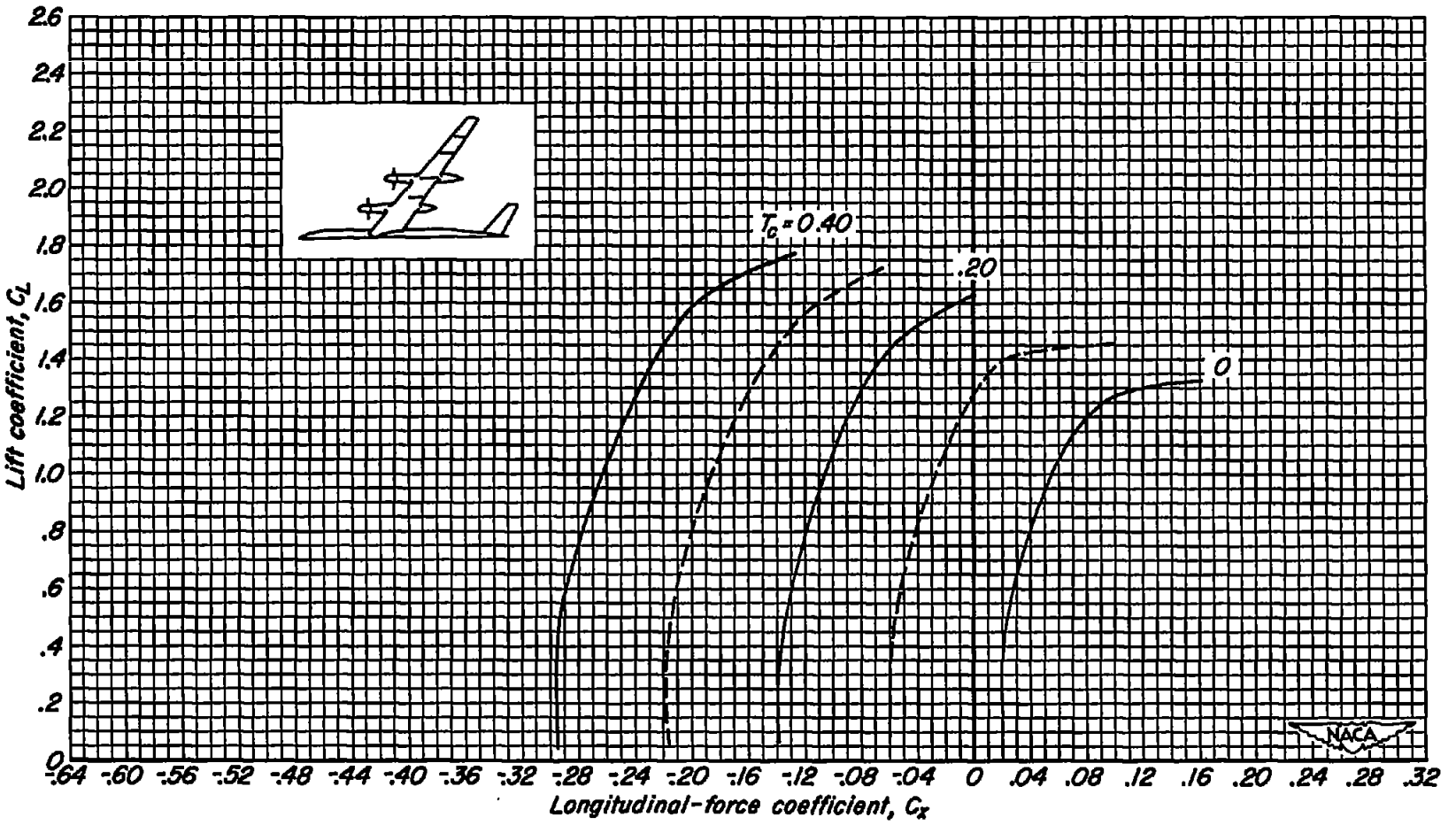
(b) C_L vs C_X

Figure 24.- Concluded.



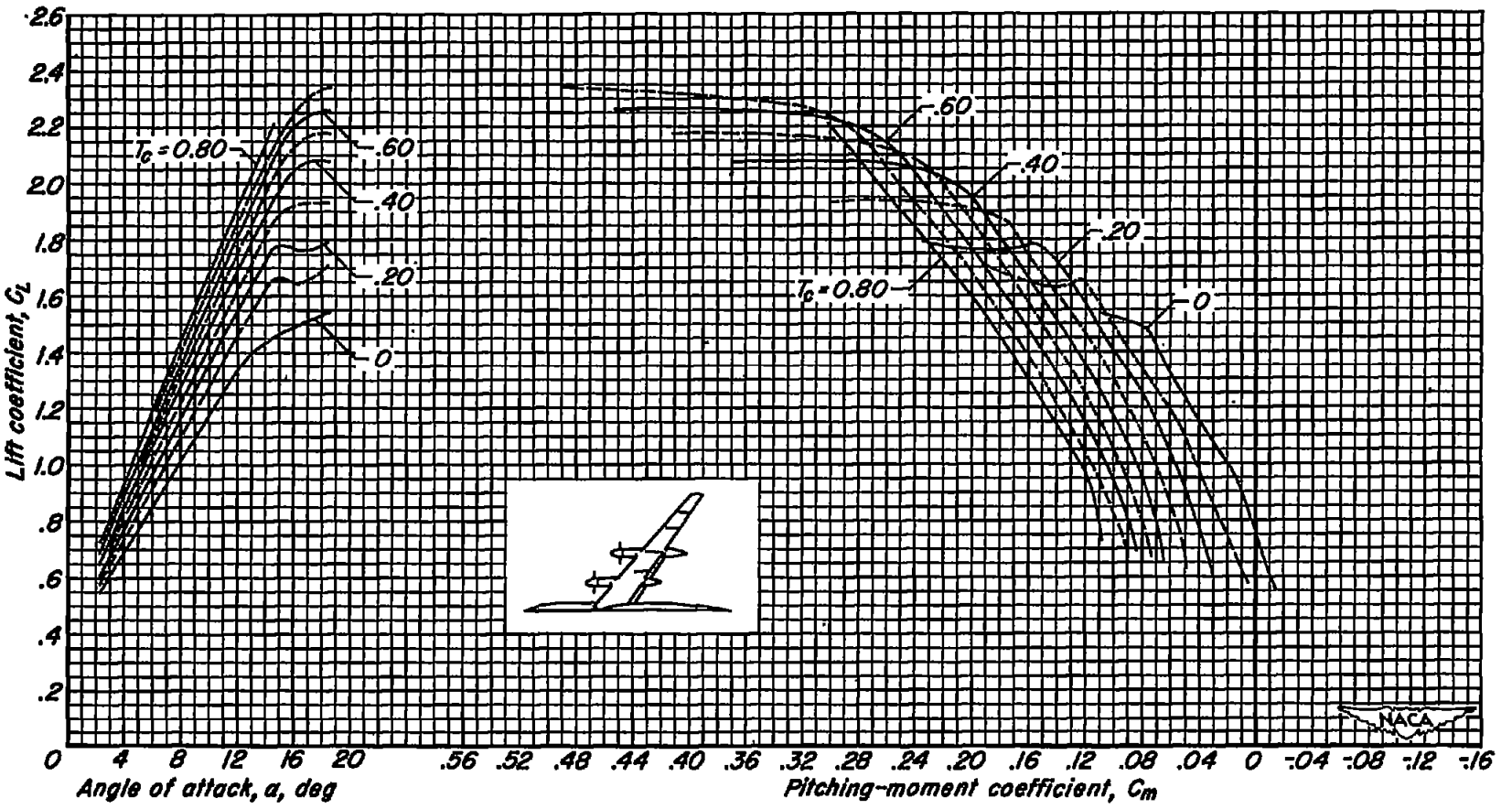
(a) C_L vs α and C_m

Figure 25.- The longitudinal characteristics of the model. Tail height = 0.15 b/2; flaps up; M = 0.123; R = 4,000,000; $\beta = 31^{\circ}$; $i_t = -4^{\circ}$.



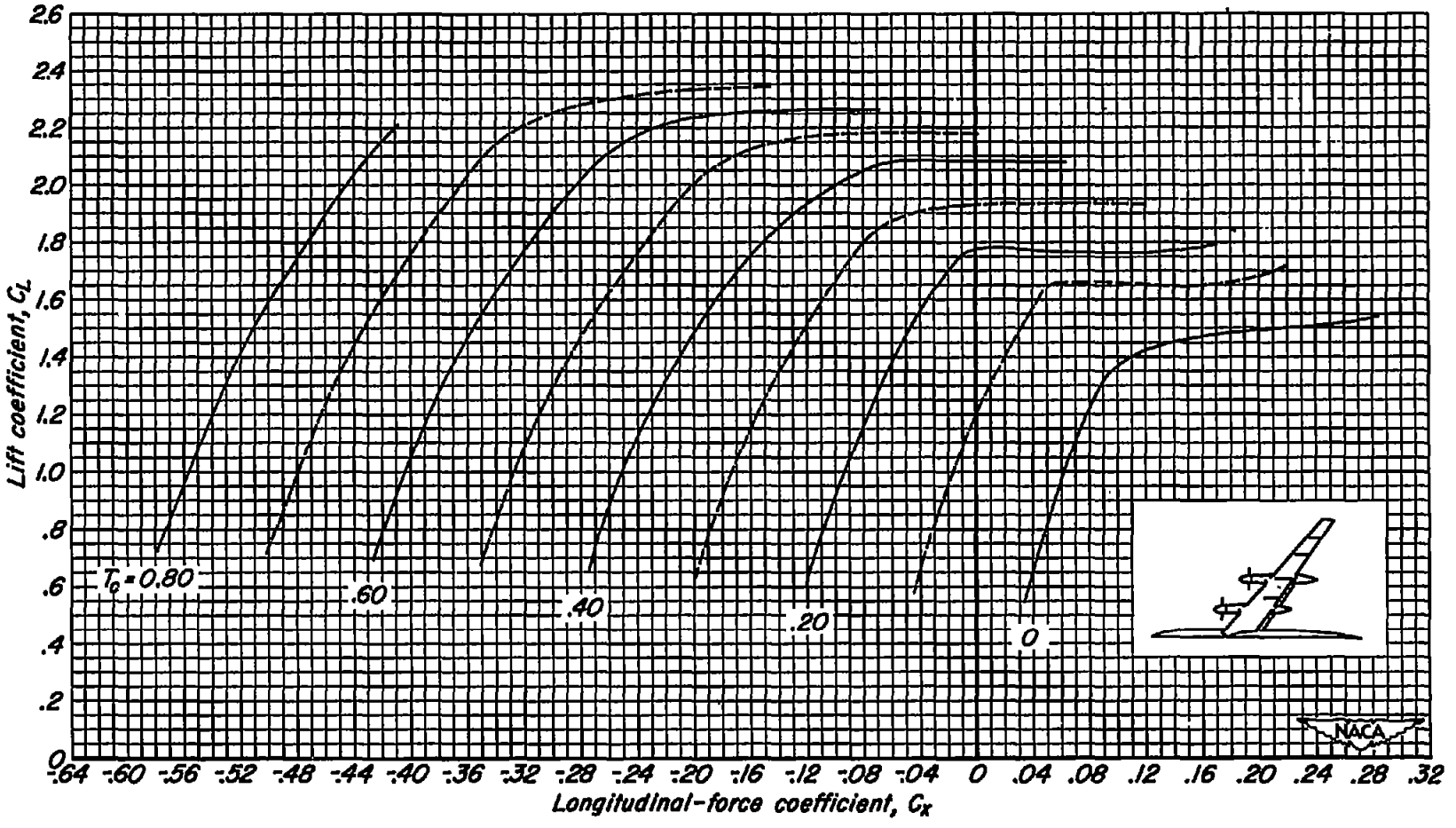
(b) C_L vs C_X

Figure 25.- Concluded.



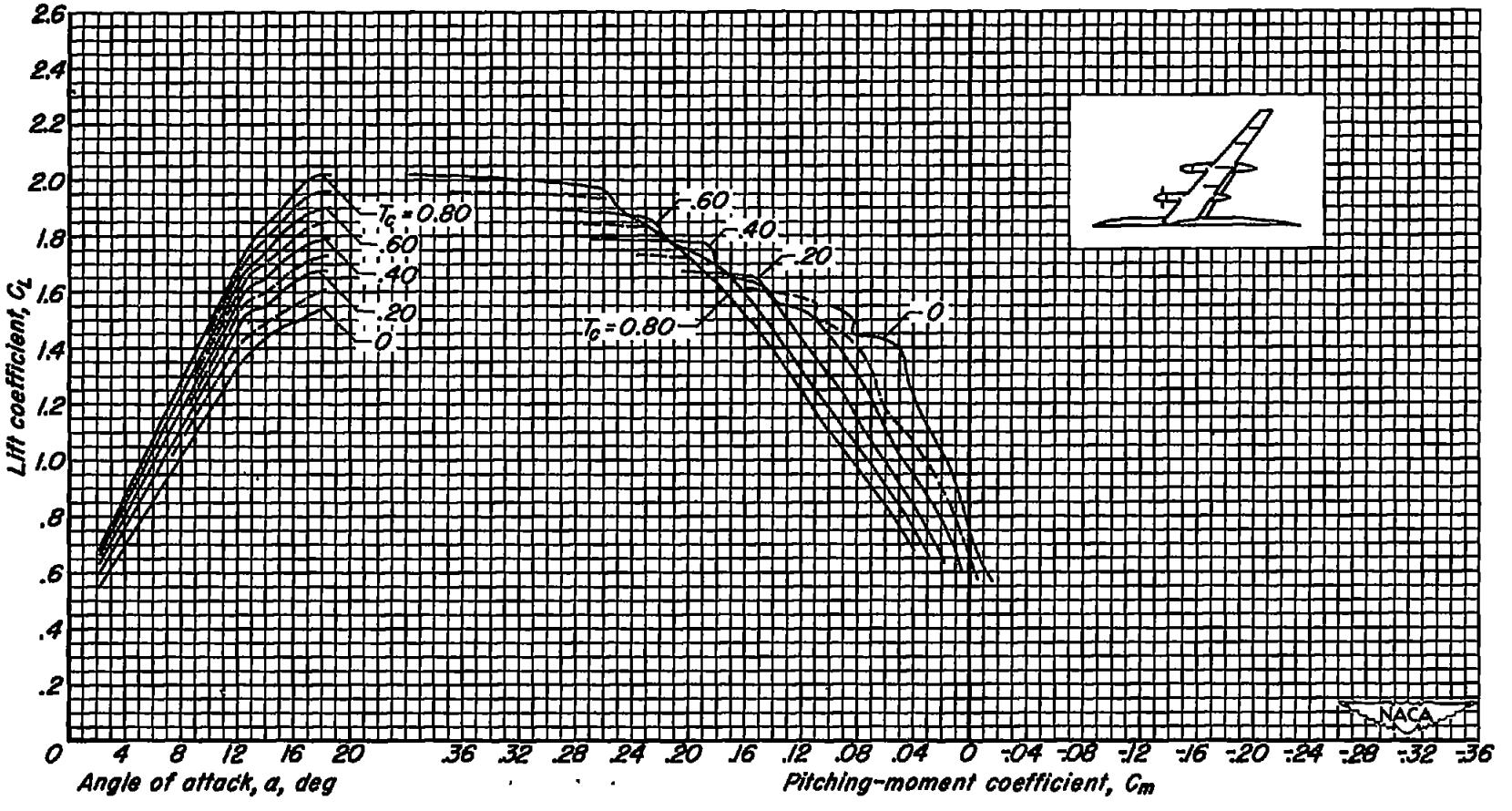
(a) C_L vs α and C_m

Figure 26.- The longitudinal characteristics of the model. Tail removed; inboard flaps deflected 30°; M = 0.082; R = 4,000,000; β = 26°.



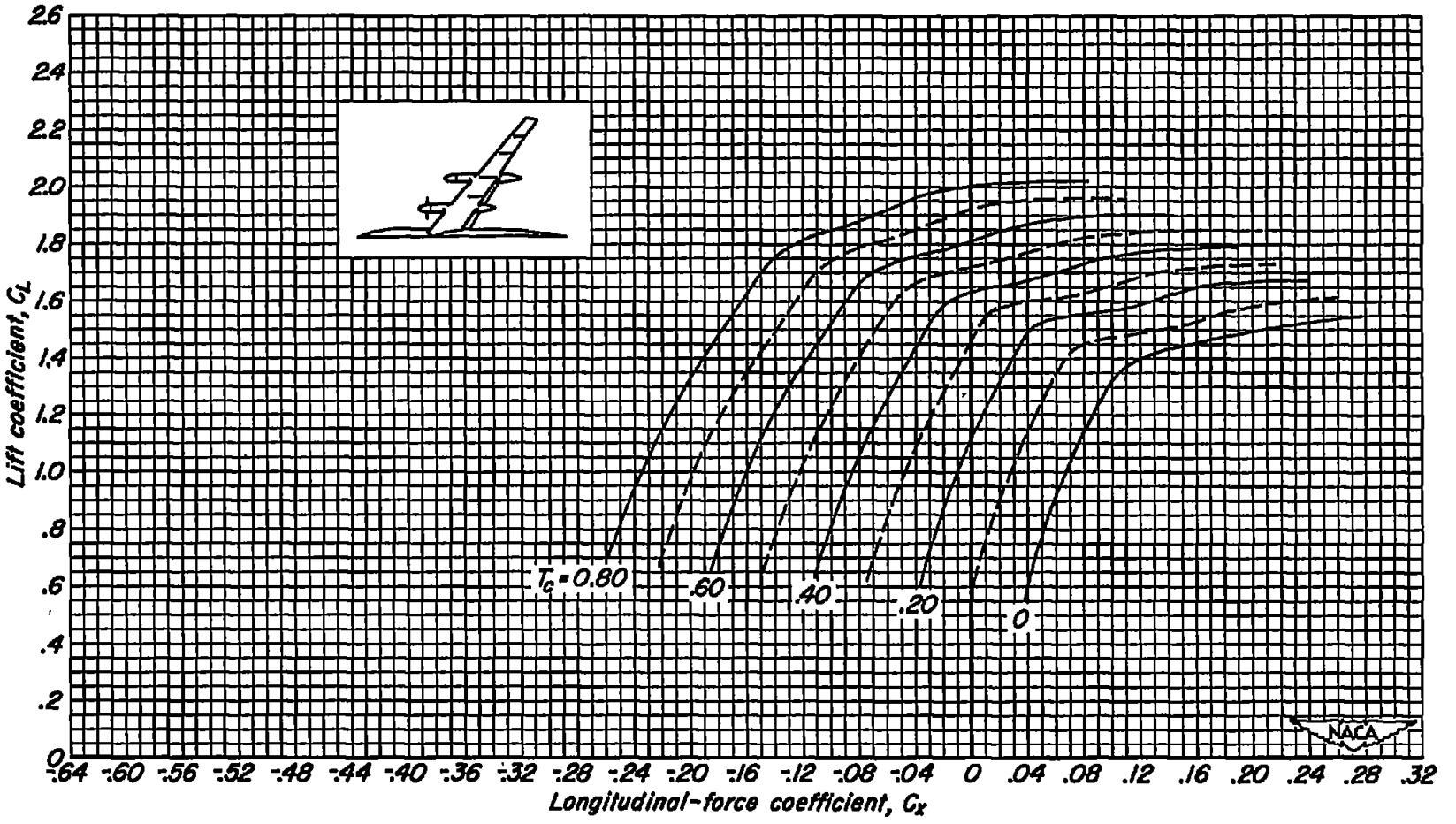
(b) C_L vs C_X

Figure 26.- Concluded.



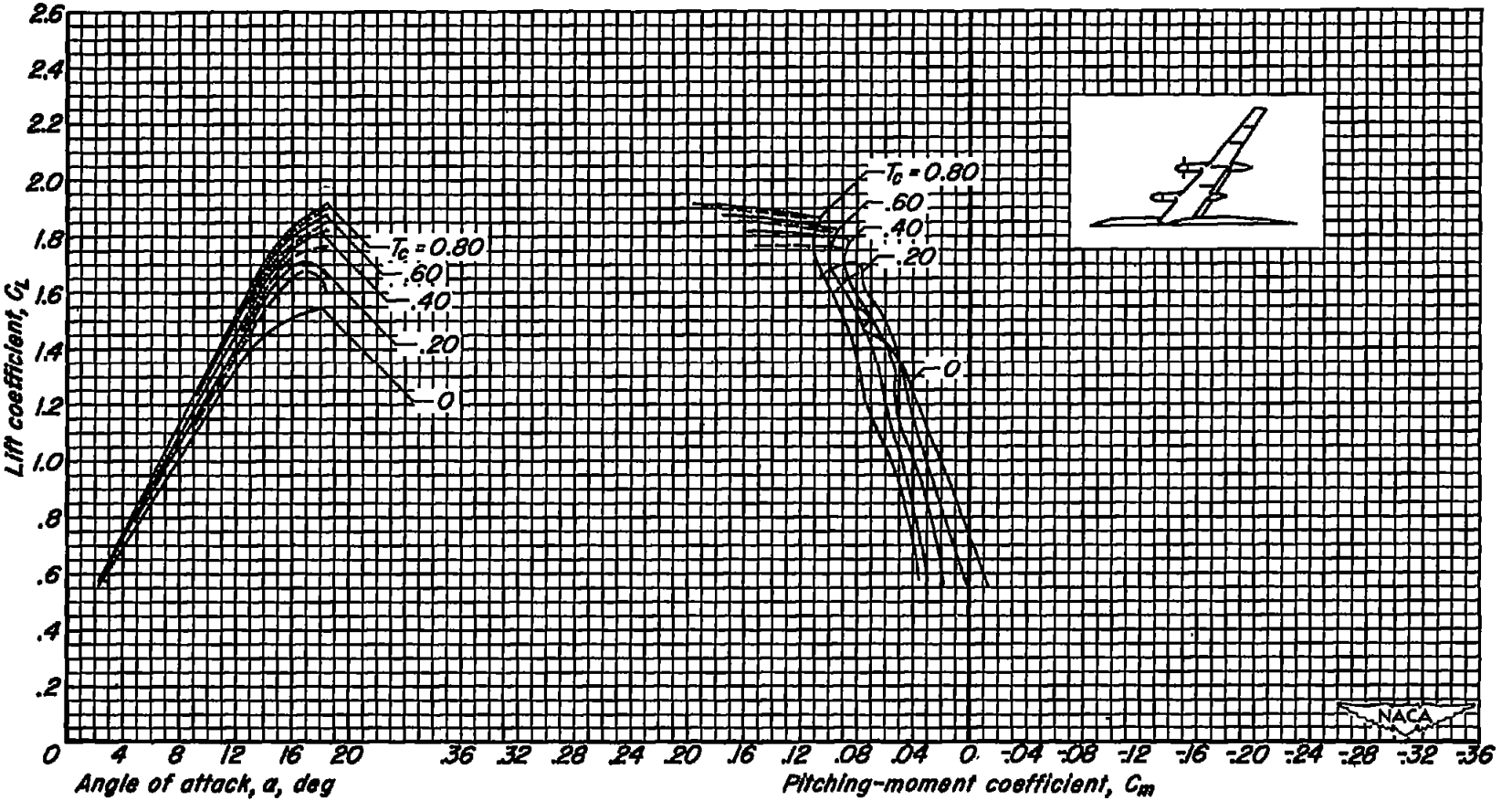
(a) C_L vs α and C_m

Figure 27.- The longitudinal characteristics of the model. Tail removed; inboard flaps deflected 30°; M = 0.082; R = 4,000,000; β = 26°; inboard propeller only.



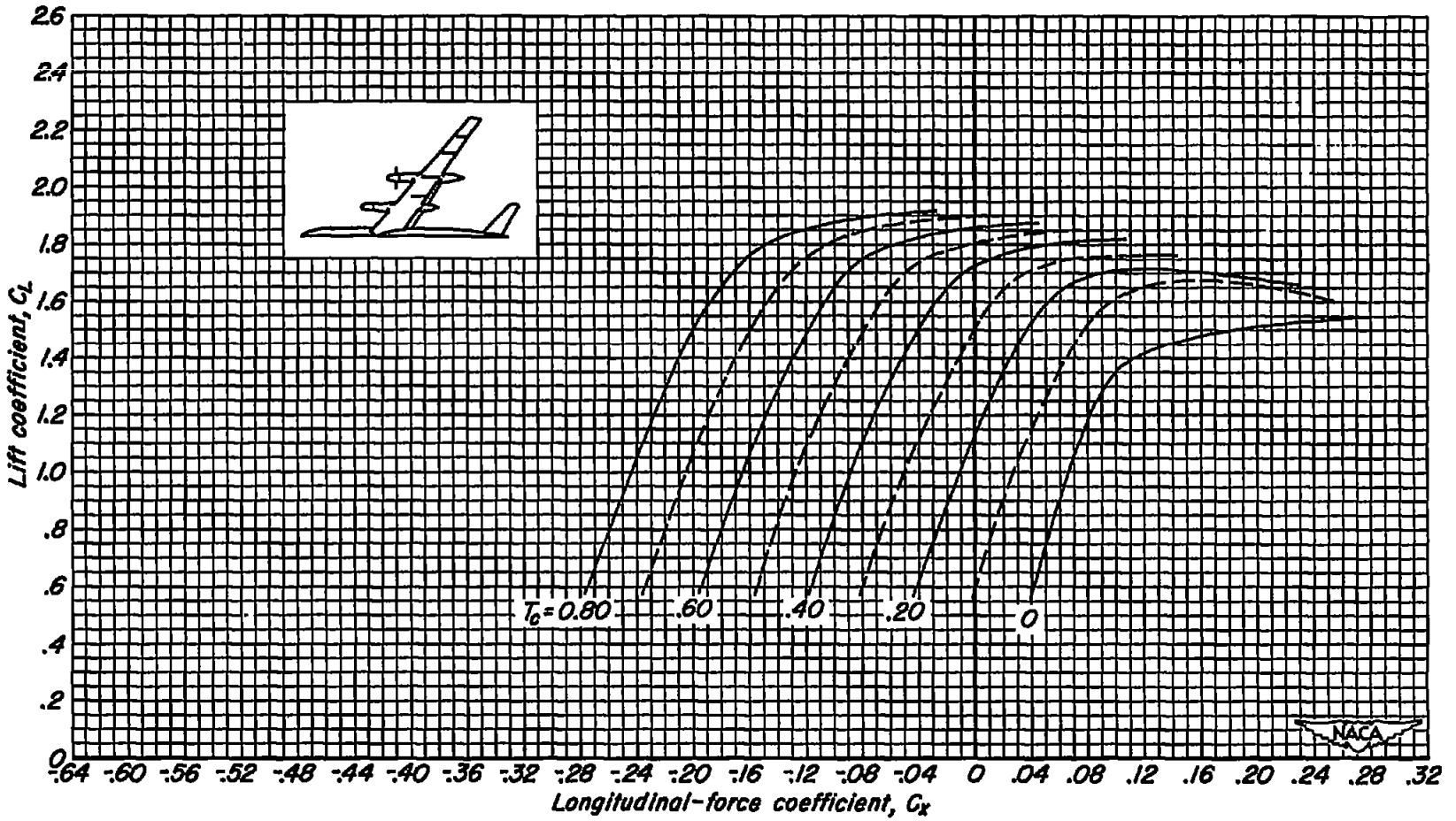
(b) C_L vs C_X

Figure 27.- Concluded.



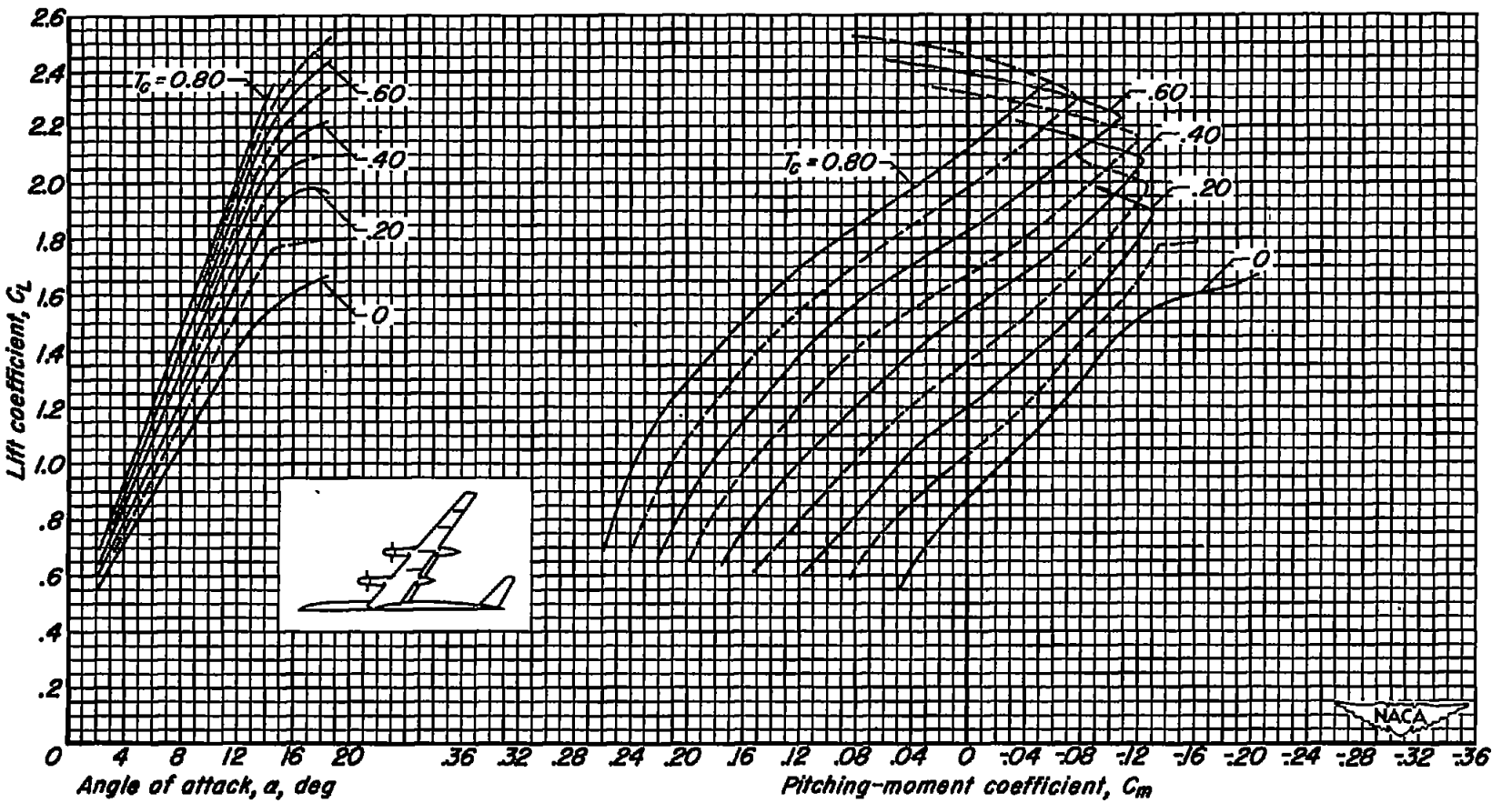
(a) C_L vs α and C_m

Figure 28.- The longitudinal characteristics of the model. Tail removed; inboard flaps deflected 30°; M = 0.082; R = 4,000,000; β = 26°; outboard propeller only.



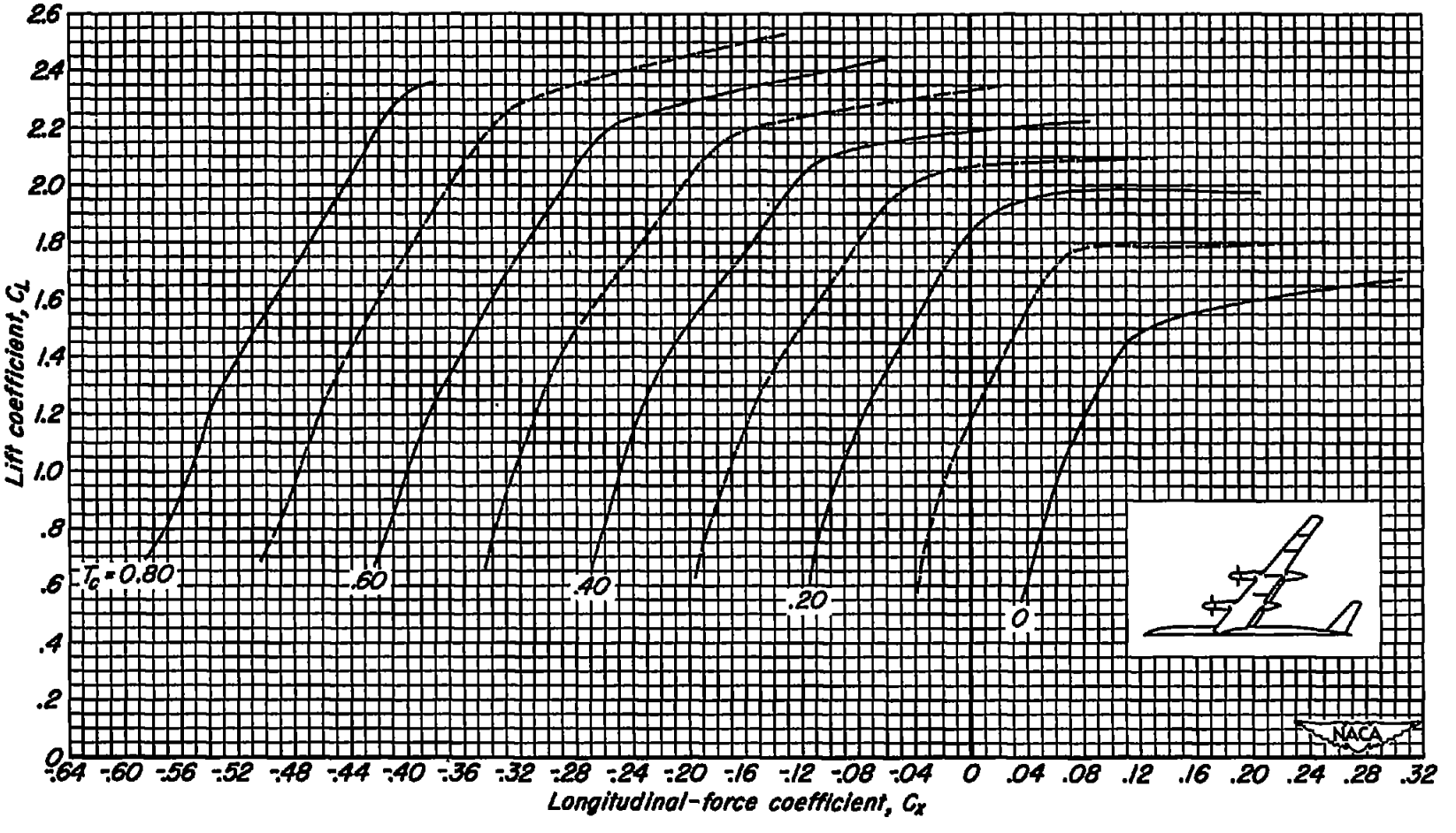
(b) C_L vs C_X

Figure 28.- Concluded.



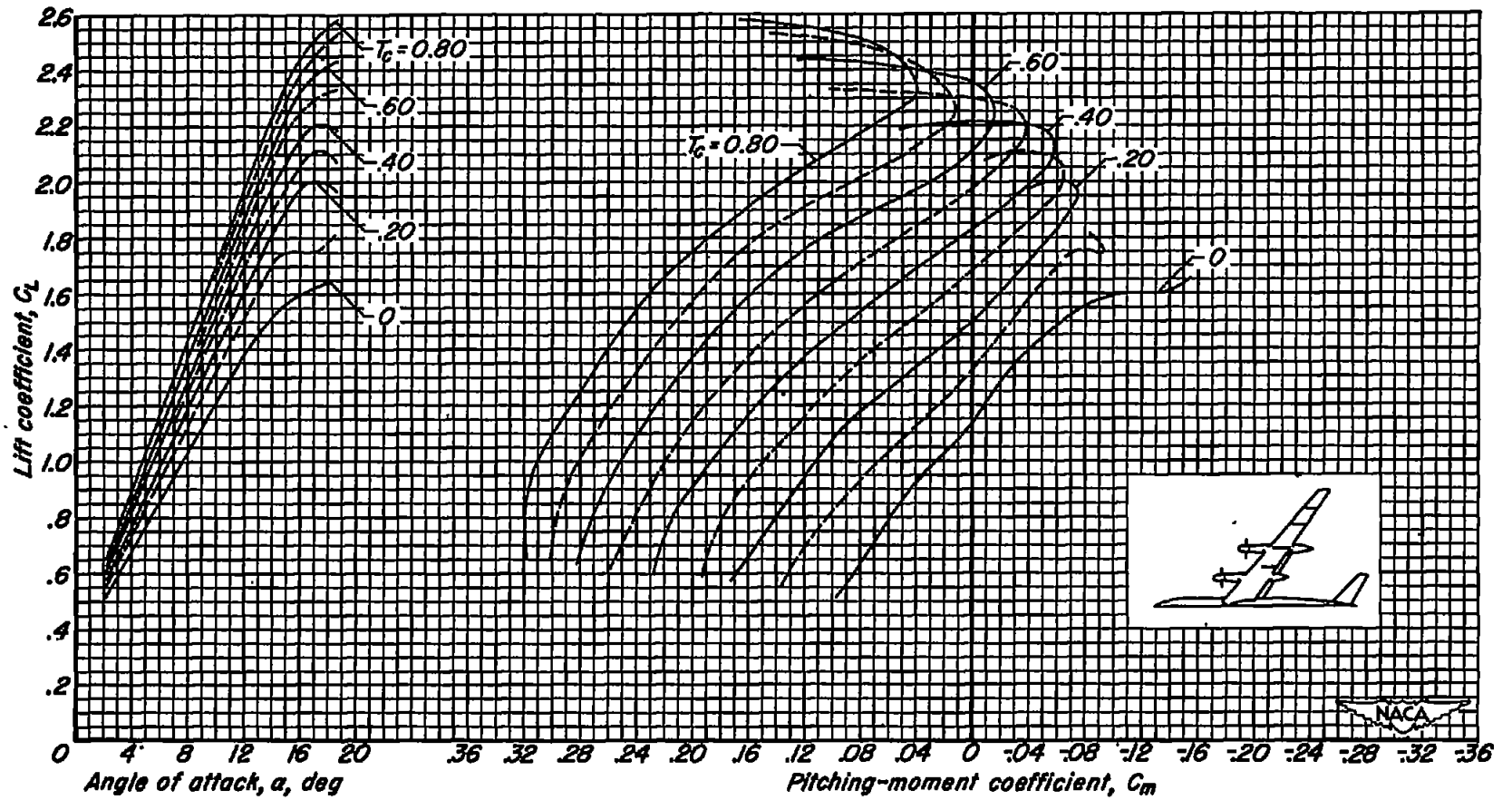
(a) C_L vs α and C_m

Figure 29.- The longitudinal characteristics of the model. Tail height = 0; inboard flaps deflected 30°; M = 0.082; R = 4,000,000; β = 26°; i_t = 0°.



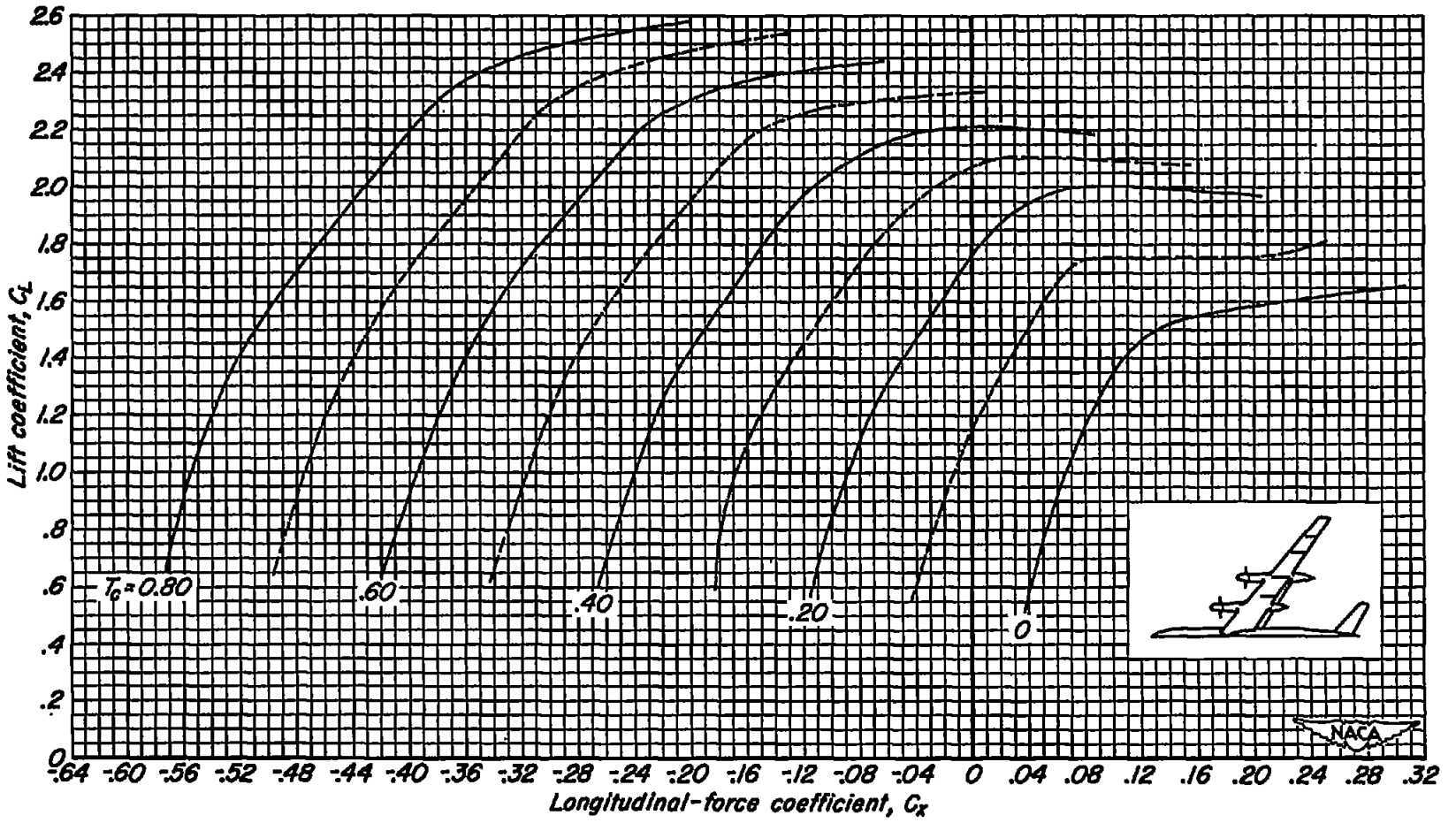
(b) C_L vs C_X

Figure 29.- Concluded.



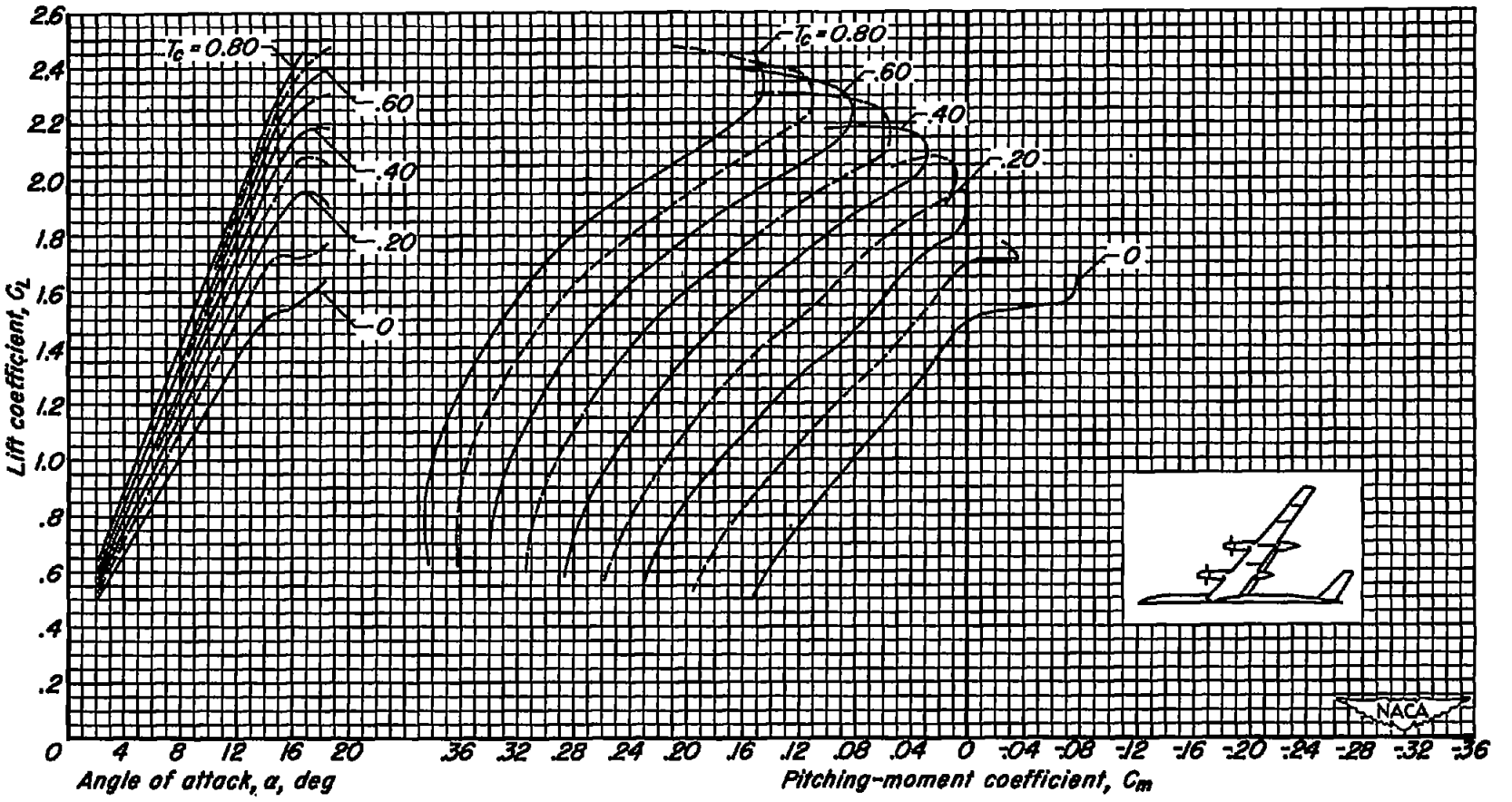
(a) C_L vs α and C_m

Figure 30.- The longitudinal characteristics of the model. Tail height = 0; inboard flaps deflected 30°; M = 0.082; R = 4,000,000; β = 26°; i_t = -2°.



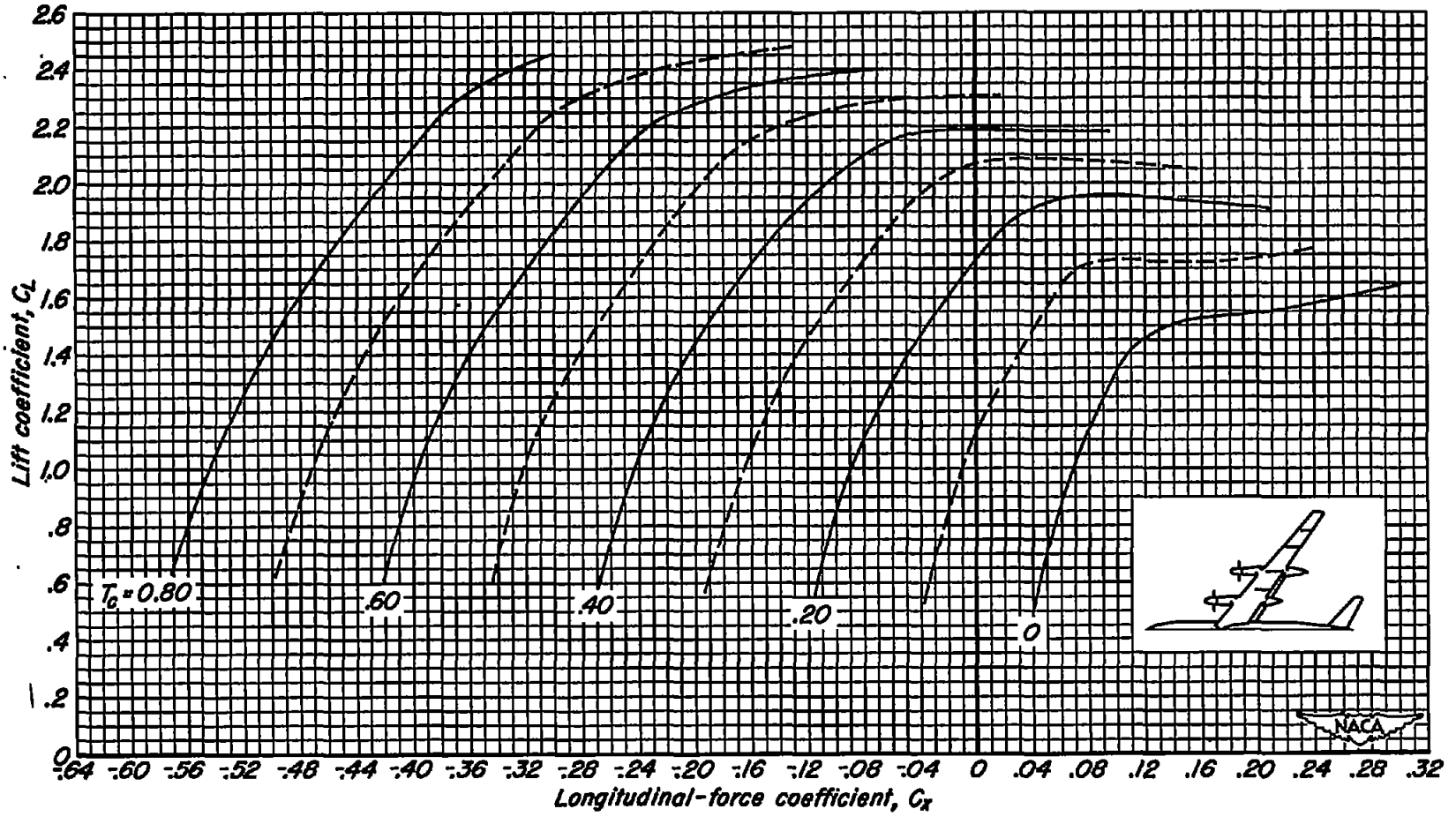
(b) C_L vs C_X

Figure 30.- Concluded.



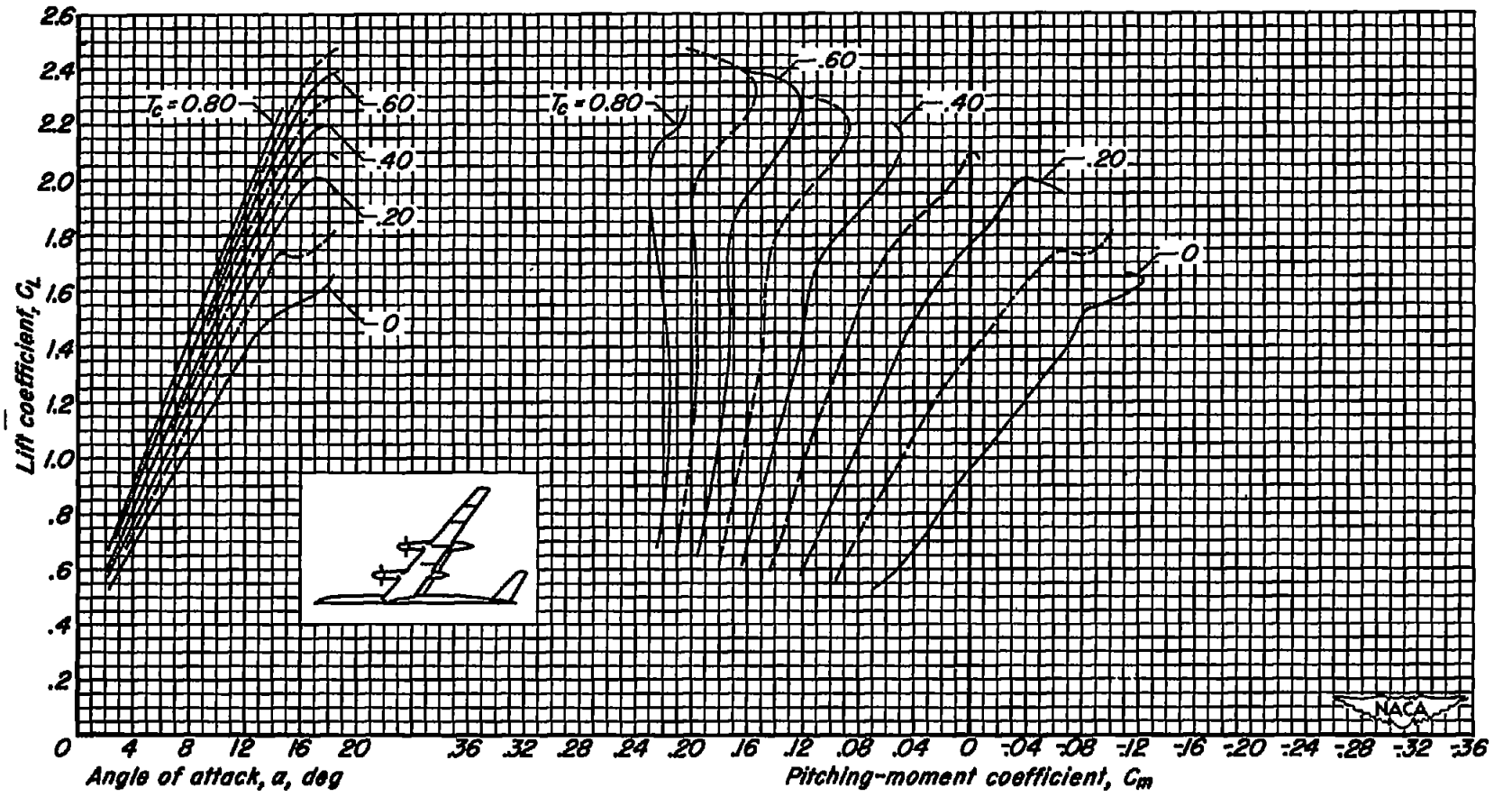
(a) C_L vs α and C_m

Figure 31.- The longitudinal characteristics of the model. Tail height = 0; inboard flaps deflected 30°; M = 0.082; R = 4,000,000; β = 26°; i_t = -4°.



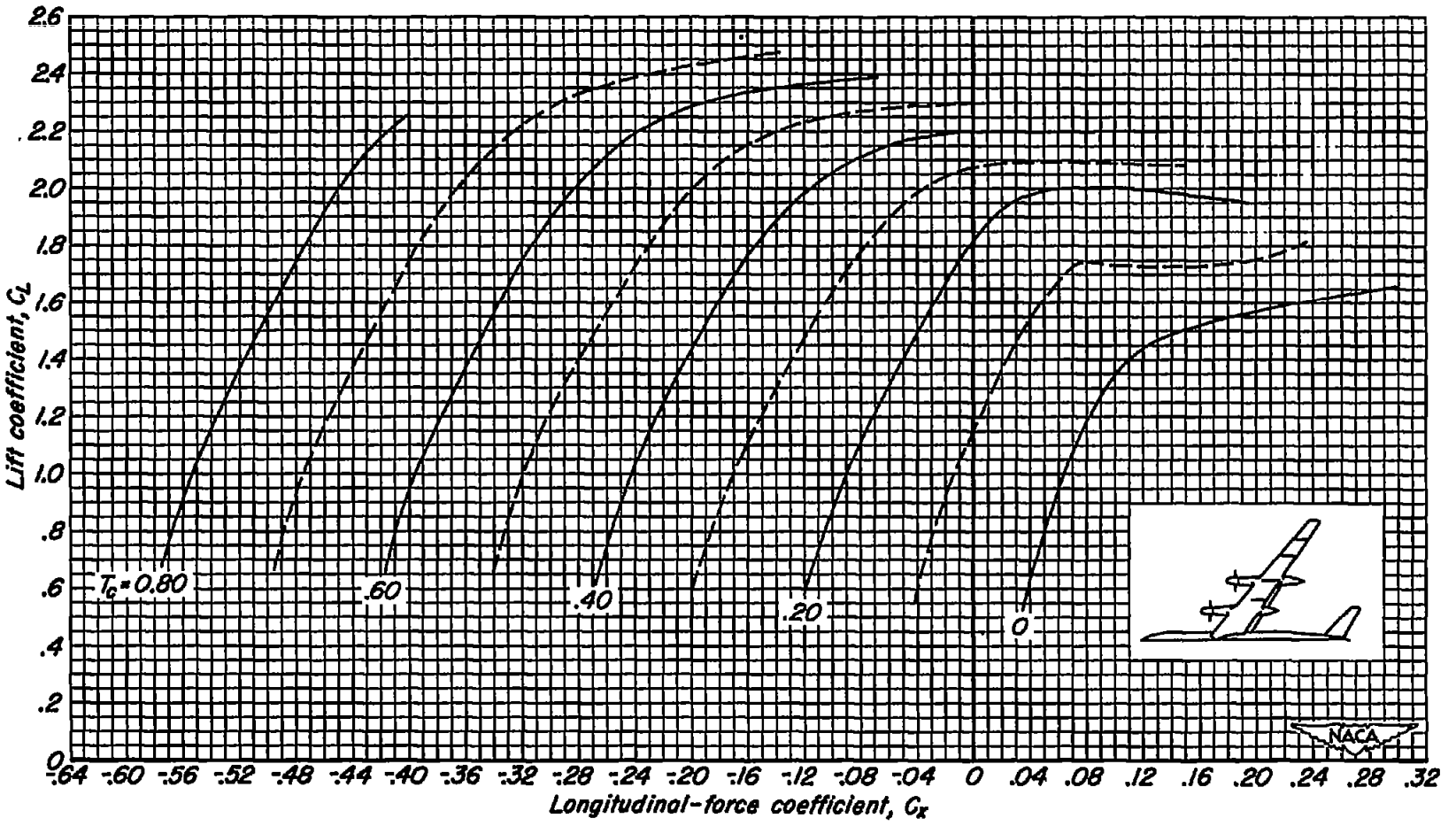
(b) C_L vs C_X

Figure 31.- Concluded.



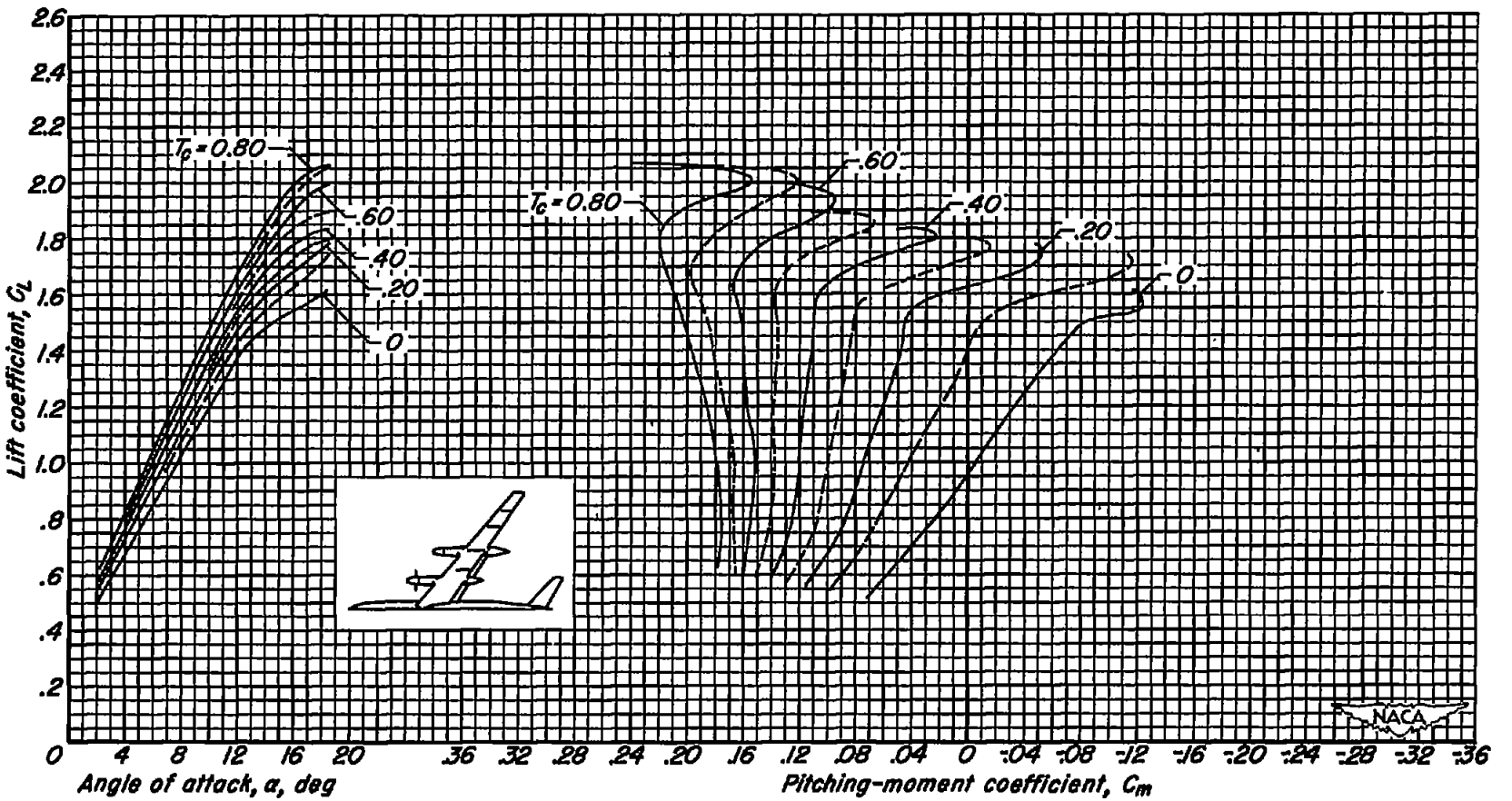
(a) C_L vs α and C_m

Figure 32.- The longitudinal characteristics of the model. Tail height = 0.10 b/2; inboard flaps deflected 30°; M = 0.082; R = 4,000,000; β = 26°; i_t = 0°.



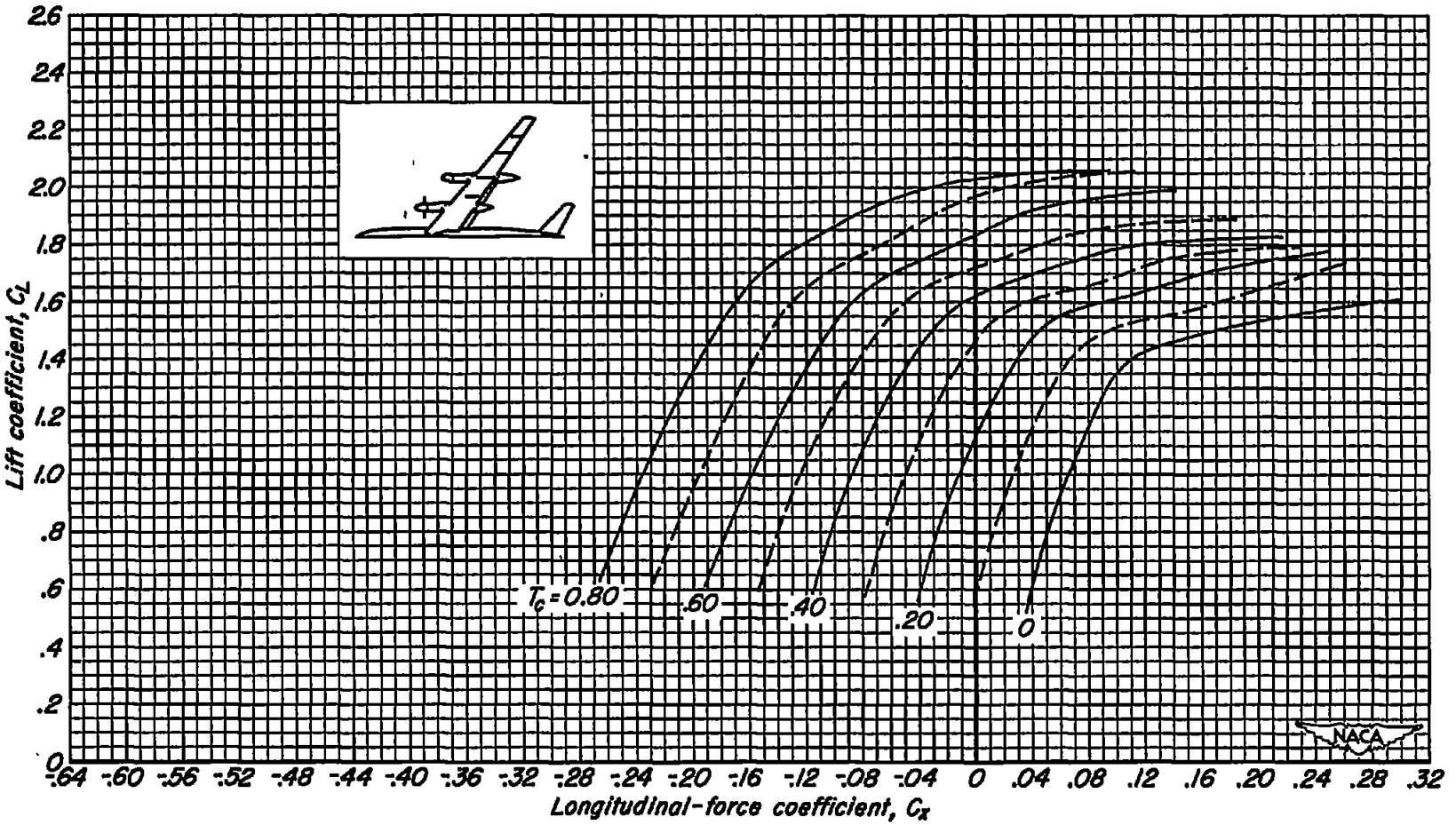
(b) C_L vs C_X

Figure 32.- Concluded.



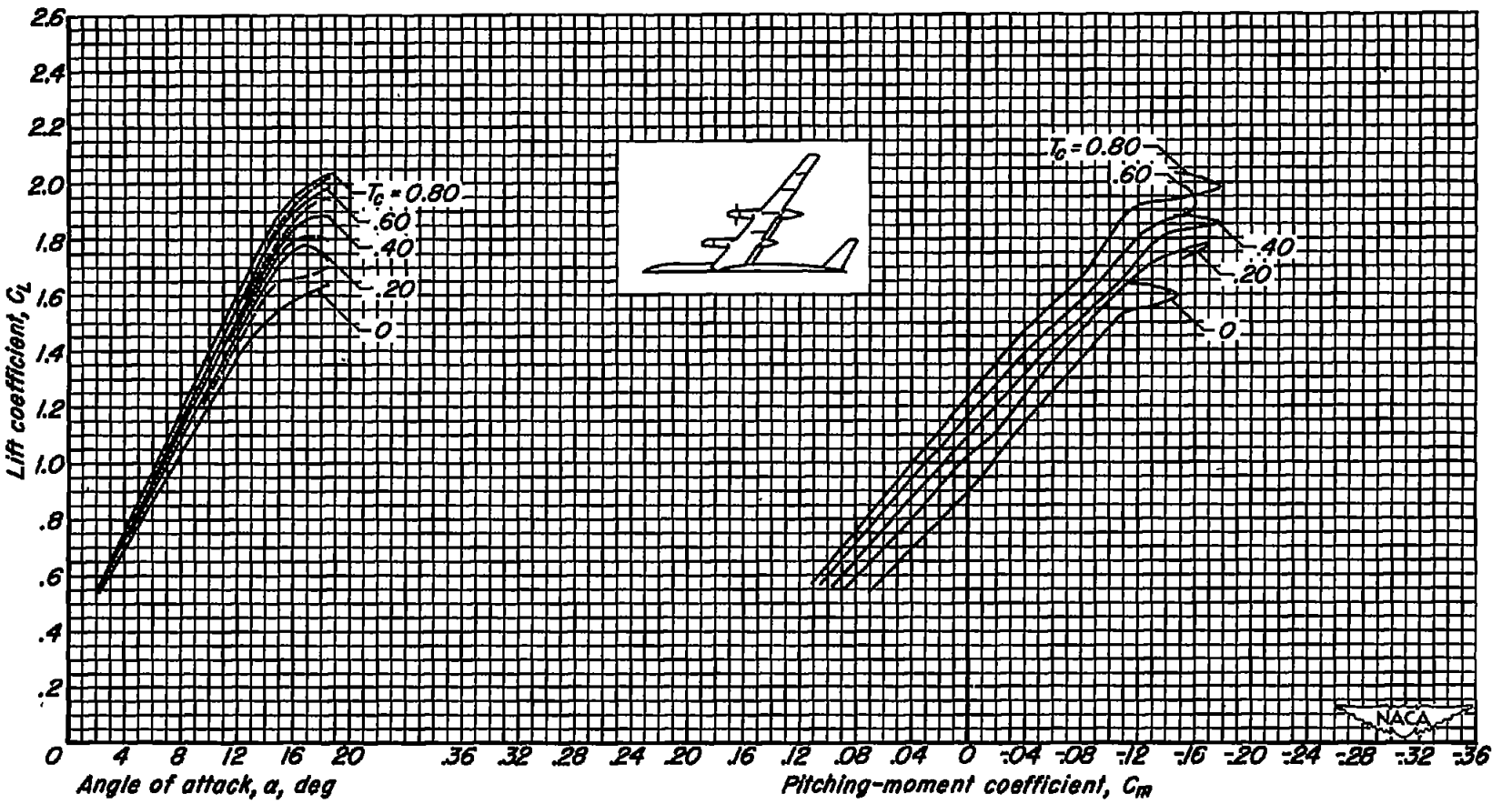
(a) C_L vs α and C_m

Figure 33.- The longitudinal characteristics of the model. Tail height = 0.10 b/2; inboard flaps deflected 30°; M = 0.082; R = 4,000,000; β = 26°; i_t = 0°; inboard propeller only.



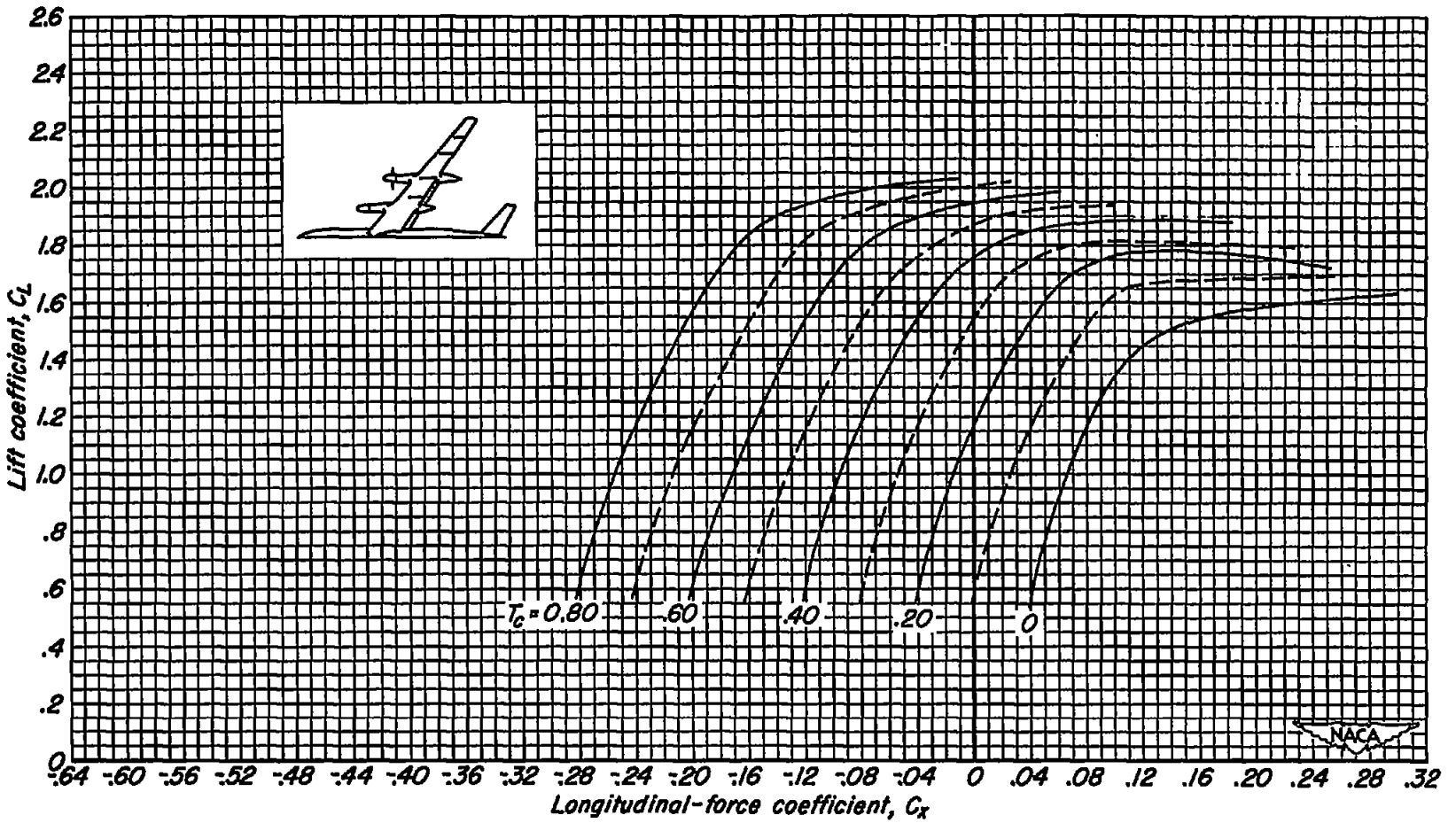
(b) C_L vs C_X

Figure 33.- Concluded.



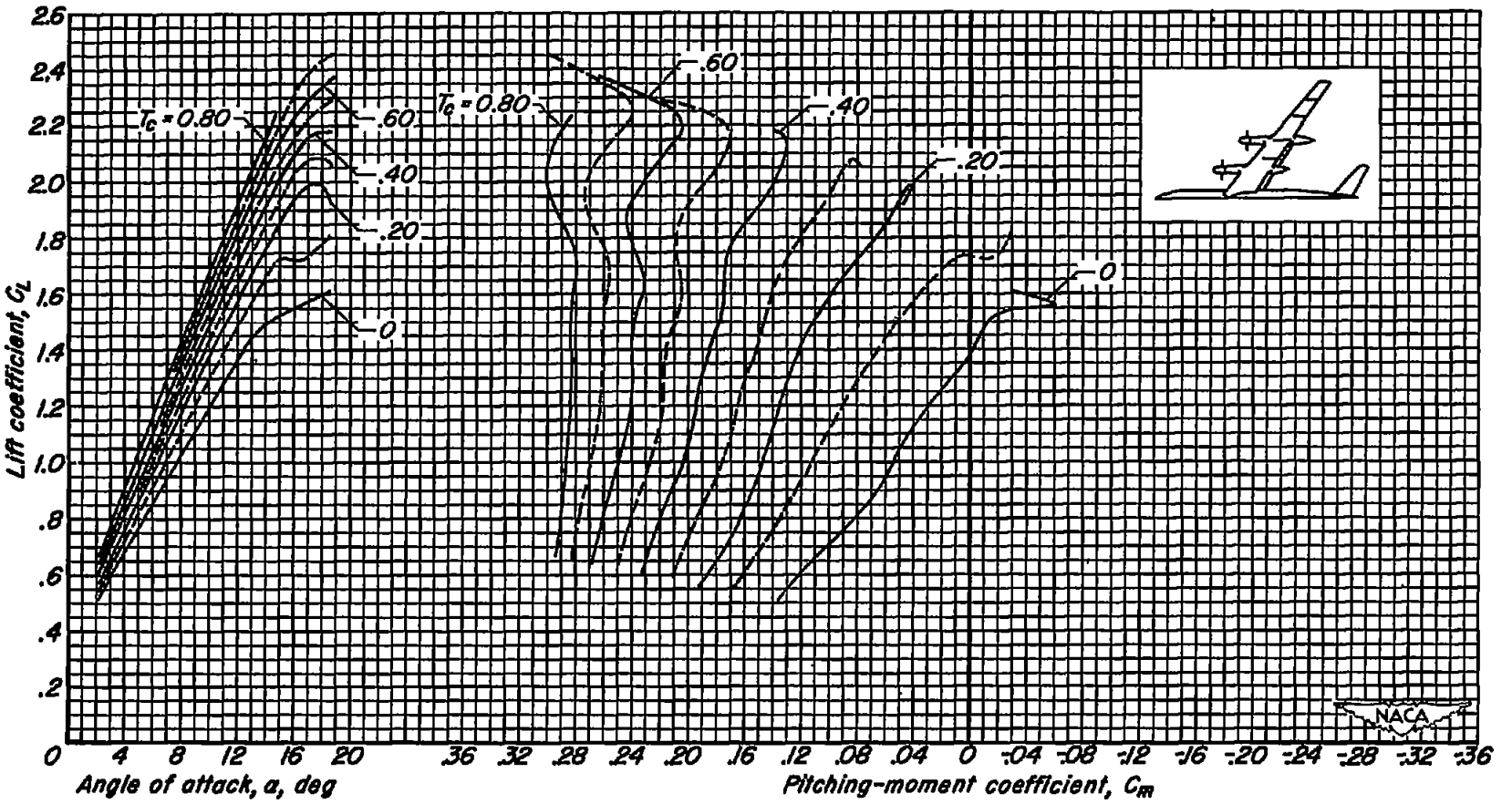
(a) C_L vs α and C_m

Figure 34.- The longitudinal characteristics of the model. Tail height = 0.10 b/2; inboard flaps deflected 30°; M = 0.082; R = 4,000,000; β = 26°; i_t = 0°; outboard propeller only.



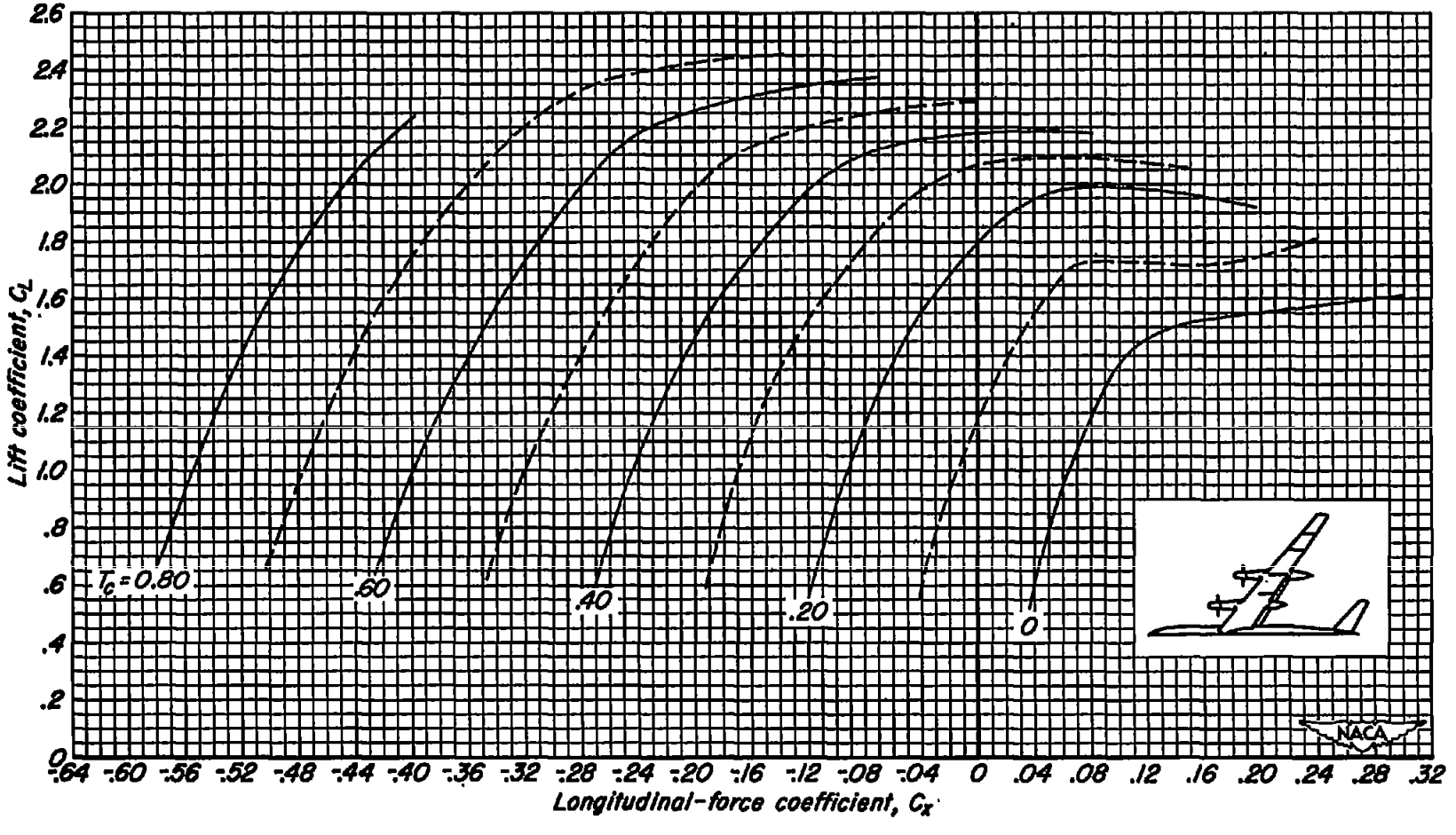
(b) C_L vs C_X

Figure 34.- Concluded.



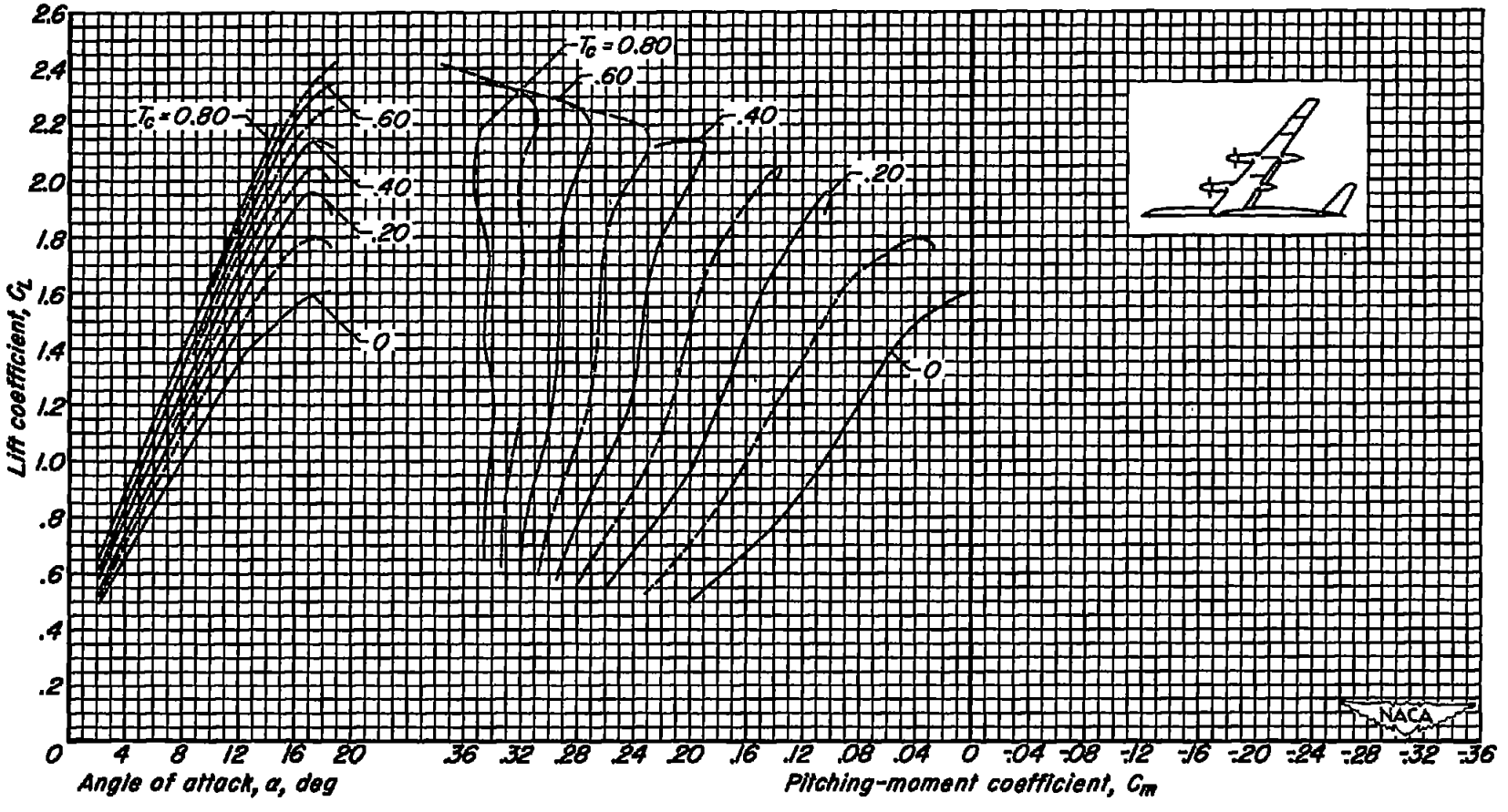
(a) C_L vs α and C_m

Figure 35.- The longitudinal characteristics of the model. Tail height = 0.10 b/2; inboard flaps deflected 30°; M = 0.082; R = 4,000,000; β = 26°; i_t = -2°.



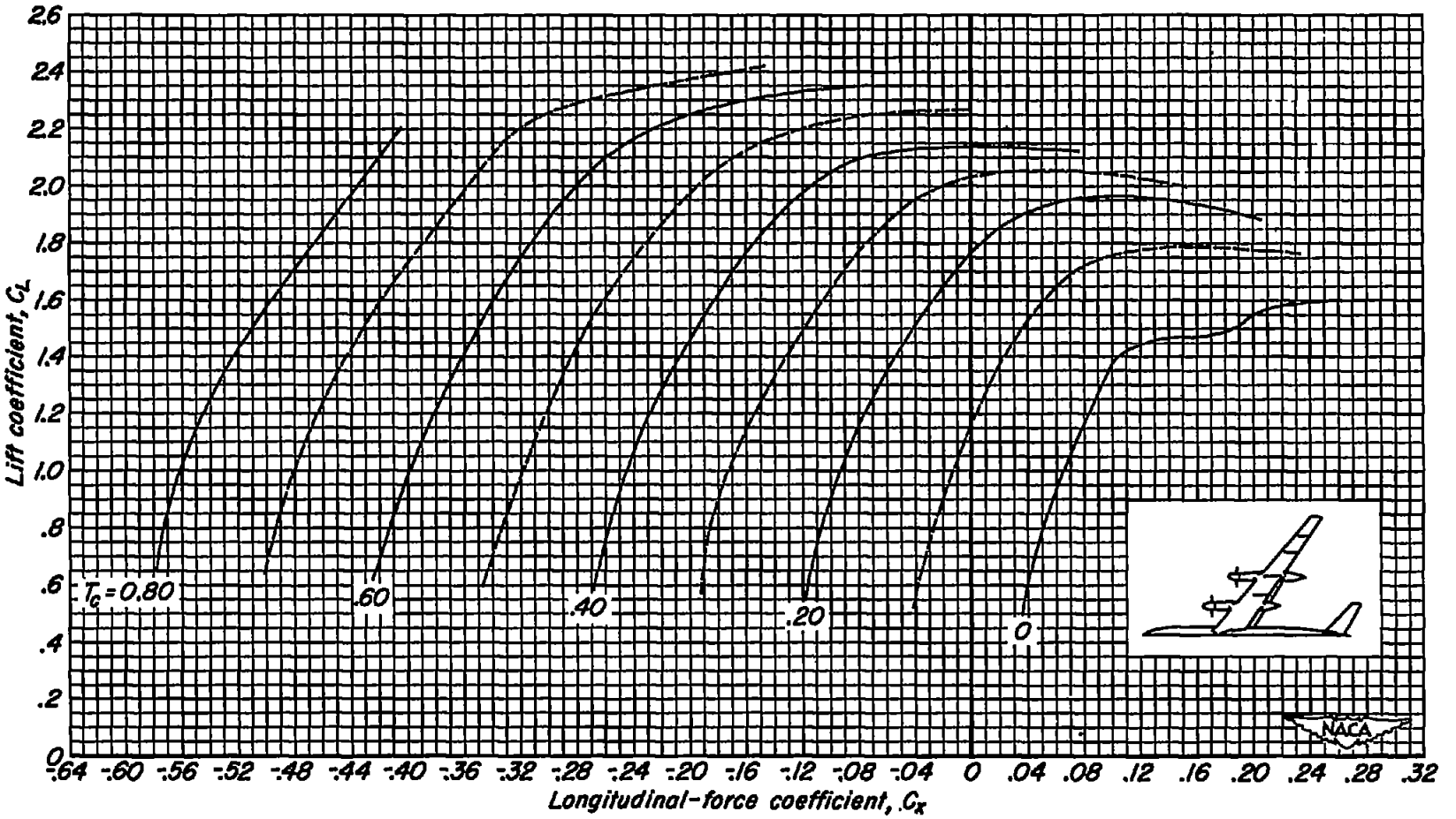
(b) C_L vs C_X

Figure 35.- Concluded.



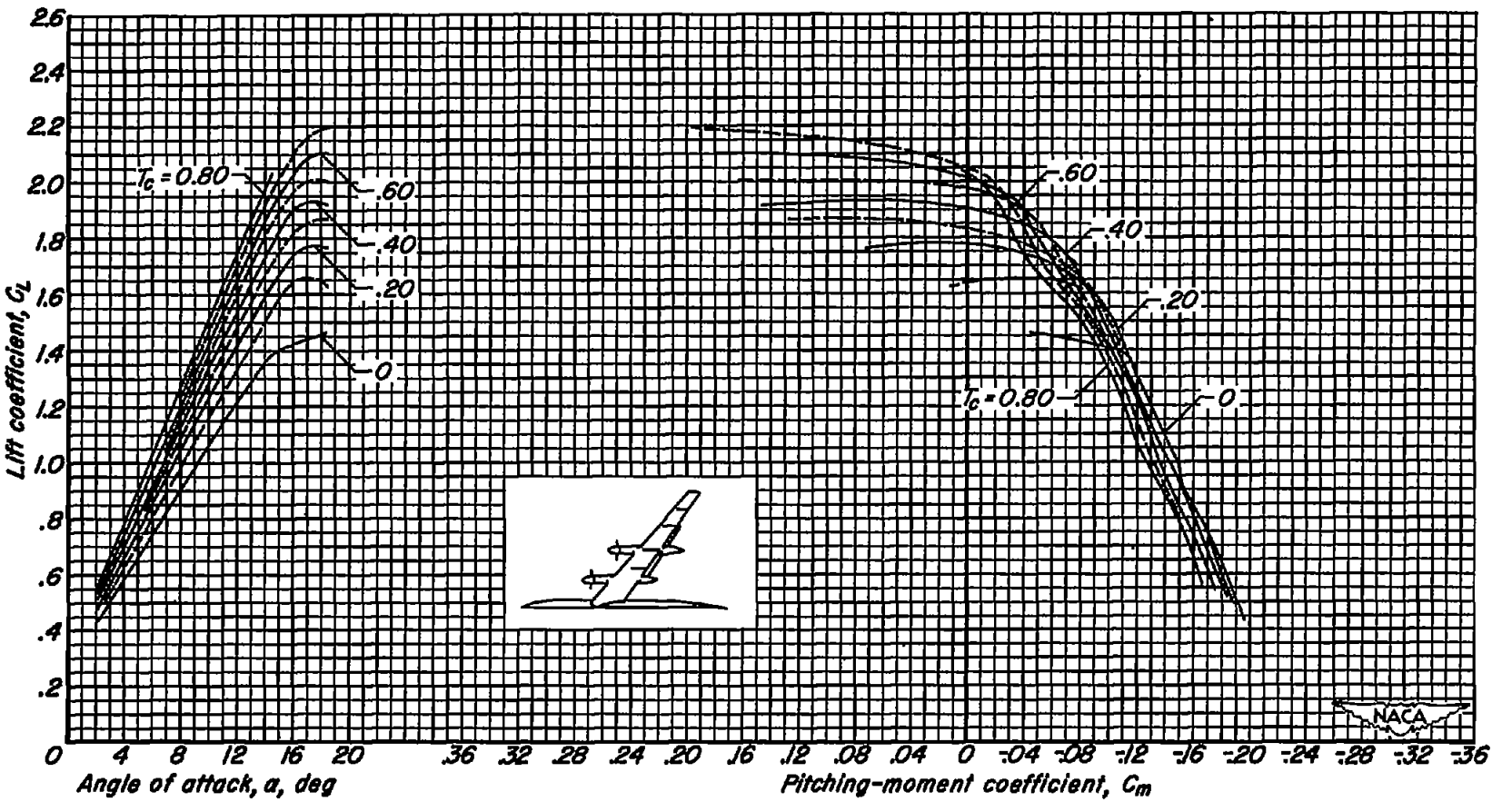
(a) C_L vs α and C_m

Figure 36.- The longitudinal characteristics of the model. Tail height 0.10 b/2; inboard flaps deflected 30°; M = 0.082; R = 4,000,000; β = 26°; i_t = -4°.



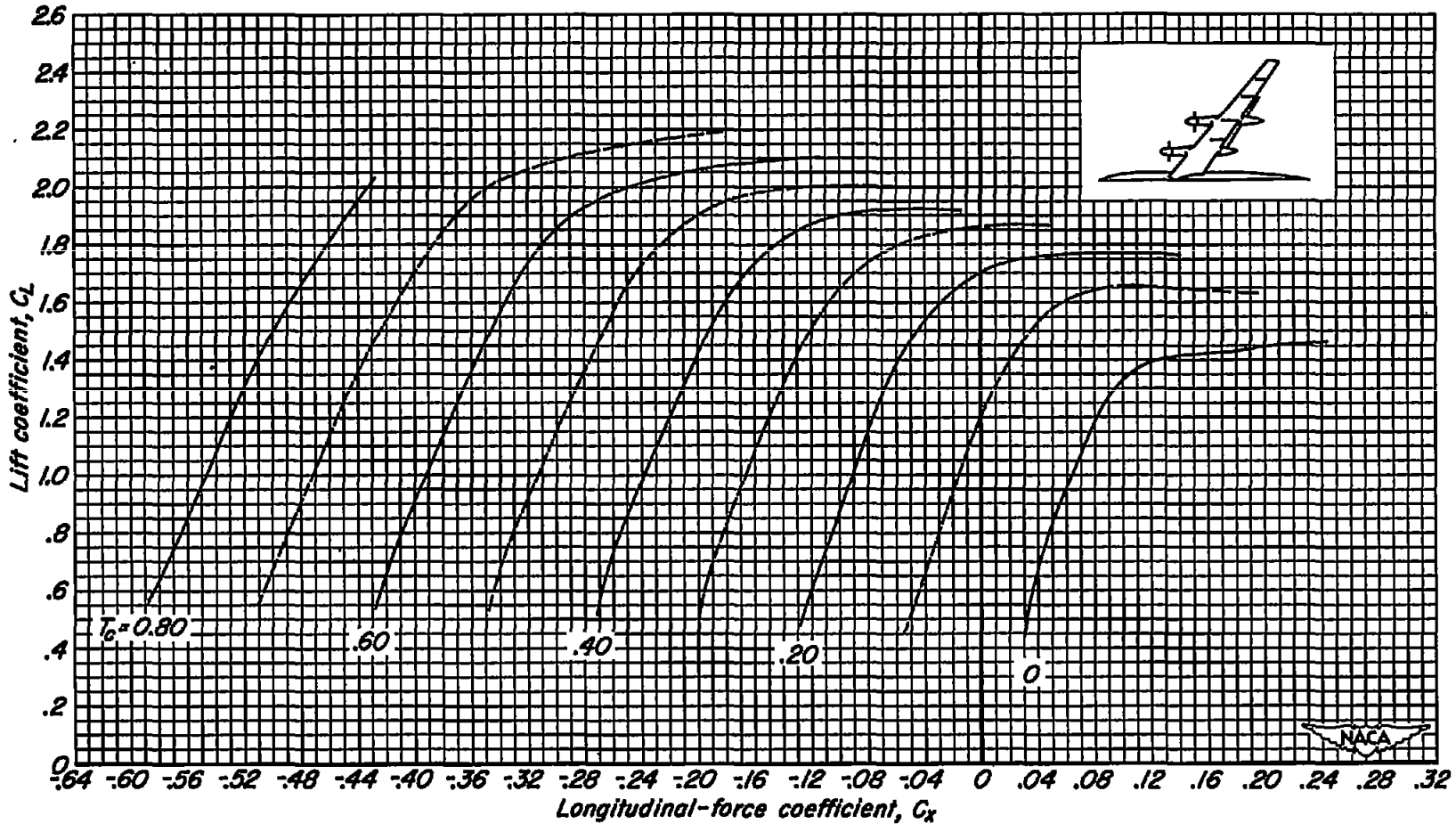
(b) C_L vs C_X

Figure 36.- Concluded.



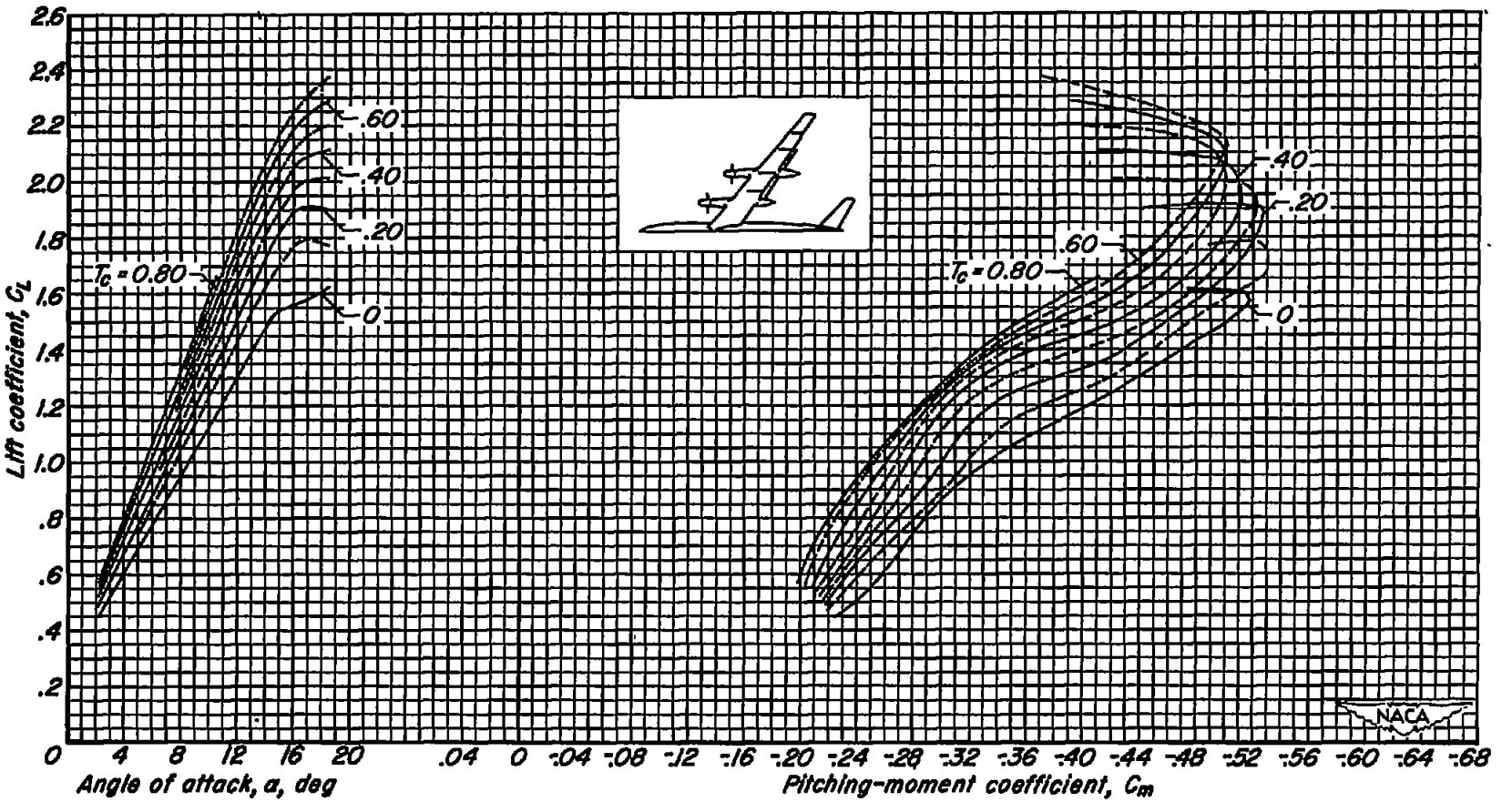
(a) C_L vs α and C_m

Figure 37.- The longitudinal characteristics of the model. Tail removed; outboard flaps deflected 30°; M = 0.082; R = 4,000,000; β = 26°.



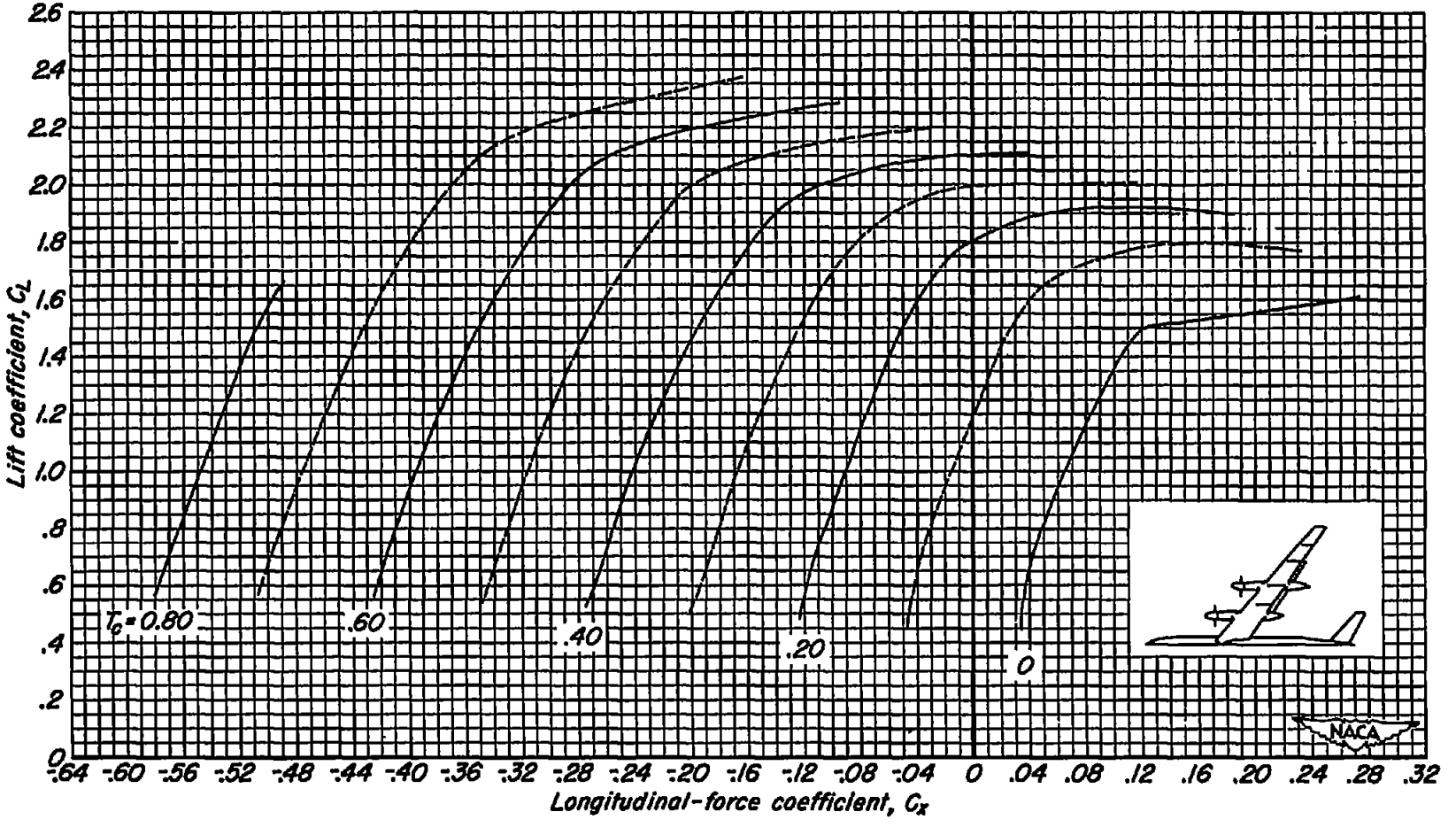
(b) C_L vs C_X

Figure 37.- Concluded.



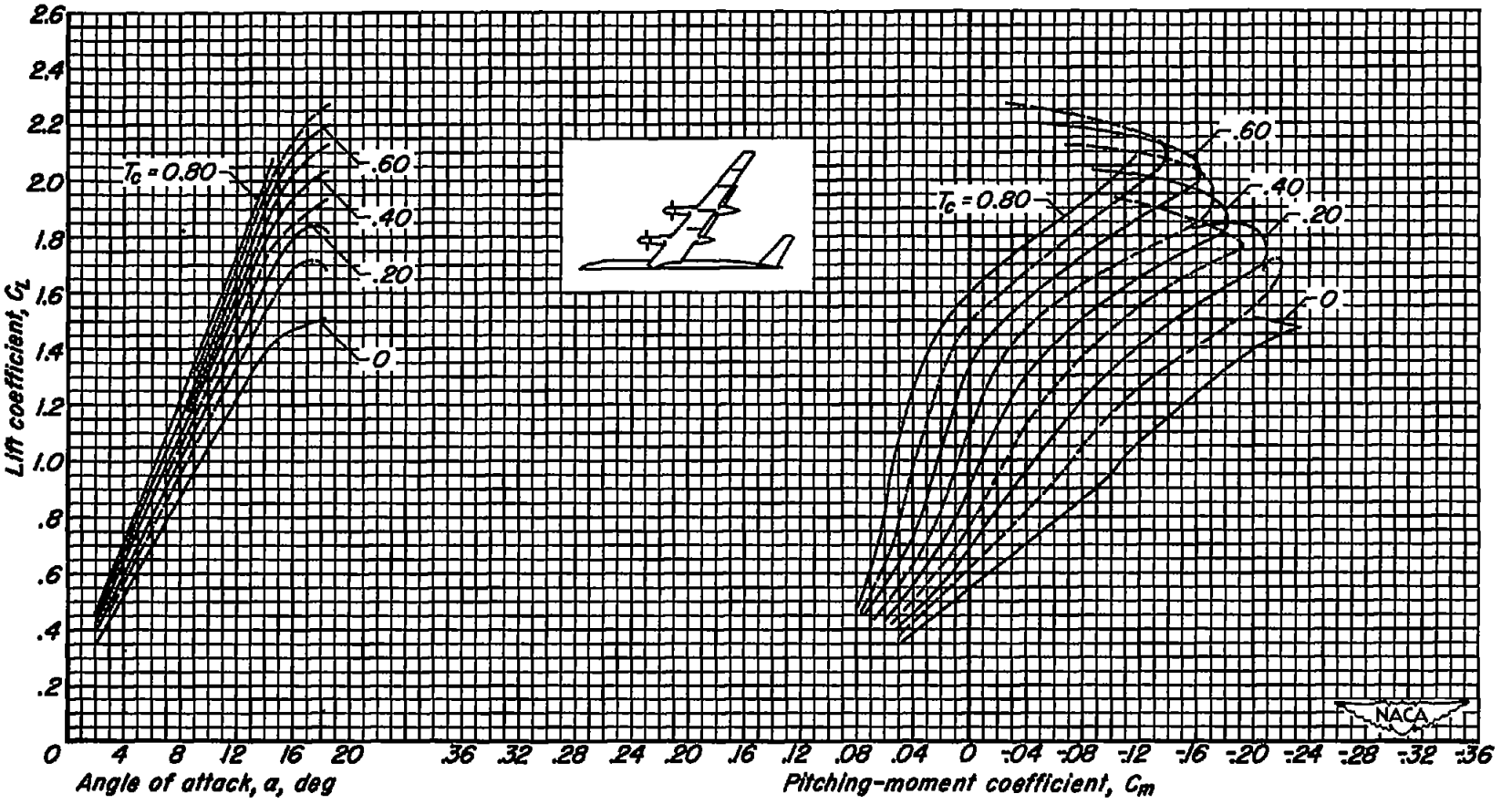
(a) C_L vs α and C_m

Figure 38.- The longitudinal characteristics of the model. Tail height = 0.10 b/2; outboard flaps deflected 30°; M = 0.082; R = 4,000,000; β = 26°; i_t = 0°.



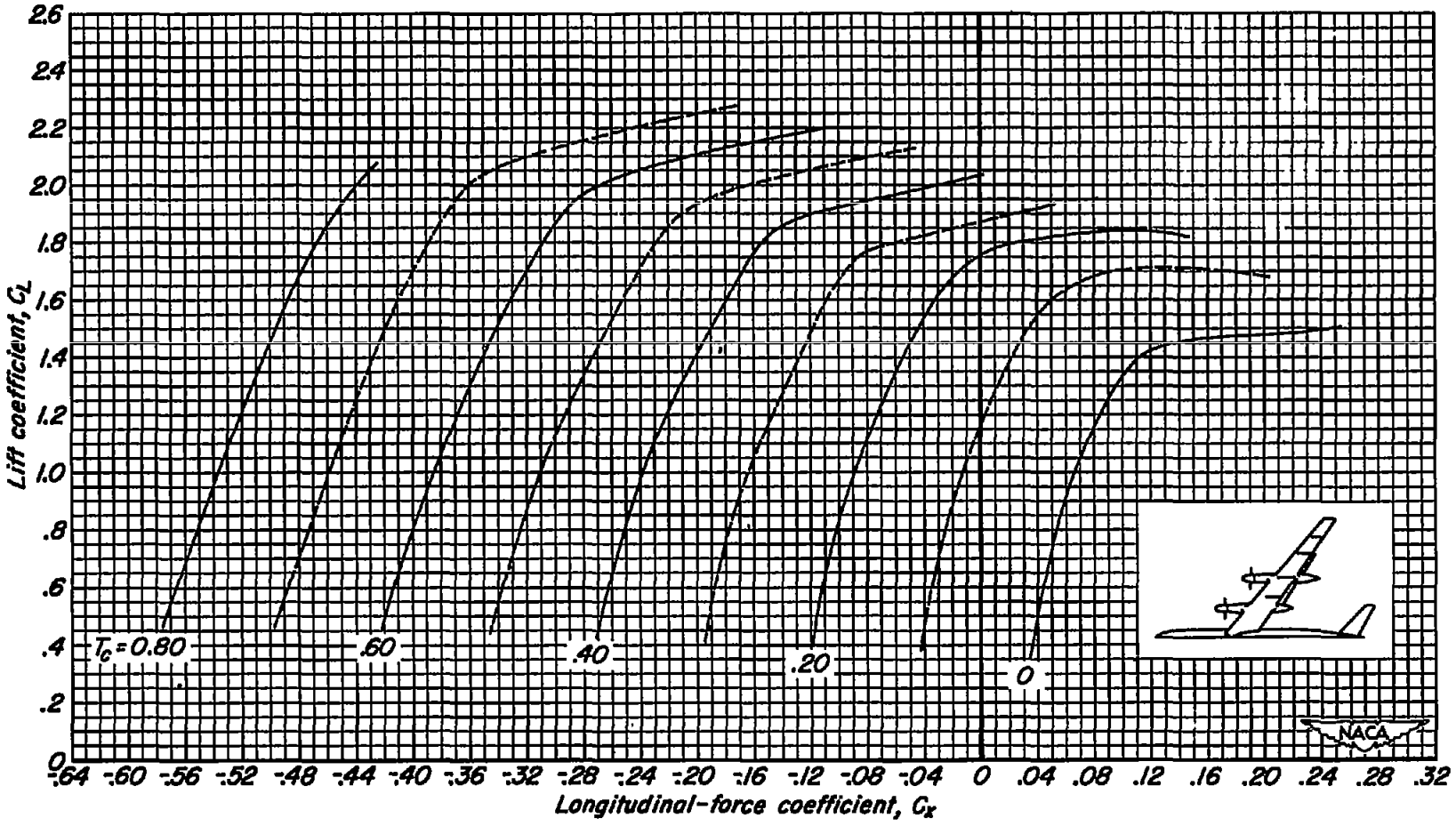
(b) C_L vs C_X

Figure 38.- Concluded.

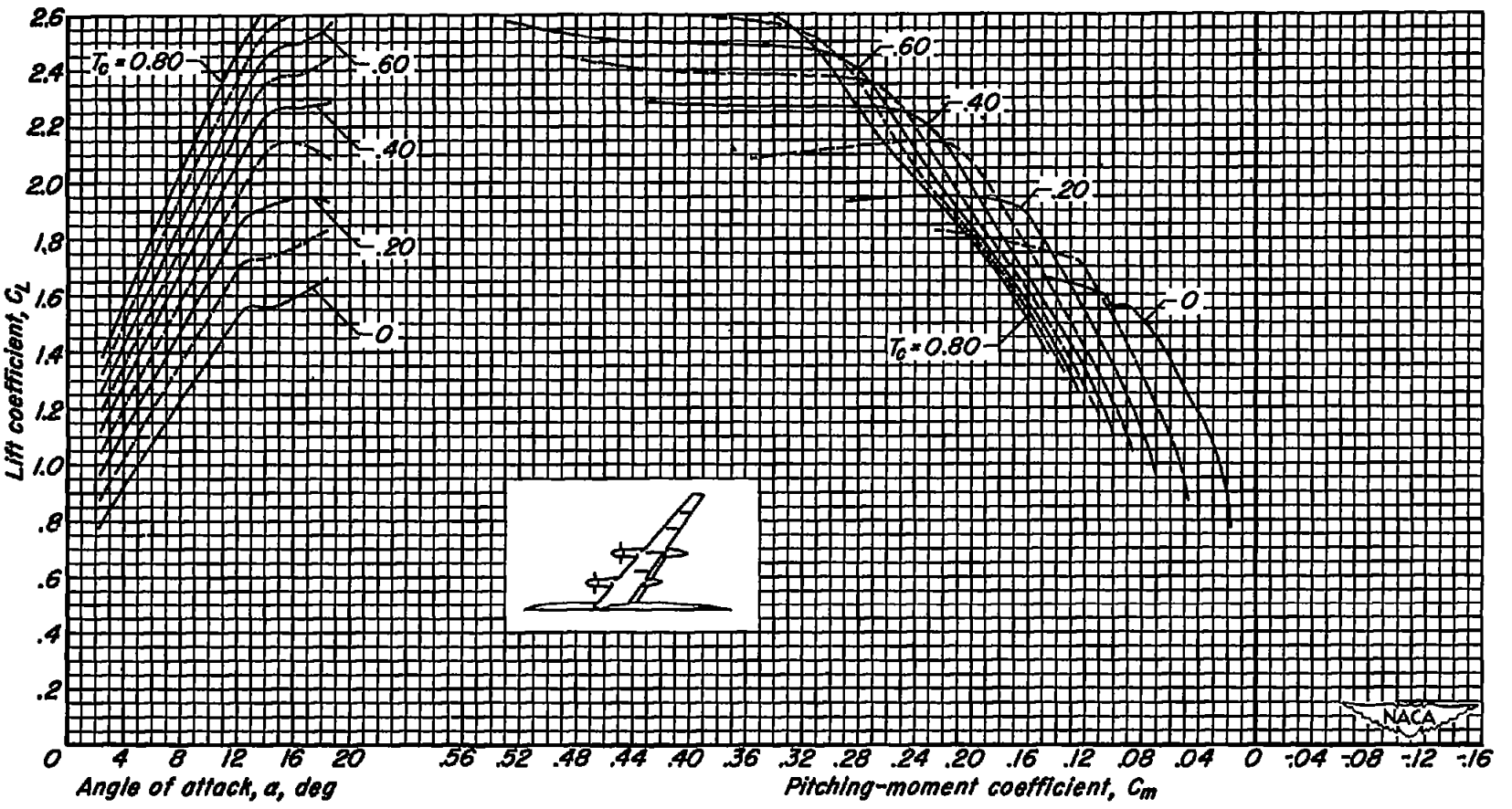


(a) C_L vs α and C_m

Figure 39.- The longitudinal characteristics of the model. Tail height = 0.10 b/2; outboard flaps deflected 30°; M = 0.082; R = 4,000,000; β = 26°; i_t = -8°.

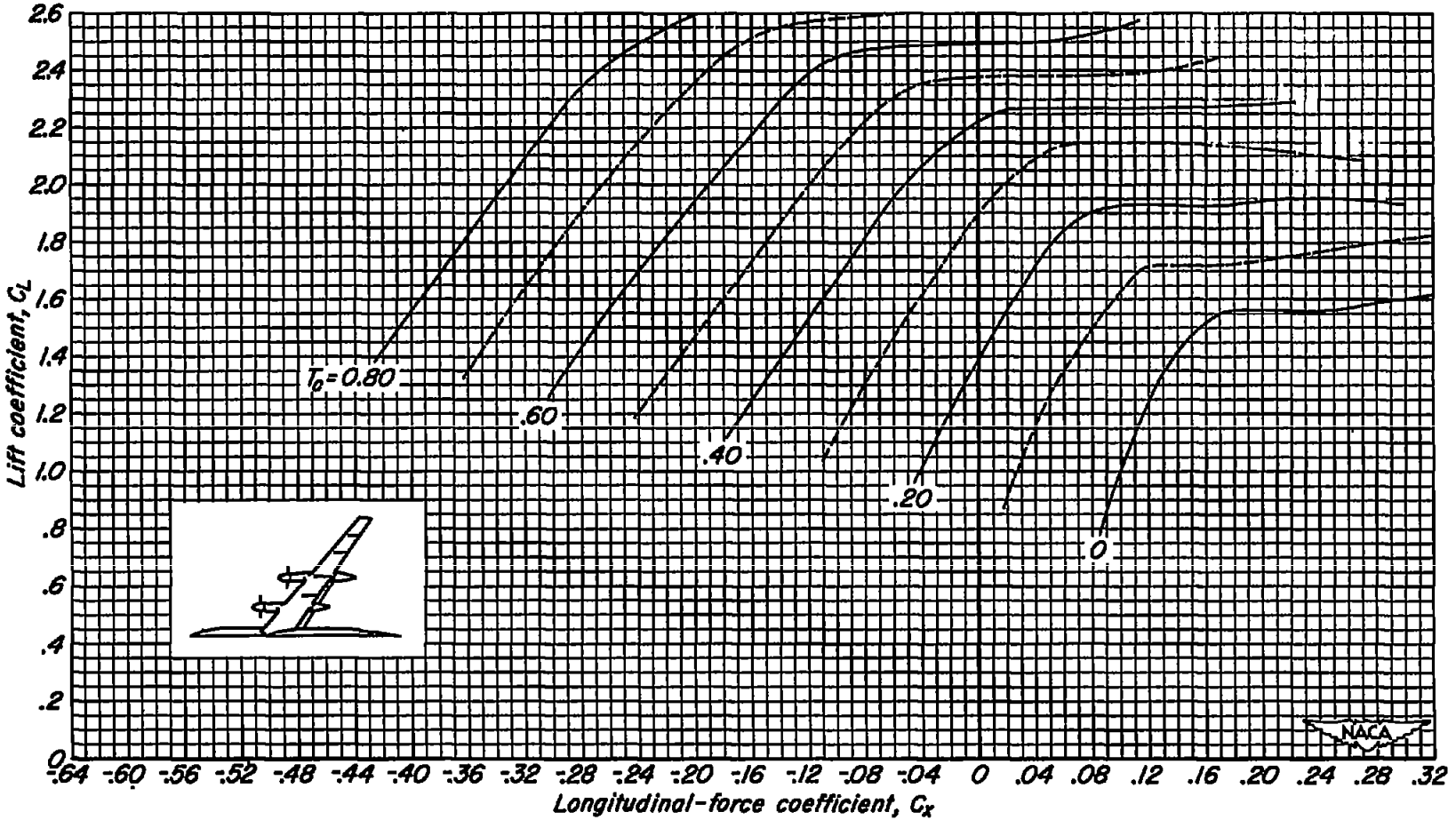


(b) C_L vs C_X
Figure 39.- Concluded.



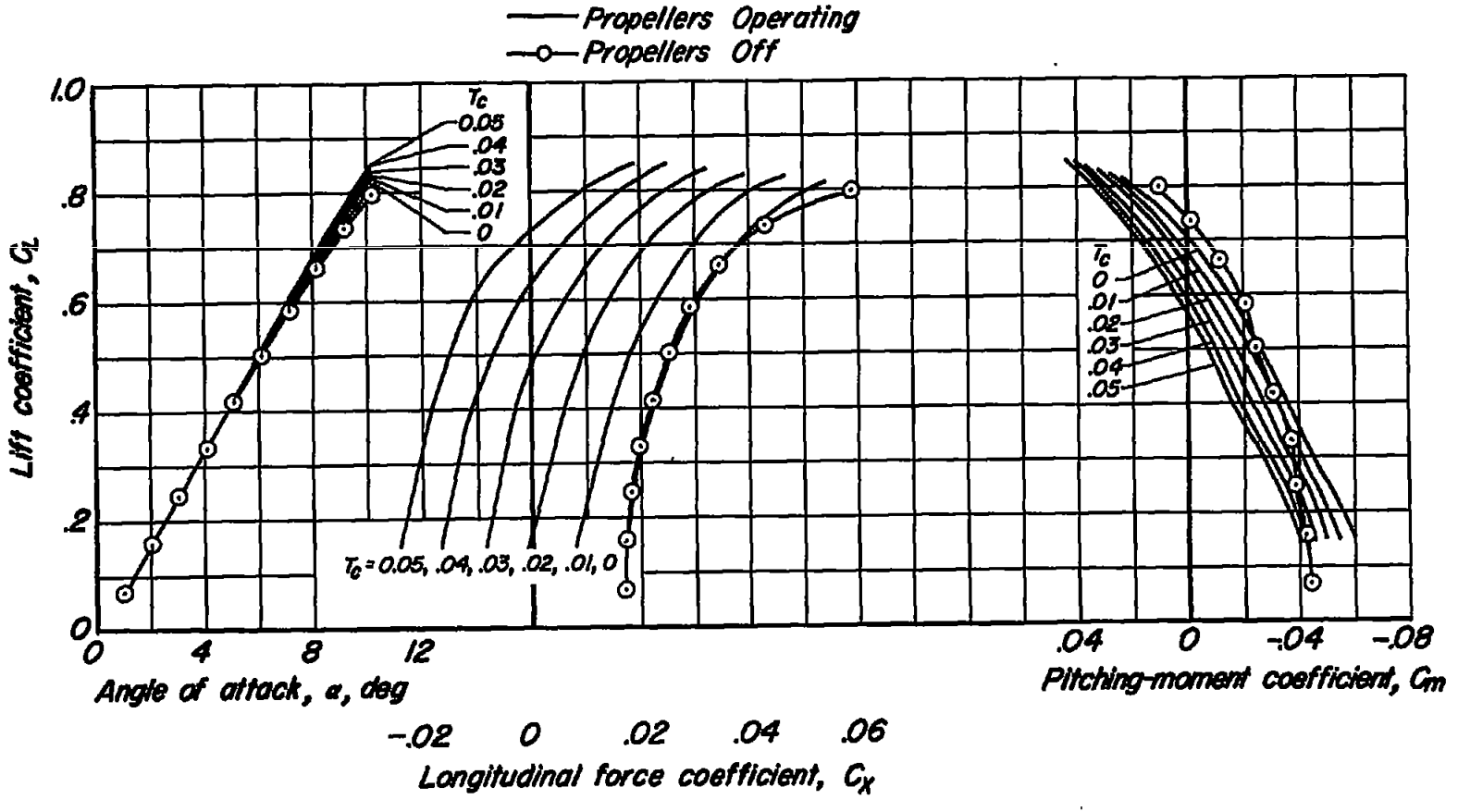
(a) C_L vs α and C_m

Figure 40.- The longitudinal characteristics of the model. Tail removed; inboard flaps deflected 60°; M = 0.082; R = 4,000,000; β = 26°.



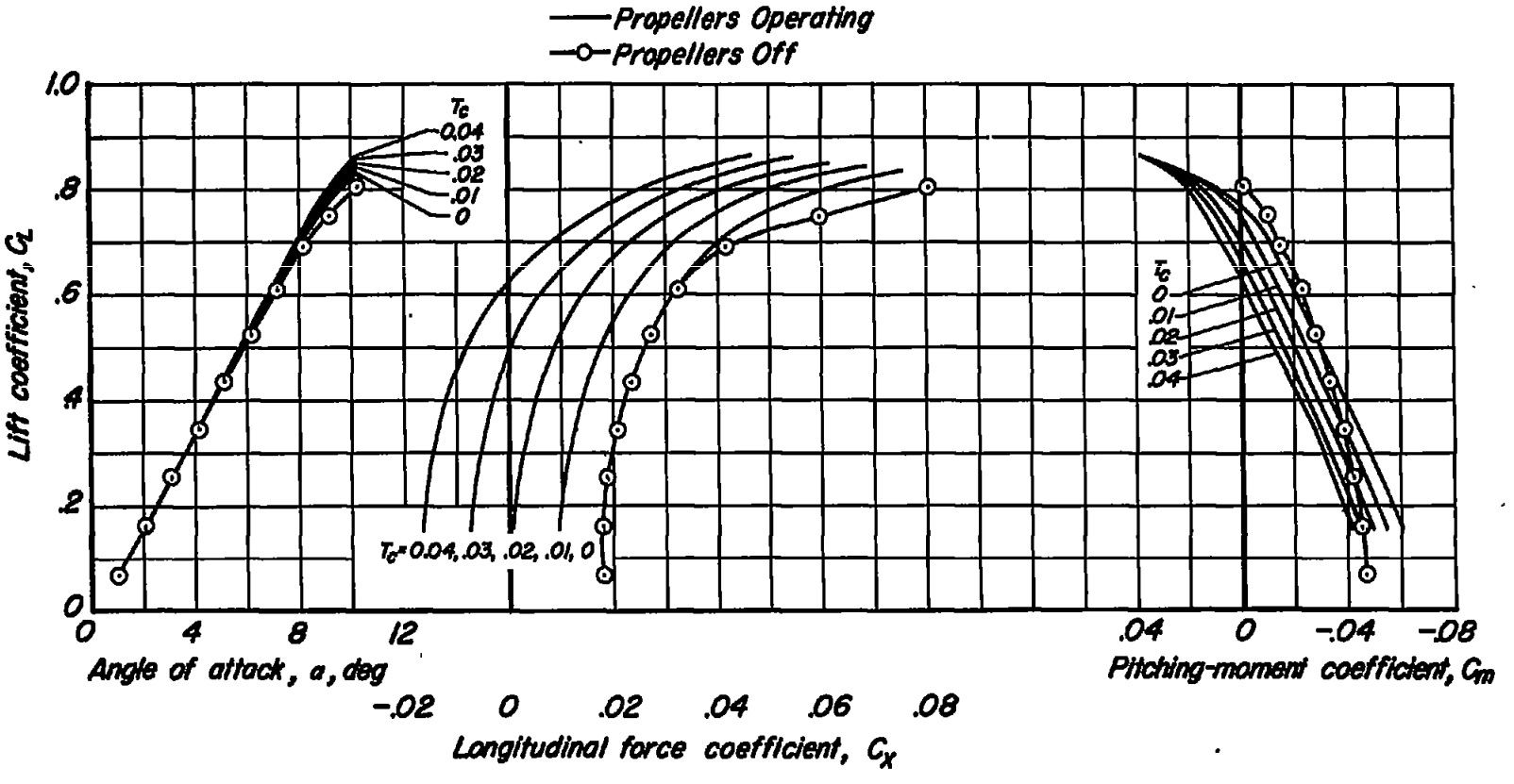
(b) C_L vs C_X

Figure 40.- Concluded.



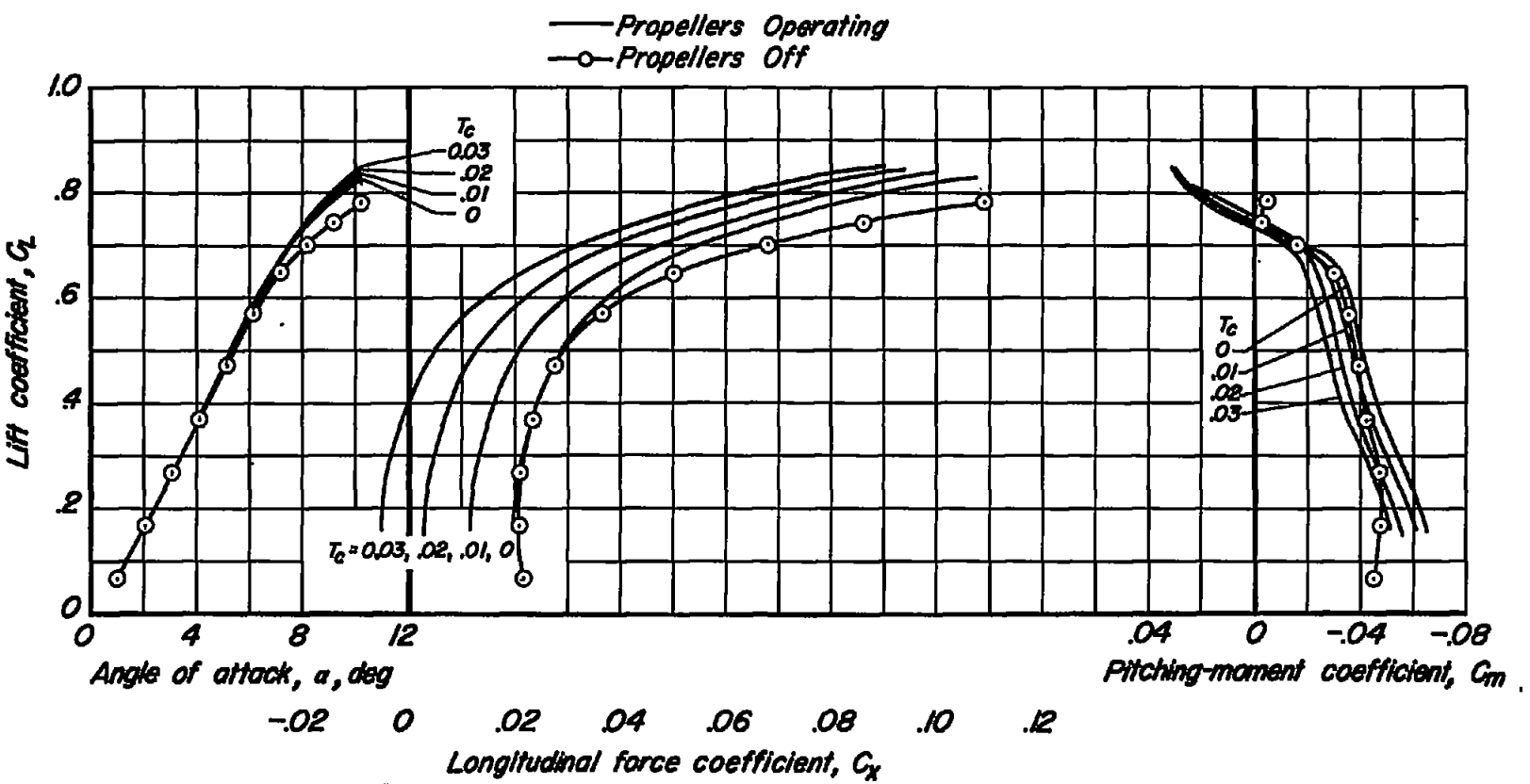
(a) M = 0.60

Figure 41.- The effect of operating propellers on the longitudinal characteristics of the model. Tail off, $\beta = 41^{\circ}$, R = 2,000,000.



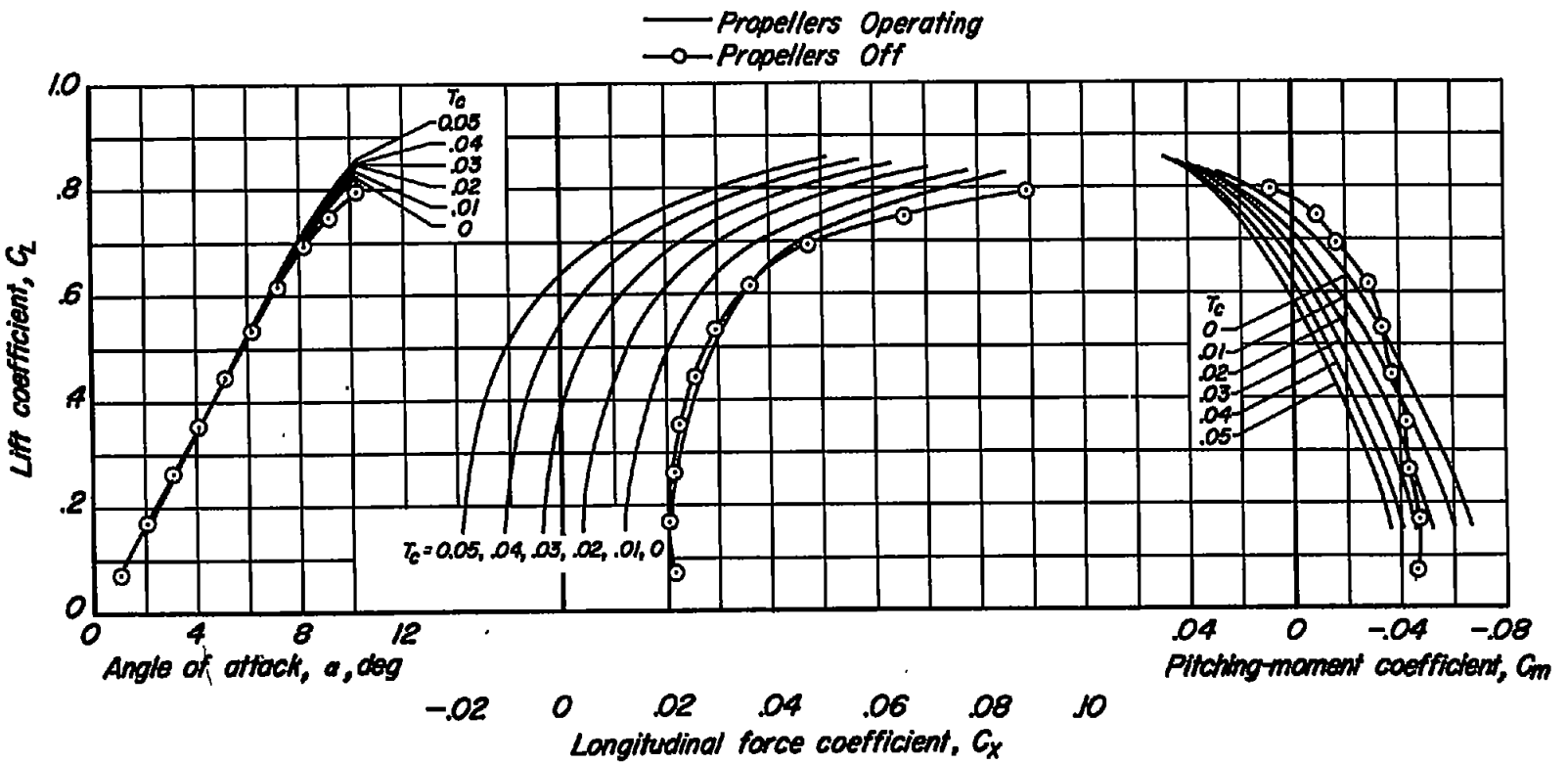
(b) M = 0.70

Figure 41.- Continued.



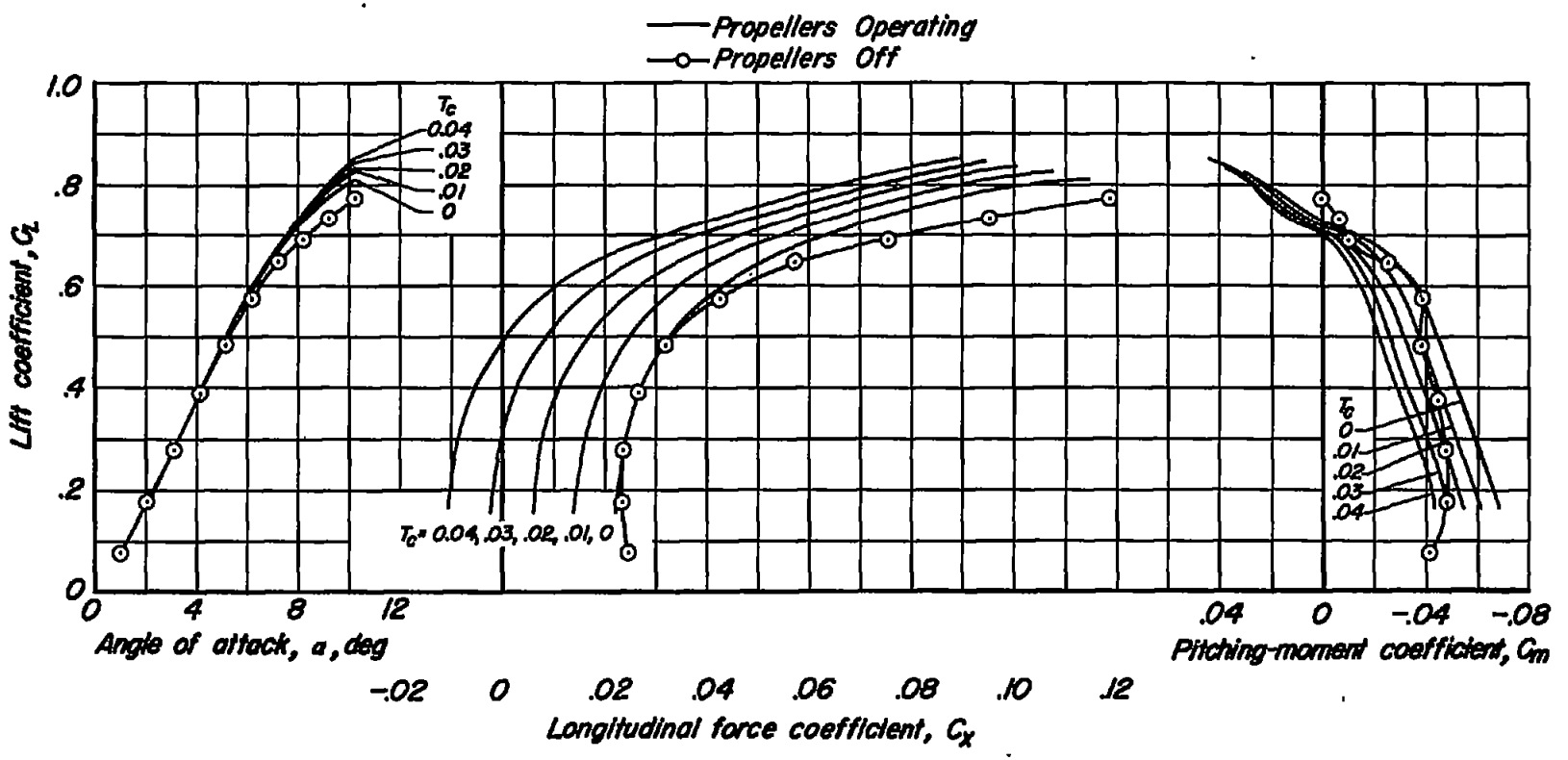
(c) M = 0.80

Figure 41.- Concluded.



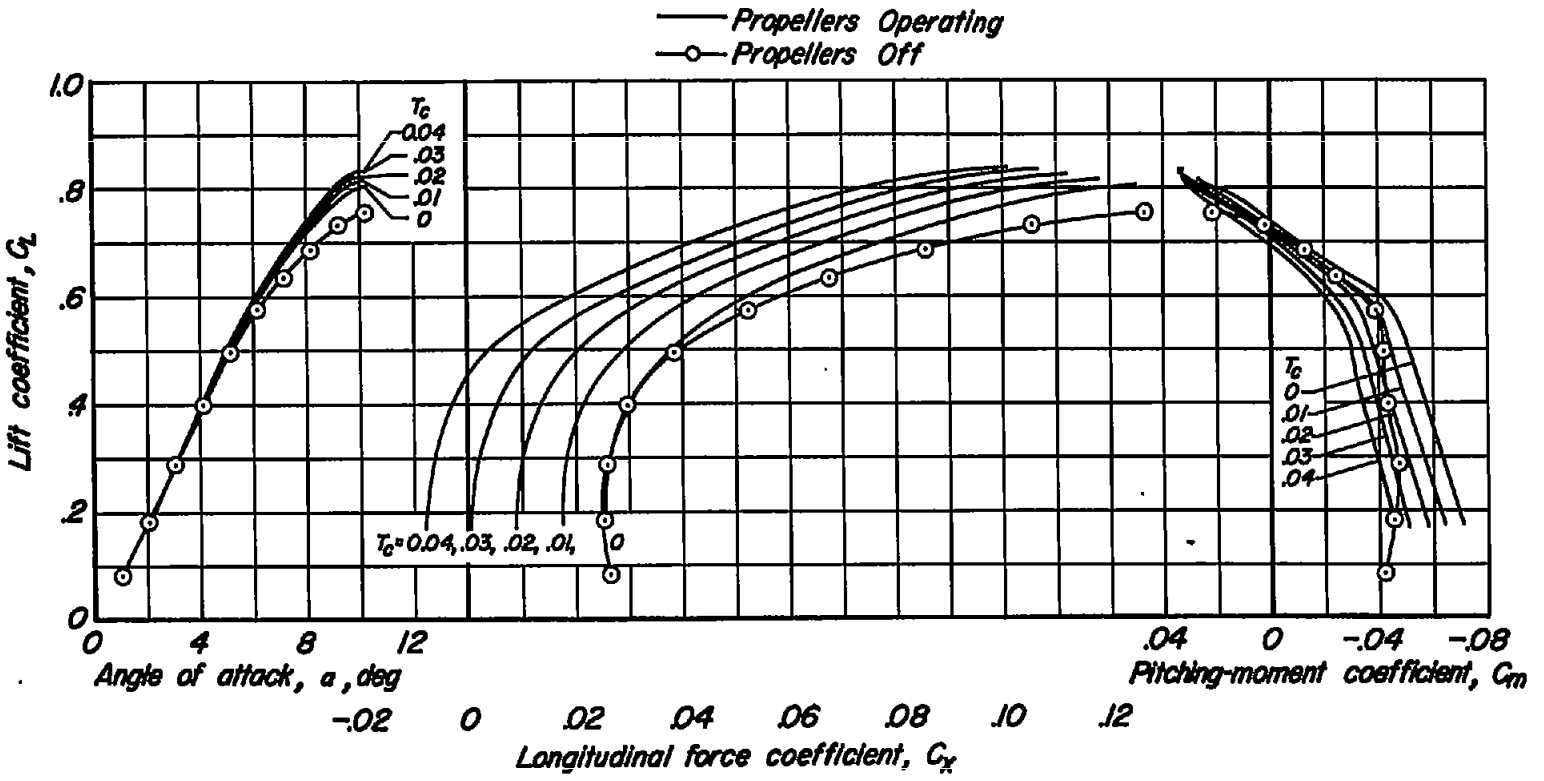
(a) M = 0.70

Figure 42.- The effect of operating propellers on the longitudinal characteristics of the model. Tail off, $\beta = 51^{\circ}$, R = 1,000,000.



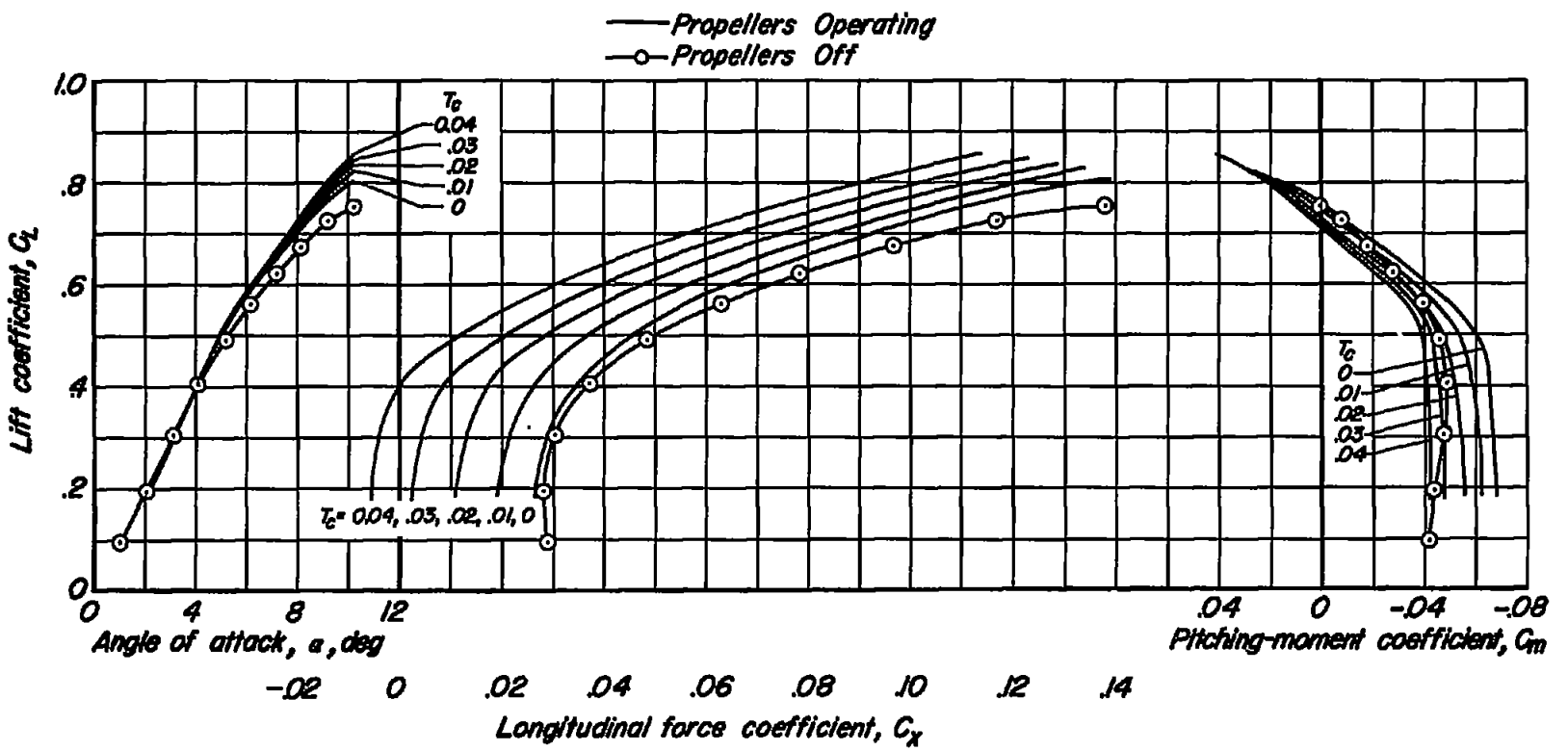
(b) M = 0.80

Figure 42.- Continued.



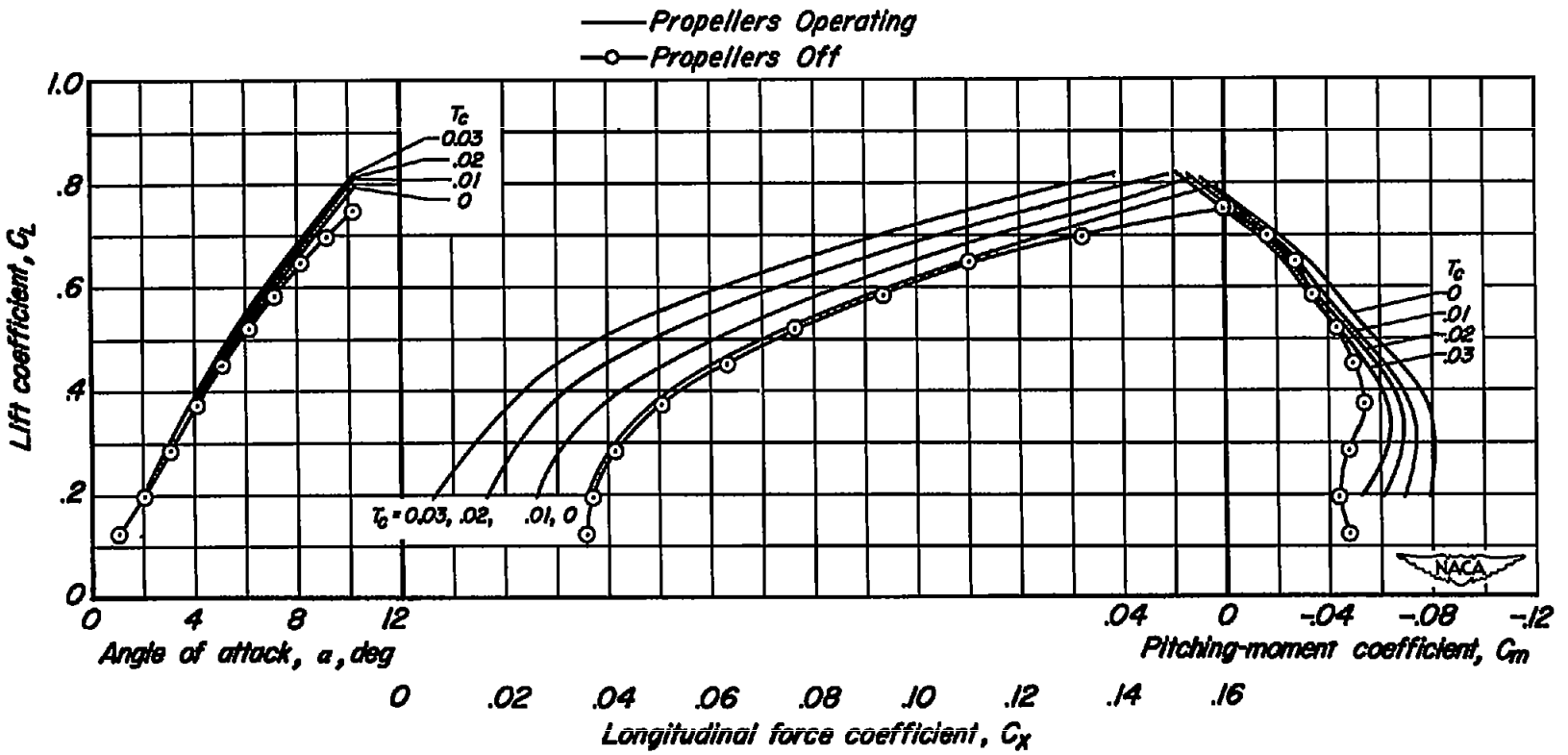
(c) M = 0.83

Figure 42.- Continued.



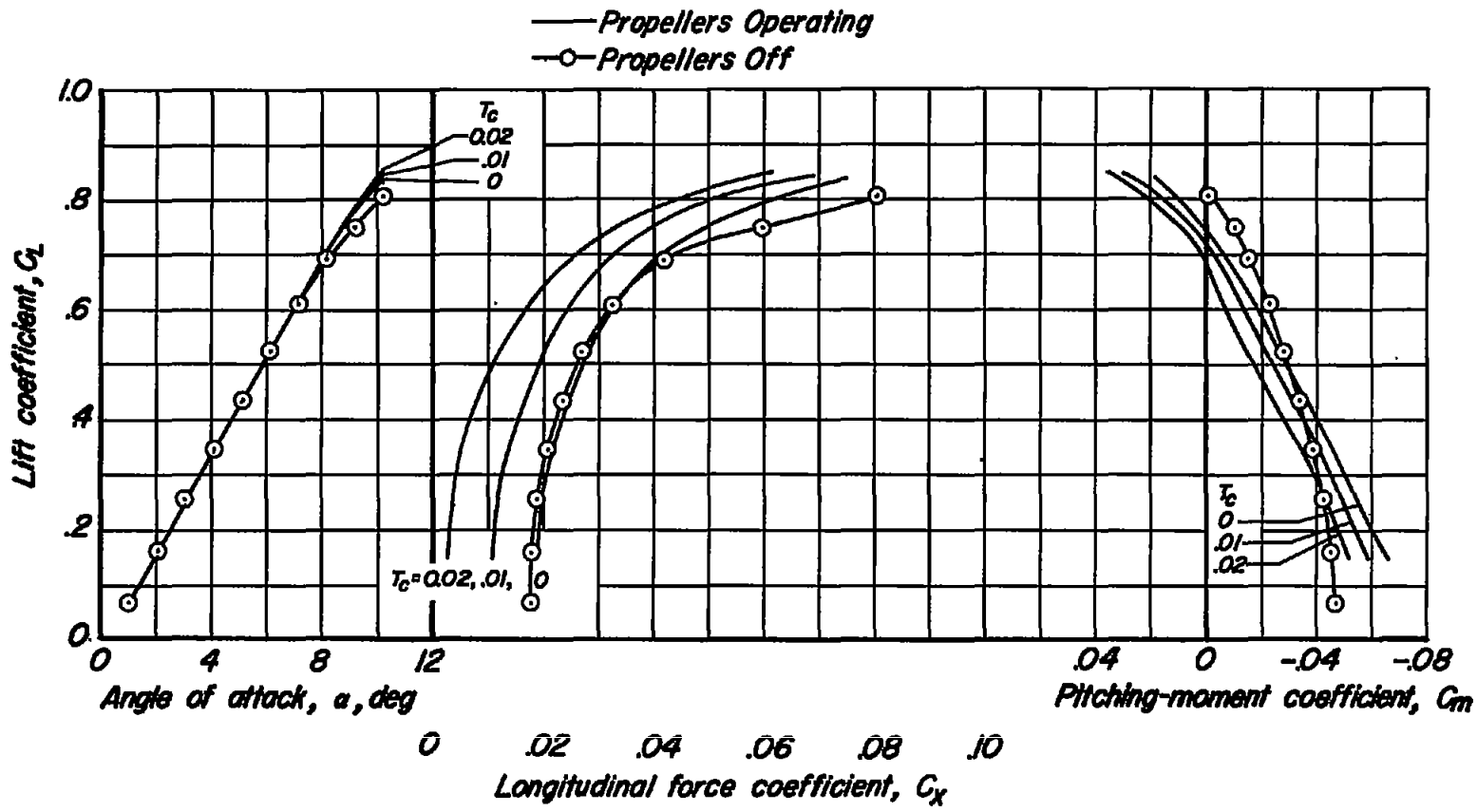
(d) M = 0.86

Figure 42.- Continued.



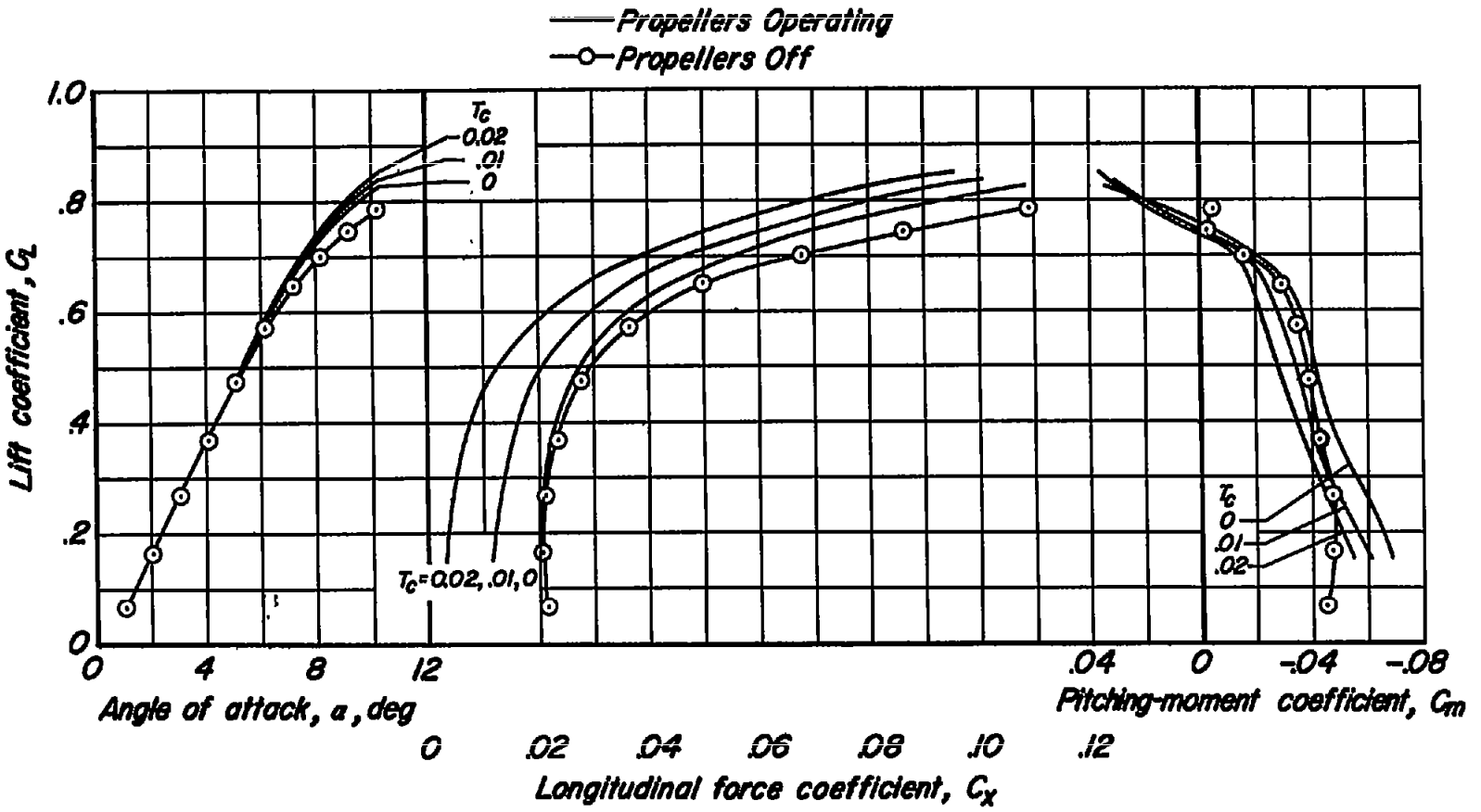
(e) M = 0.90

Figure 42.- Concluded.



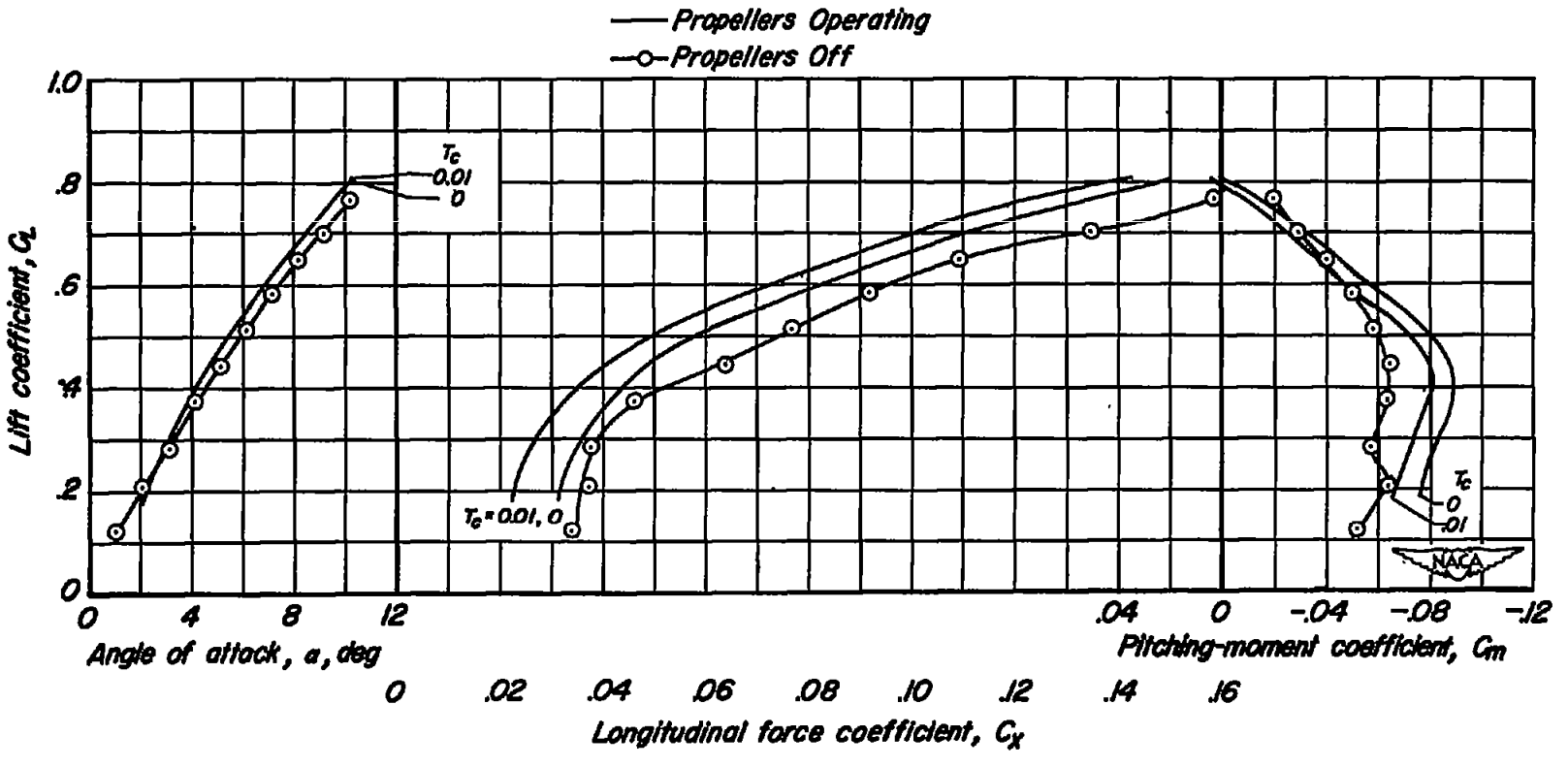
(a) M = 0.70

Figure 43.- The effect of operating propellers on the longitudinal characteristics of the model. Tail off, β = 51°, R = 2,000,000.



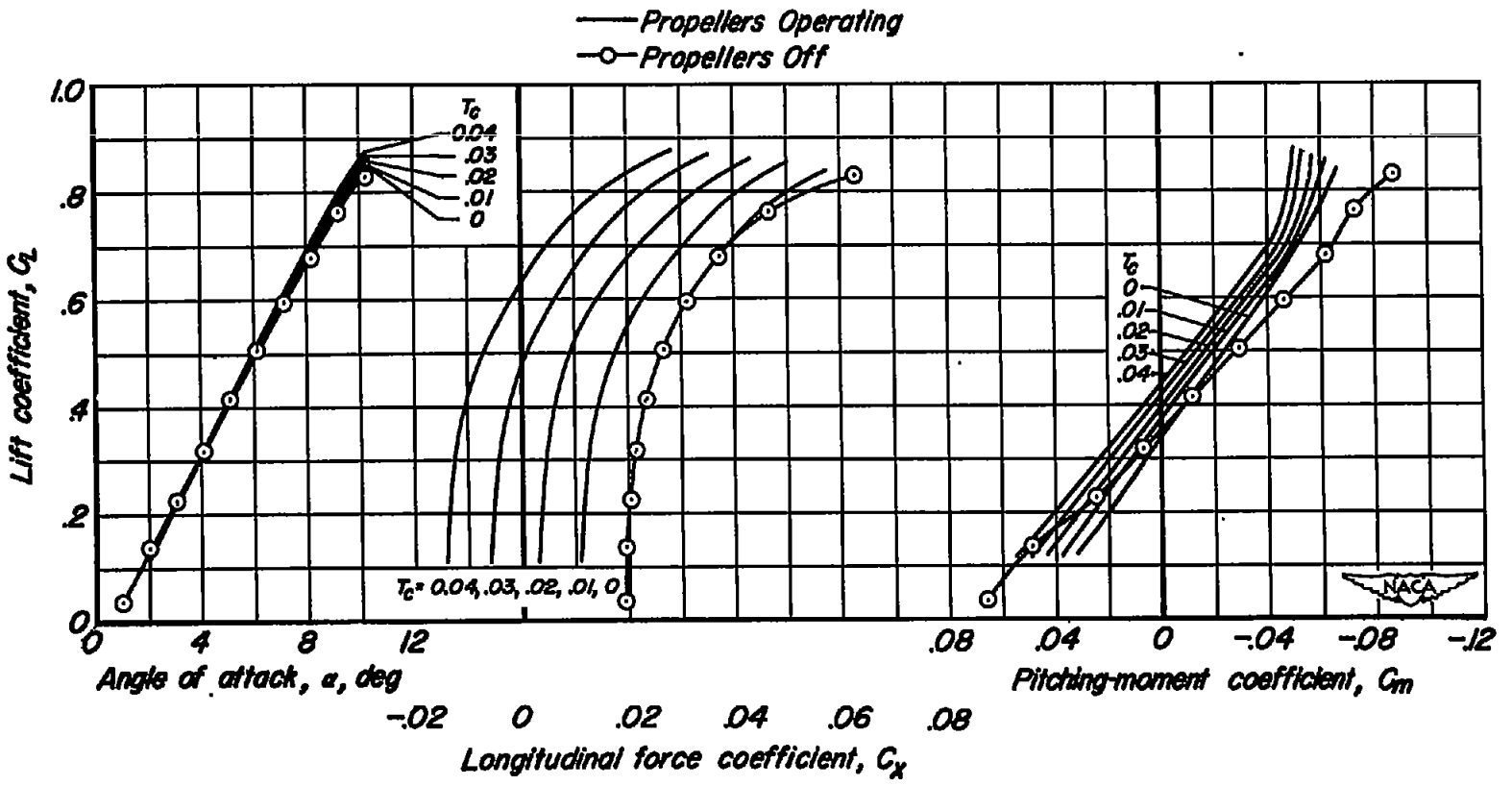
(b) M = 0.80

Figure 43.- Continued.



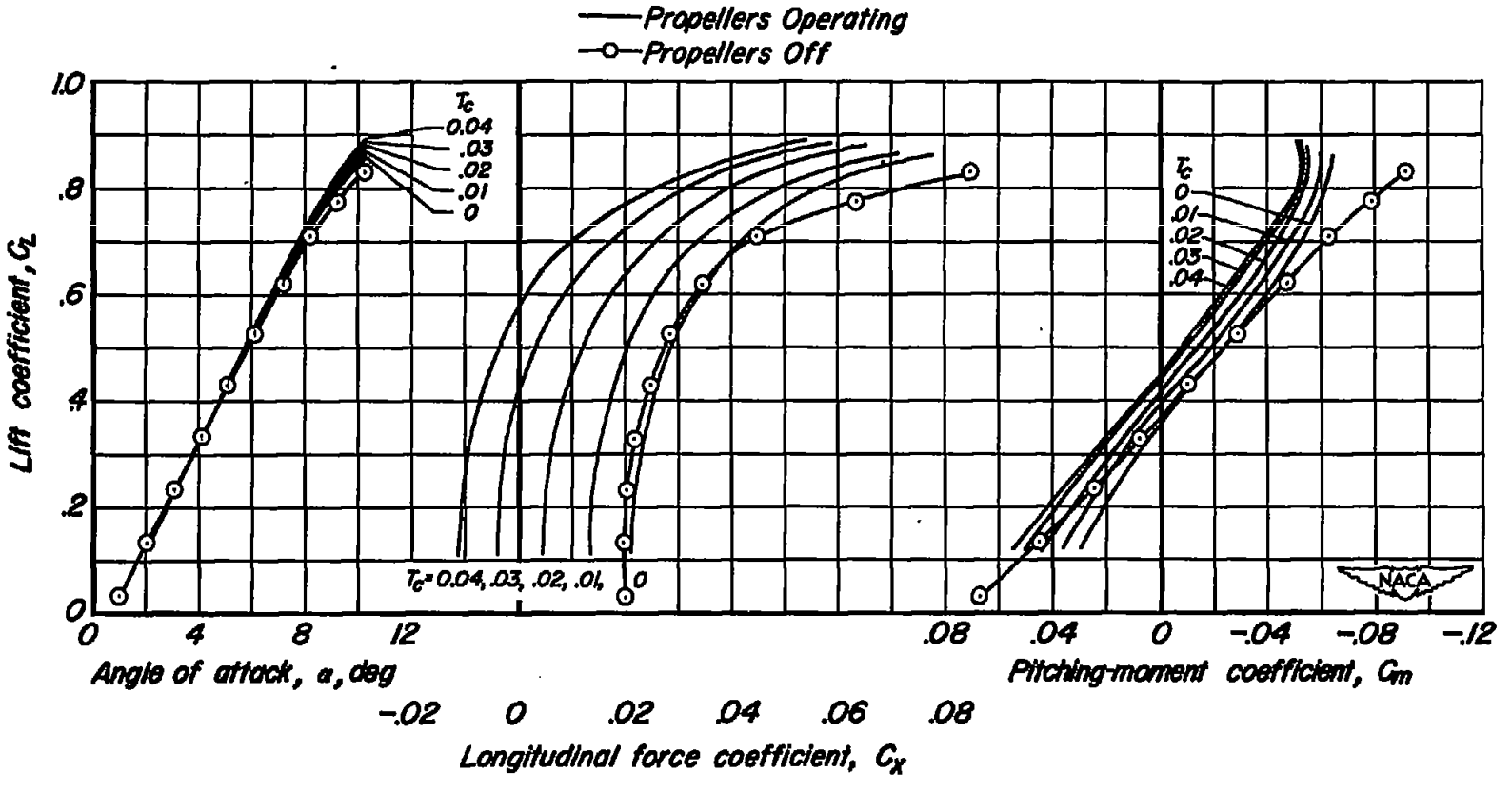
(c) M = 0.90

Figure 43.- Concluded.



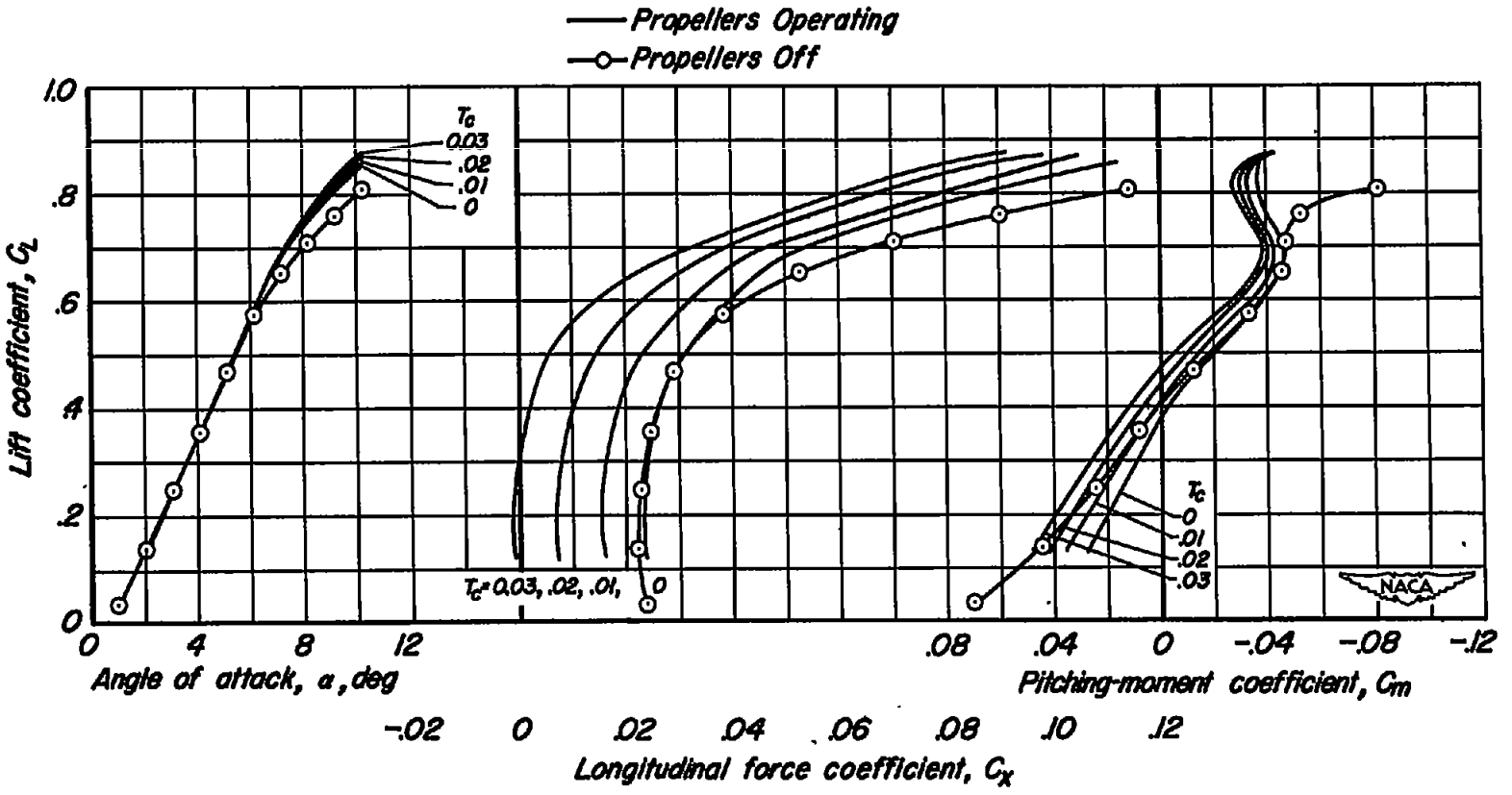
(a) M = 0.60

Figure 44.- The effect of operating propellers on the longitudinal characteristics of the model. Tail height = 0 b/2, $i_t = -4^{\circ}$, $\beta = 41^{\circ}$, R = 2,000,000.



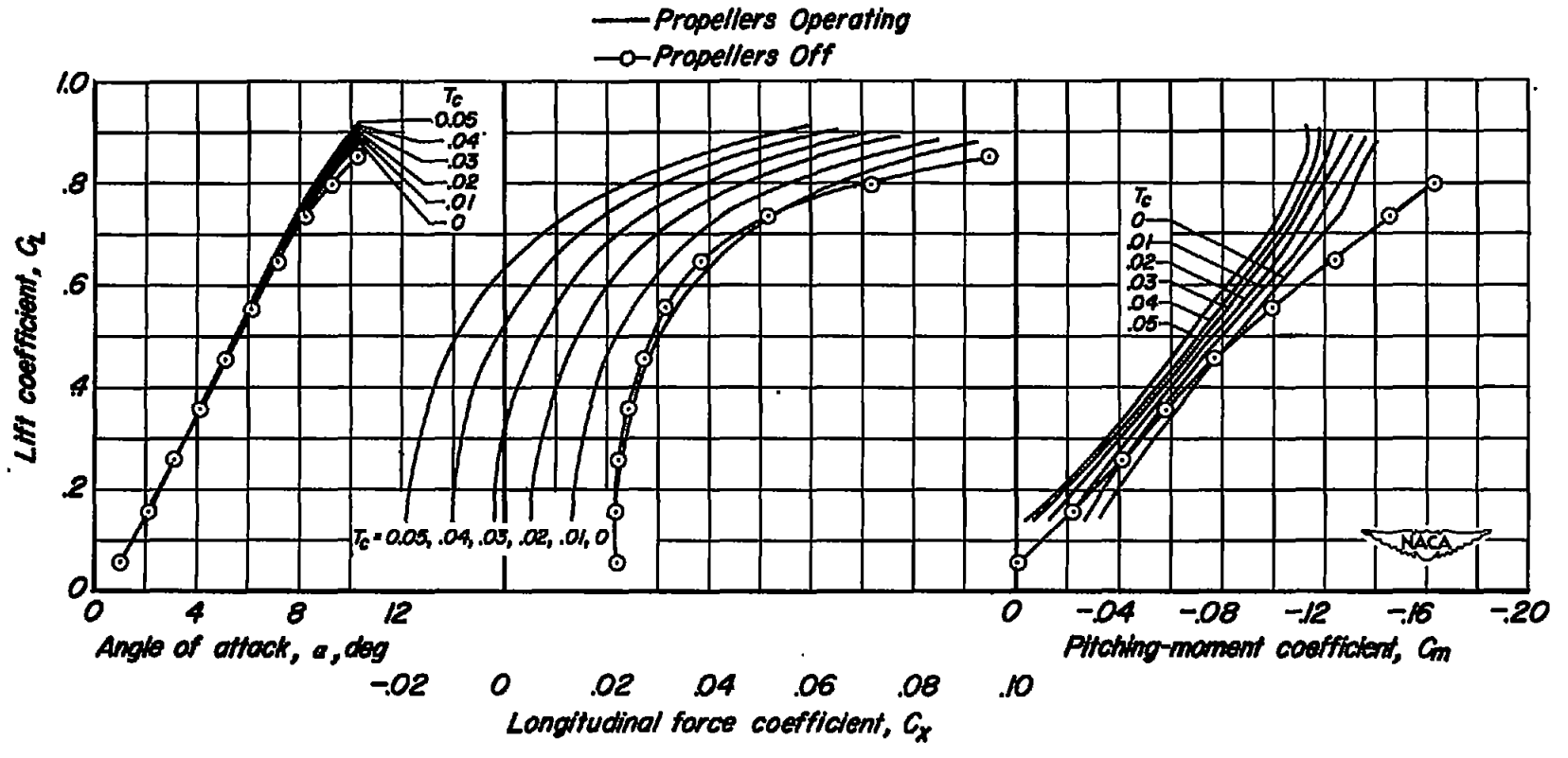
(b) M = 0.70

Figure 44.- Continued.



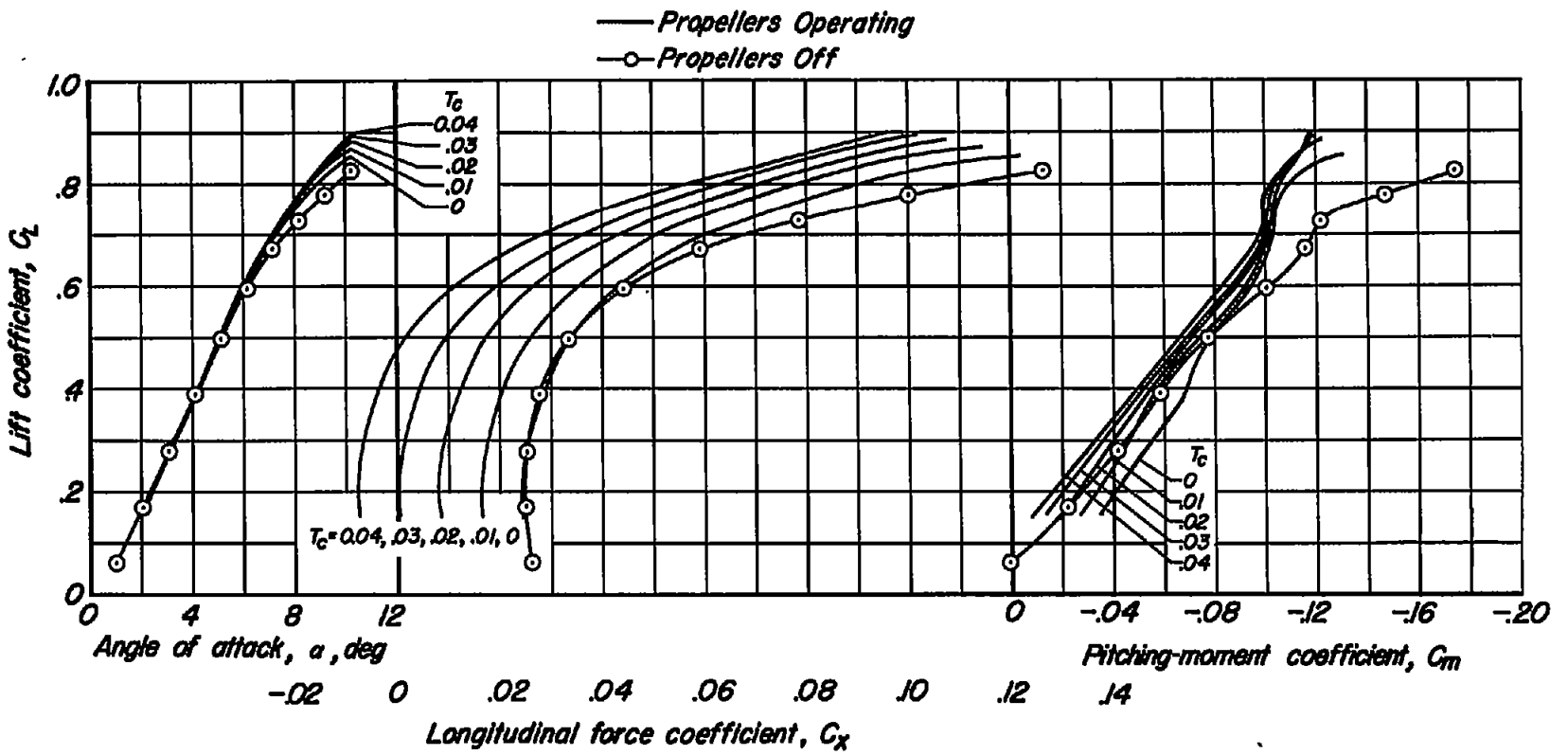
(c) M = 0.80

Figure 44.- Concluded.



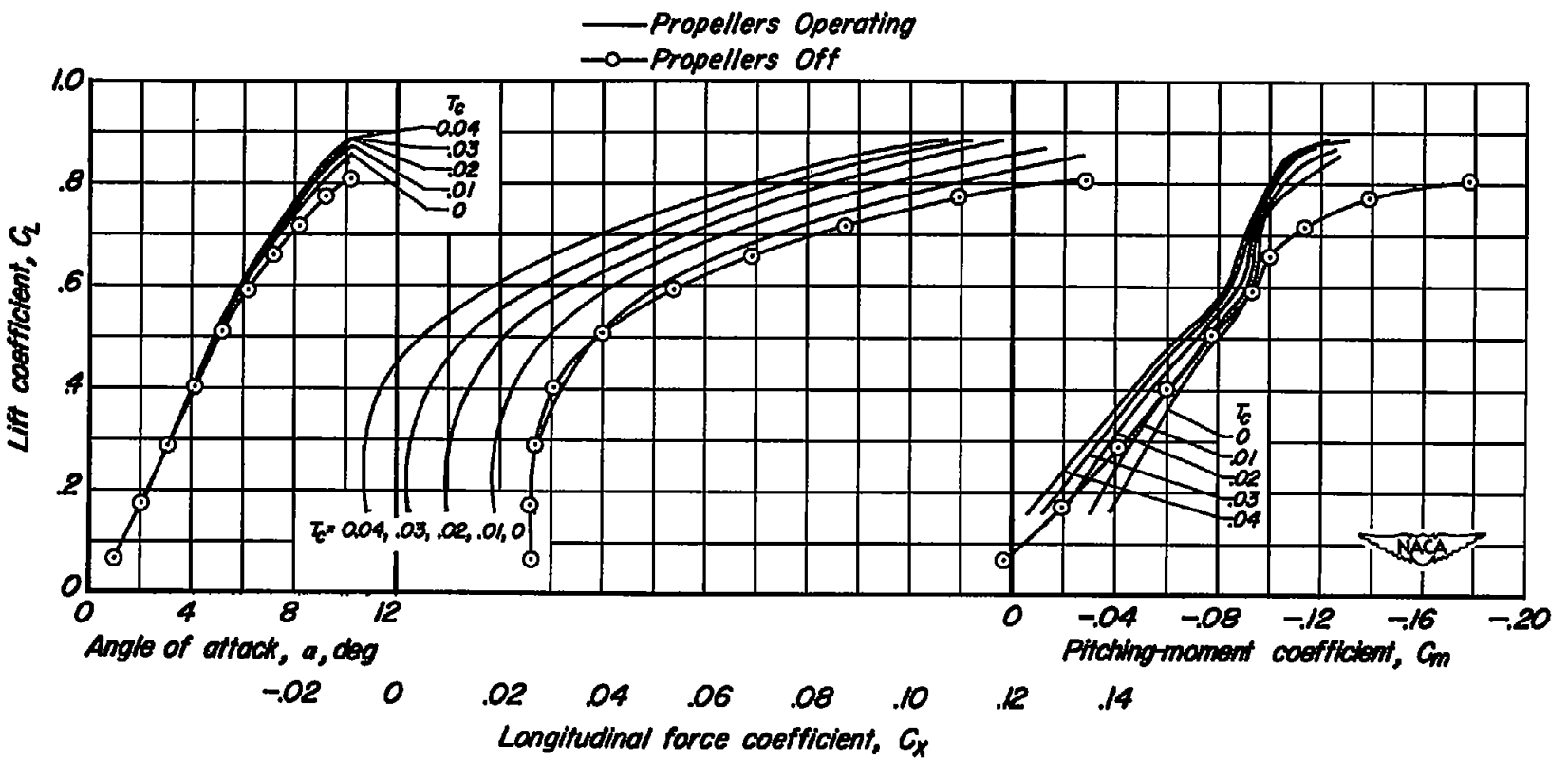
(a) M = 0.70

Figure 45.- The effect of operating propellers on the longitudinal characteristics of the model. Tail height = 0 b/2, $i_t = -2^\circ$, $\beta = 51^\circ$, R = 1,000,000.



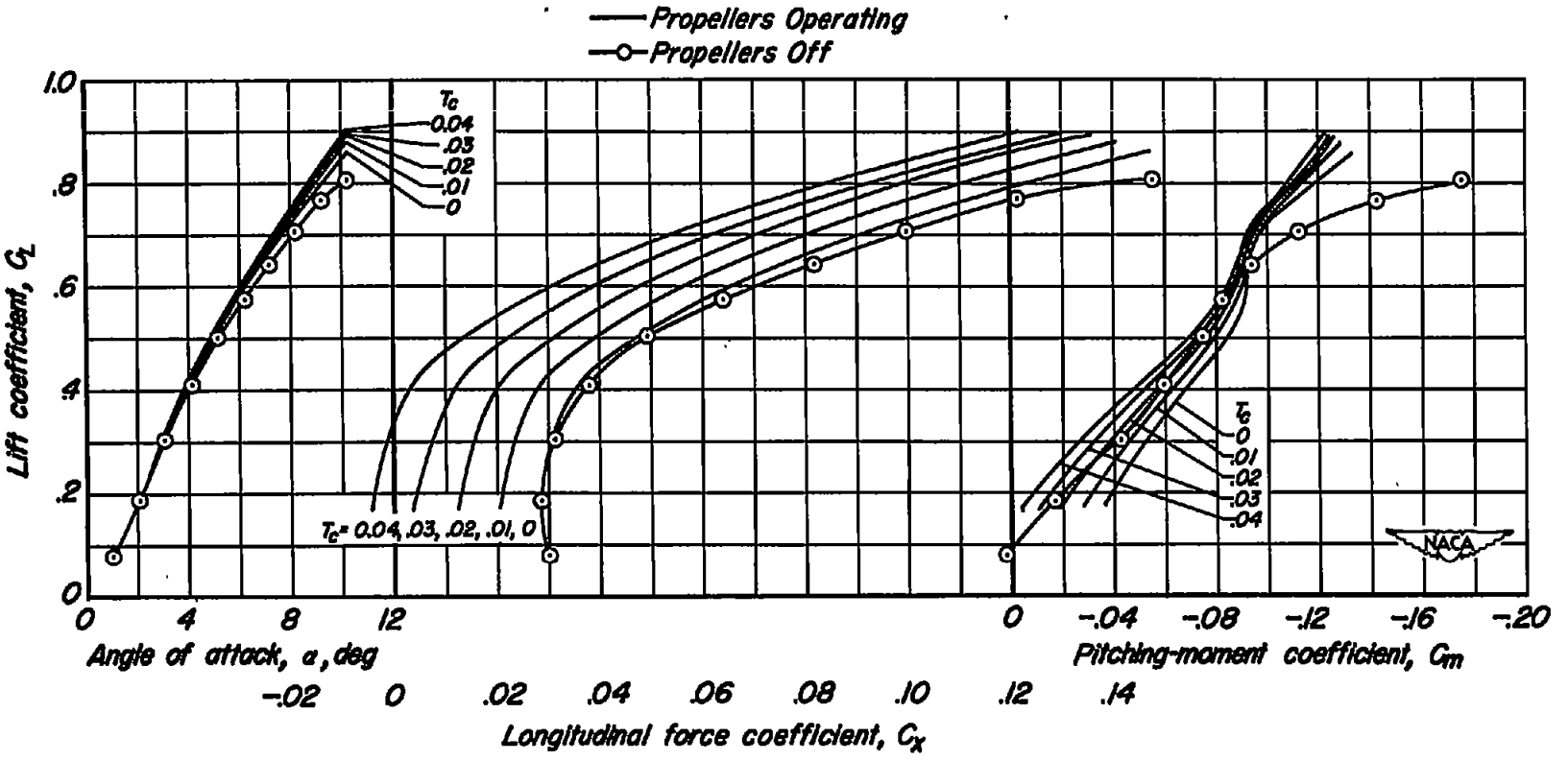
(b) M = 0.80

Figure 45.- Continued.



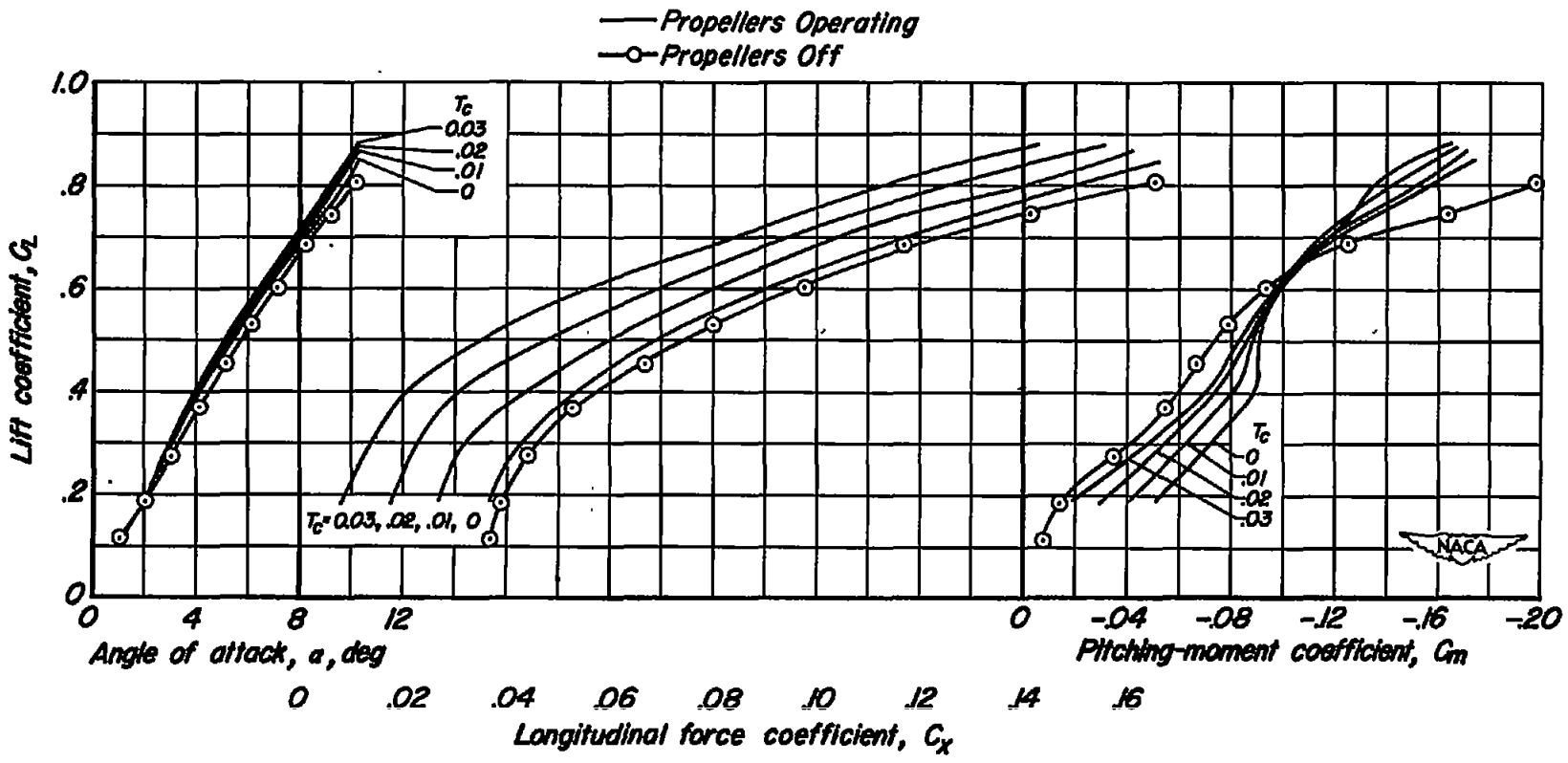
(c) M = 0.83

Figure 45.- Continued.



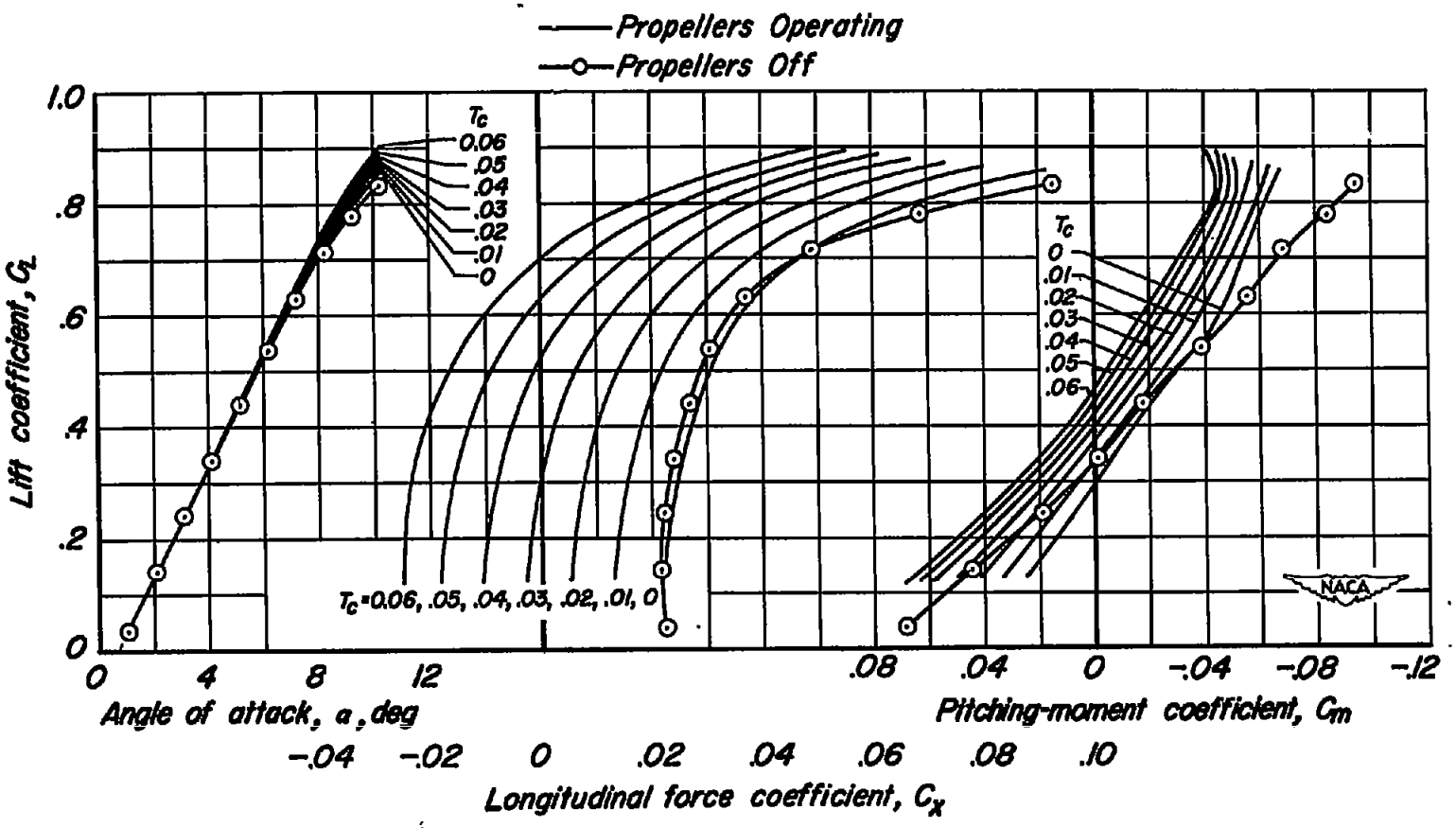
(d) M = 0.86

Figure 45.- Continued.



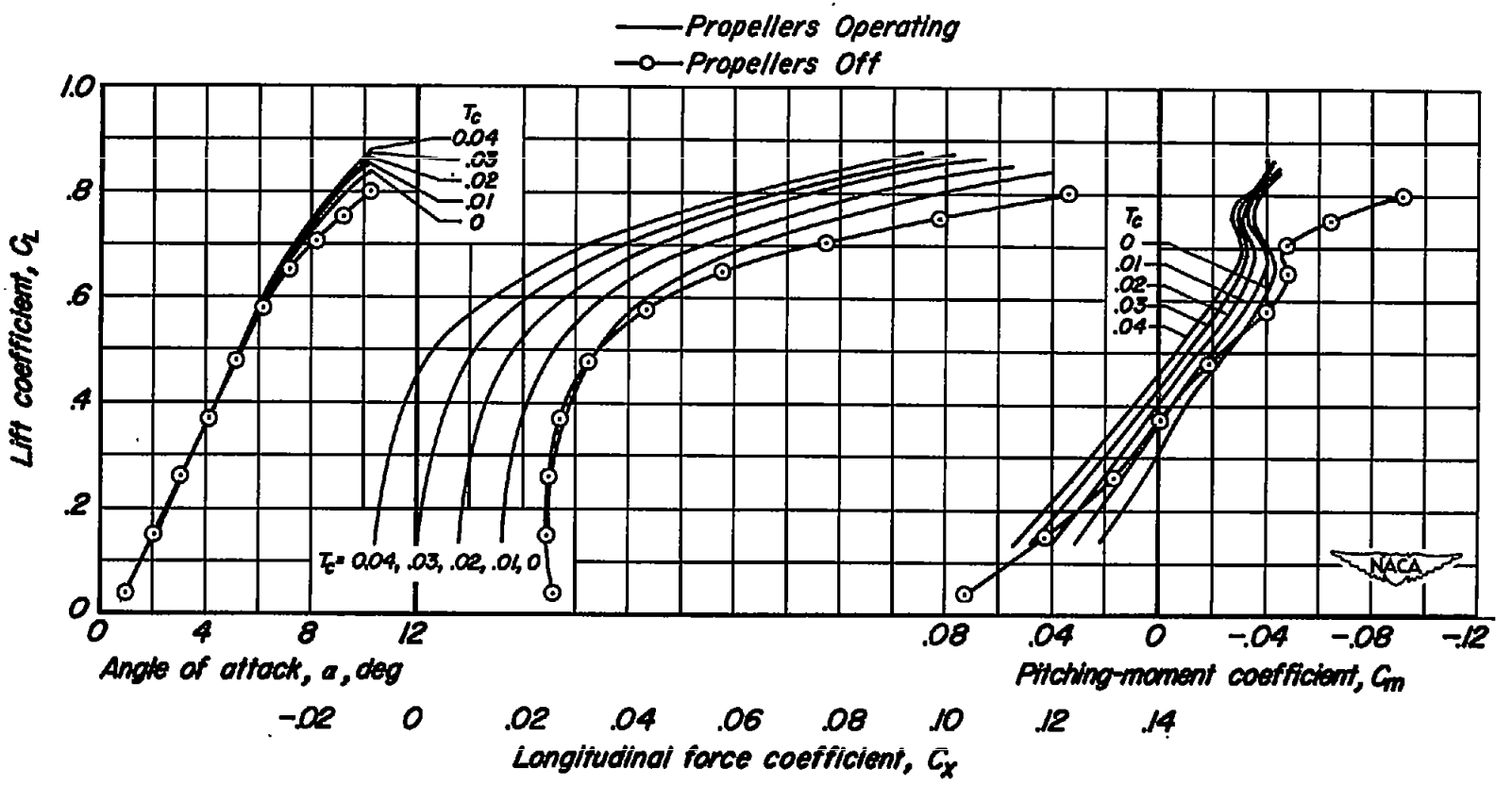
(e) M = 0.90

Figure 45.- Concluded.



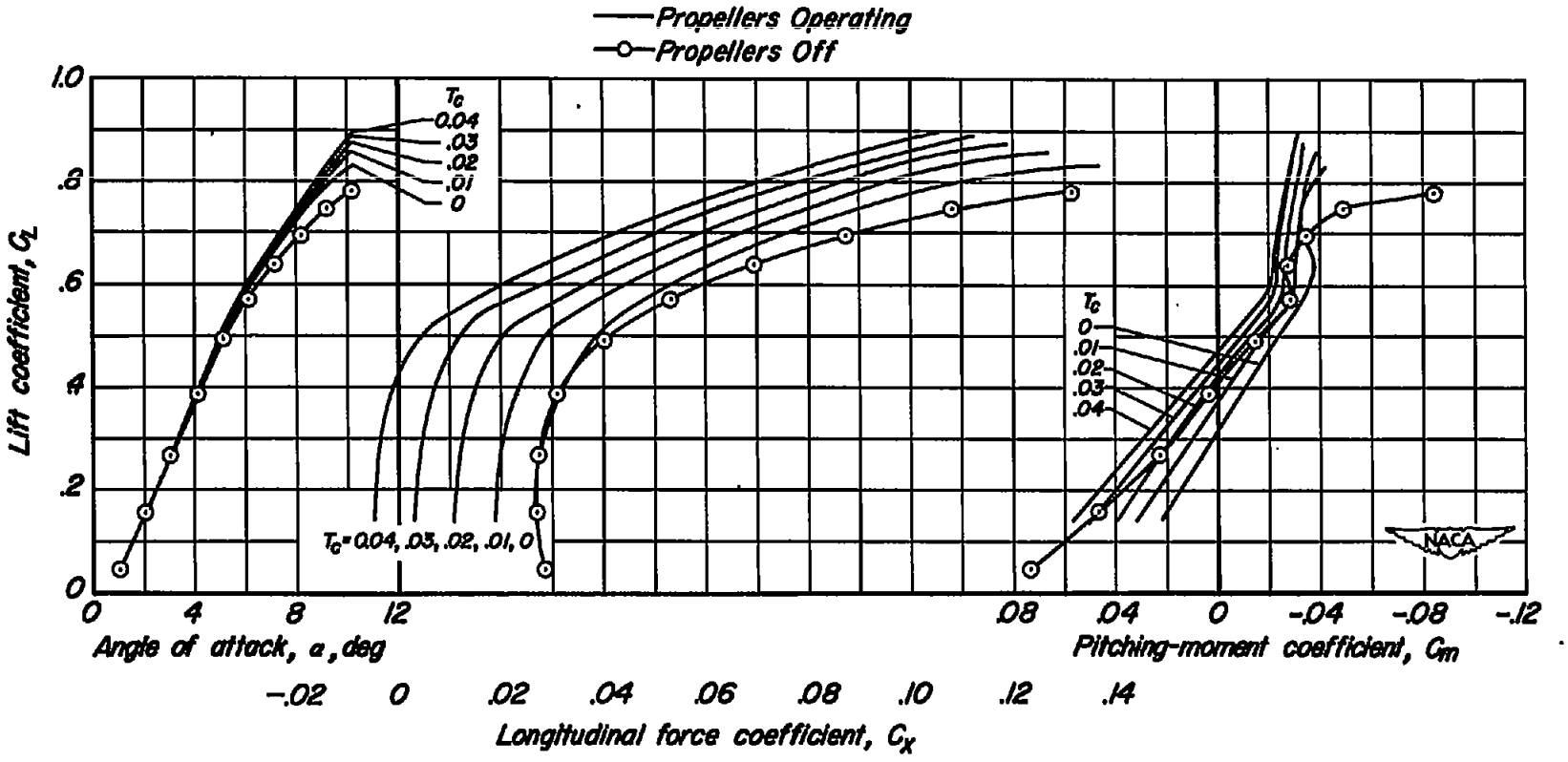
(a) M = 0.70

Figure 46.- The effect of operating propellers on the longitudinal characteristics of the model. Tail height = 0 b/2, i_t = -4°, β = 51°, R = 1,000,000.



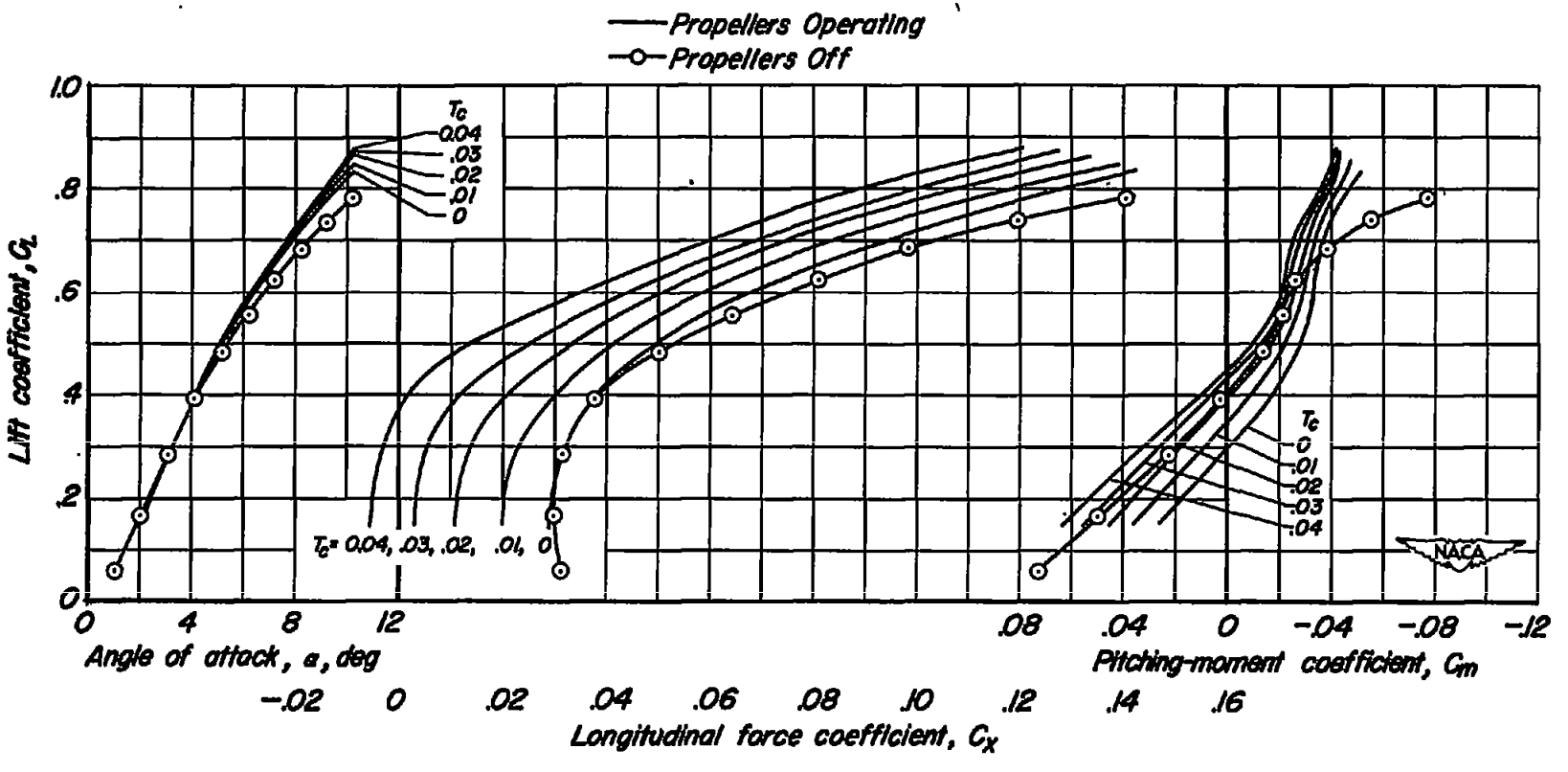
(b) M = 0.80

Figure 46.- Continued.



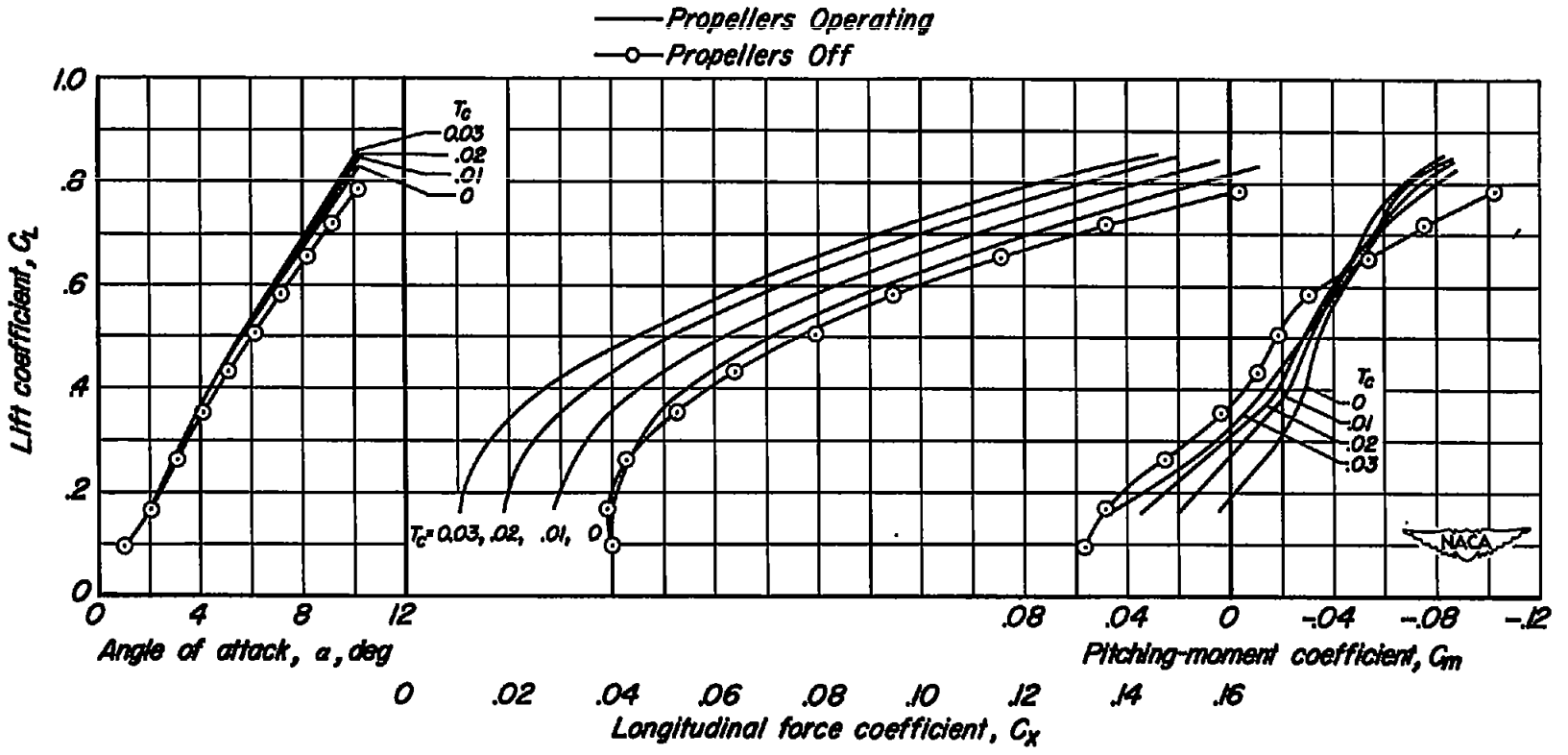
(c) M = 0.83

Figure 46.- Continued.



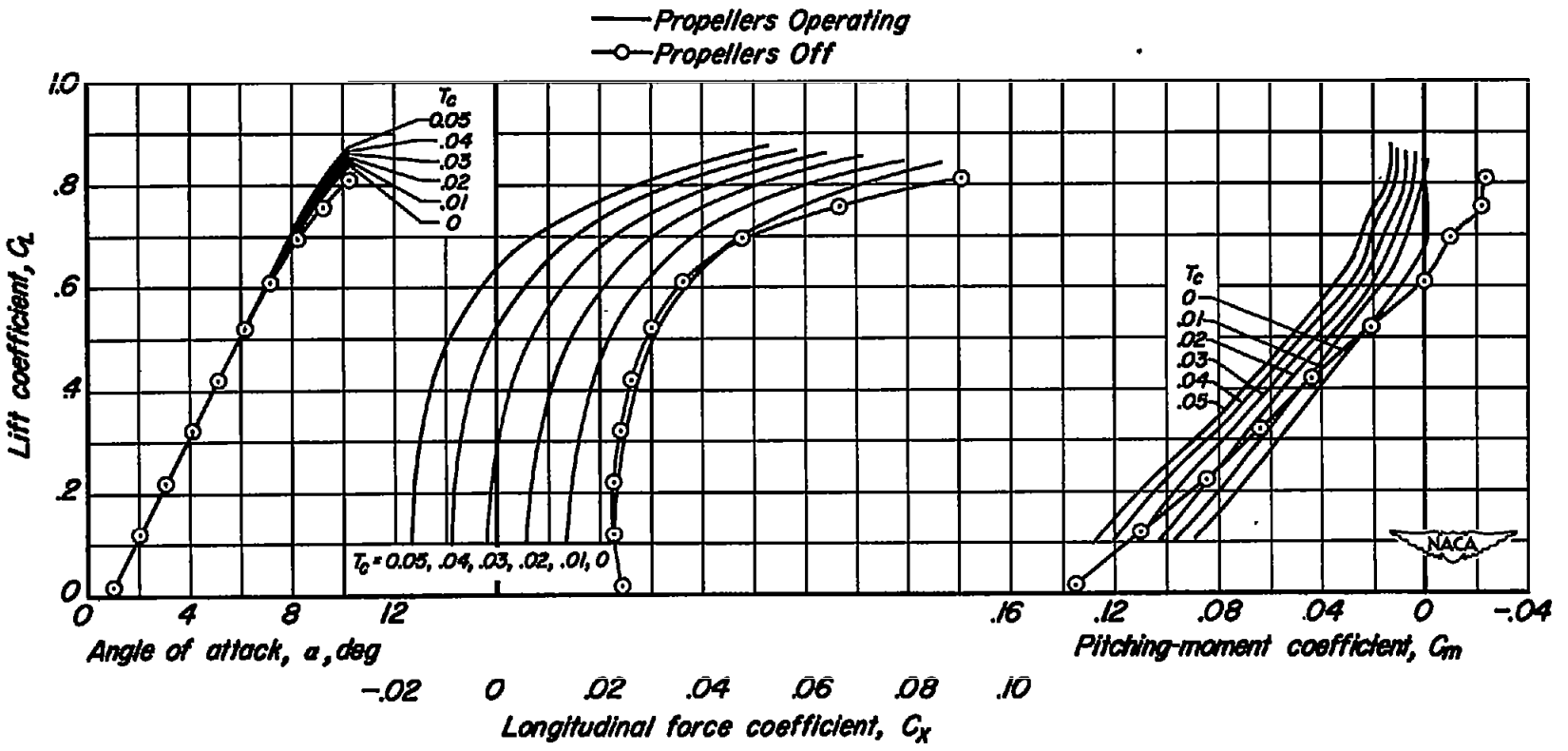
(d) M = 0.86

Figure 46.- Continued.



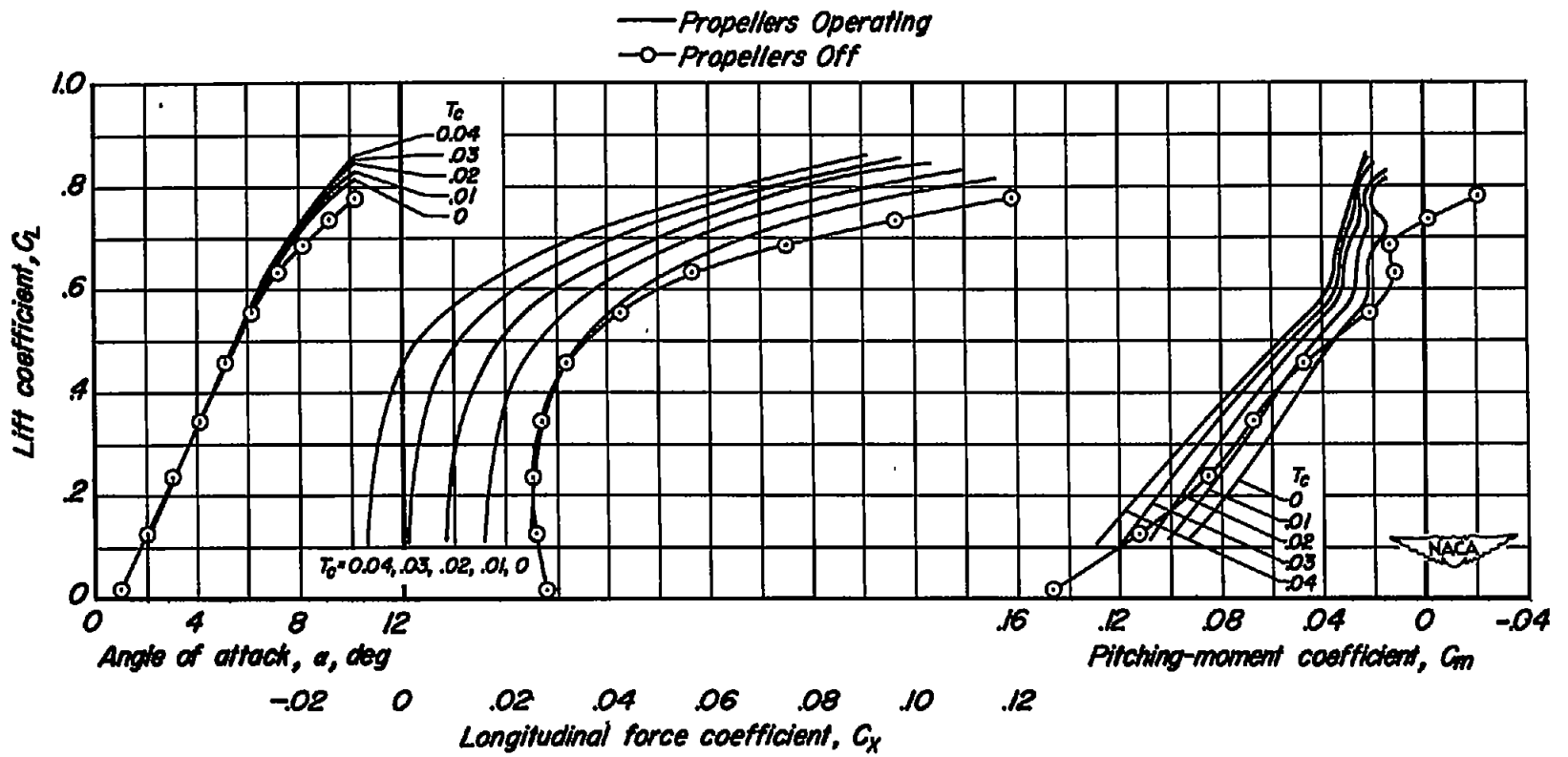
(e) M = 0.90

Figure 46.- Concluded.



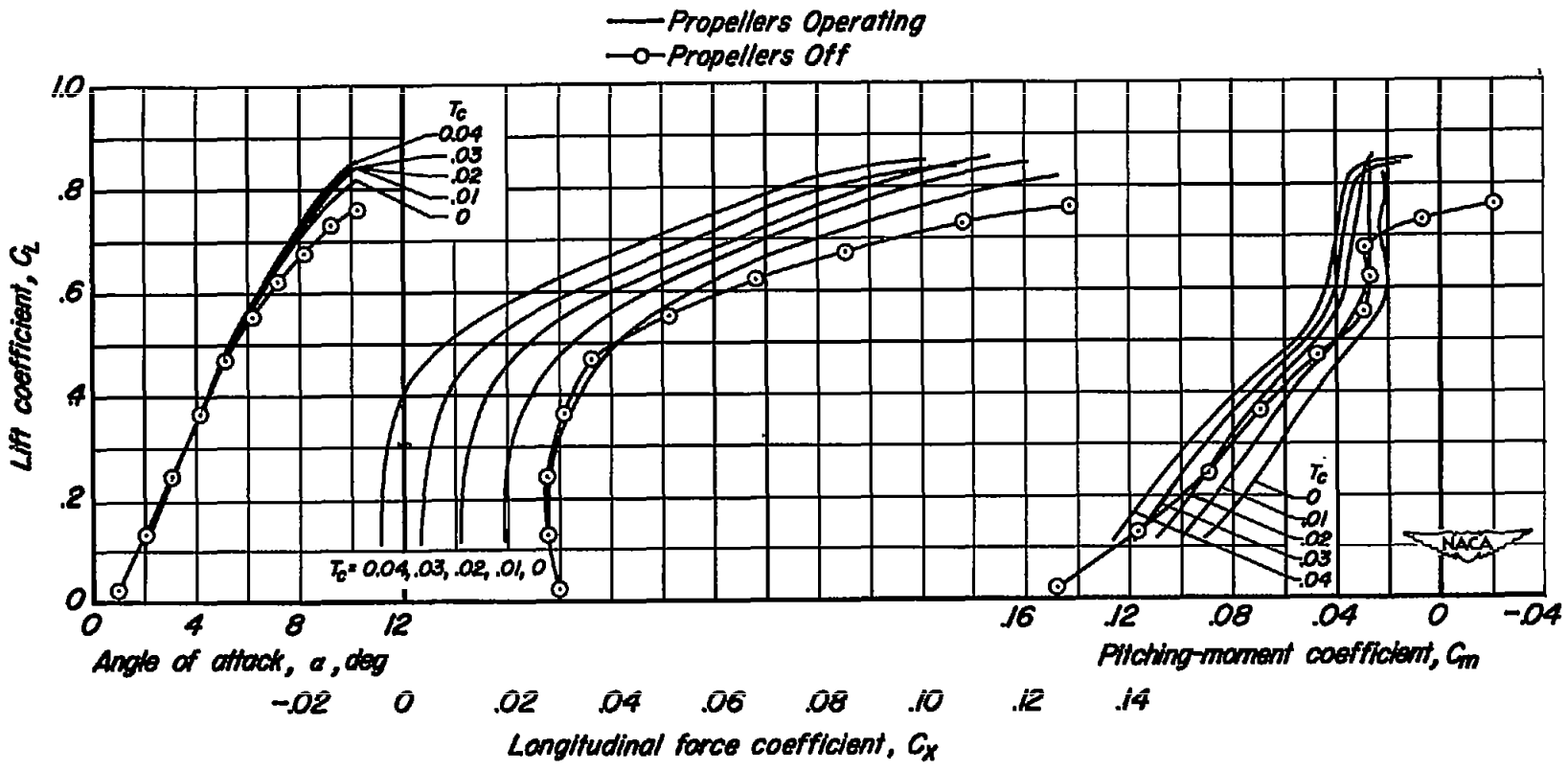
(a) M = 0.70

Figure 47.- The effect of operating propellers on the longitudinal characteristics of the model. Tail height = 0 b/2, $i_t = -6^\circ$, $\beta = 51^\circ$, R = 1,000,000.



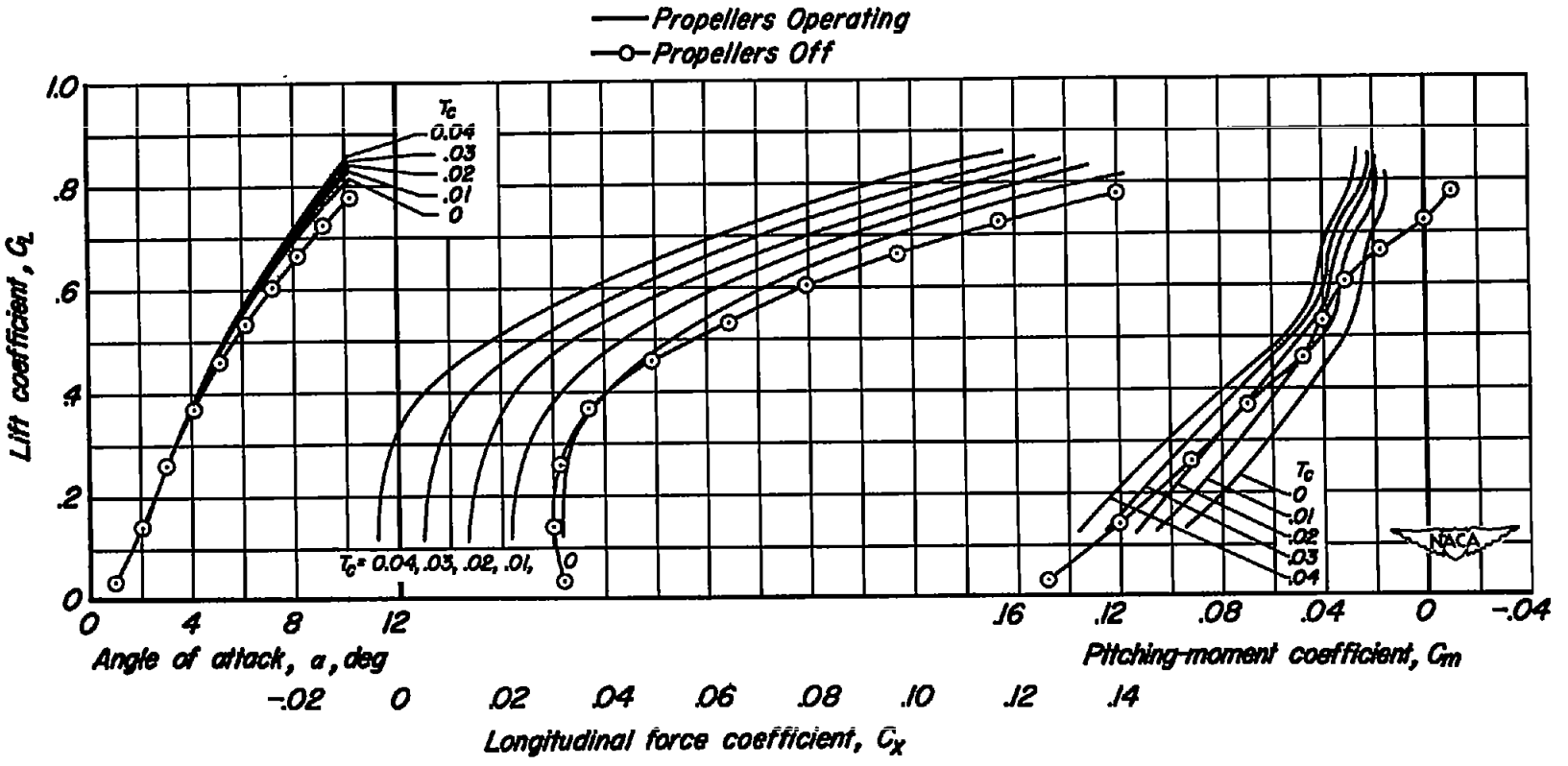
(b) M = 0.80

Figure 47.- Continued.



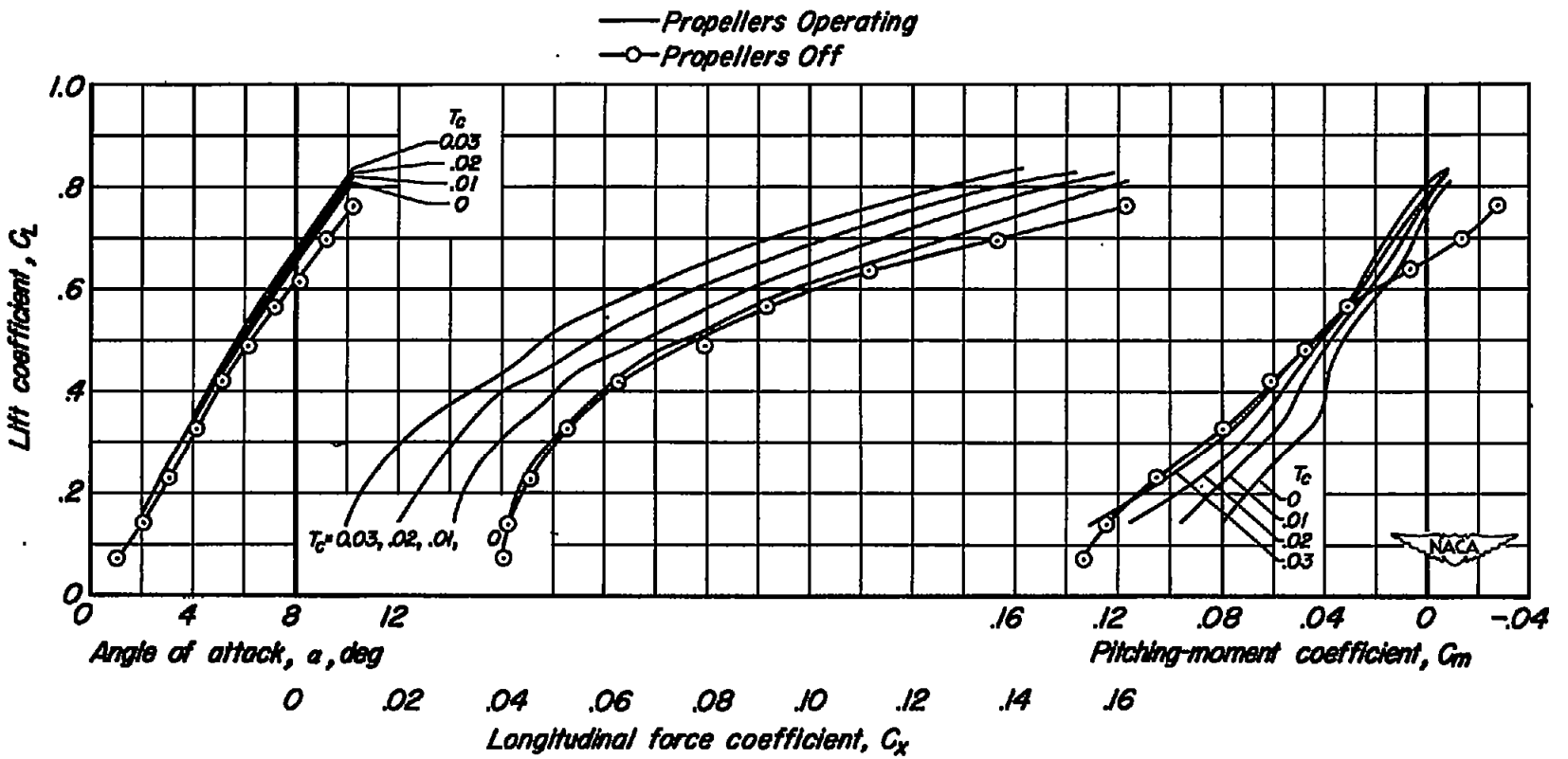
(c) M = 0.83

Figure 47.- Continued.



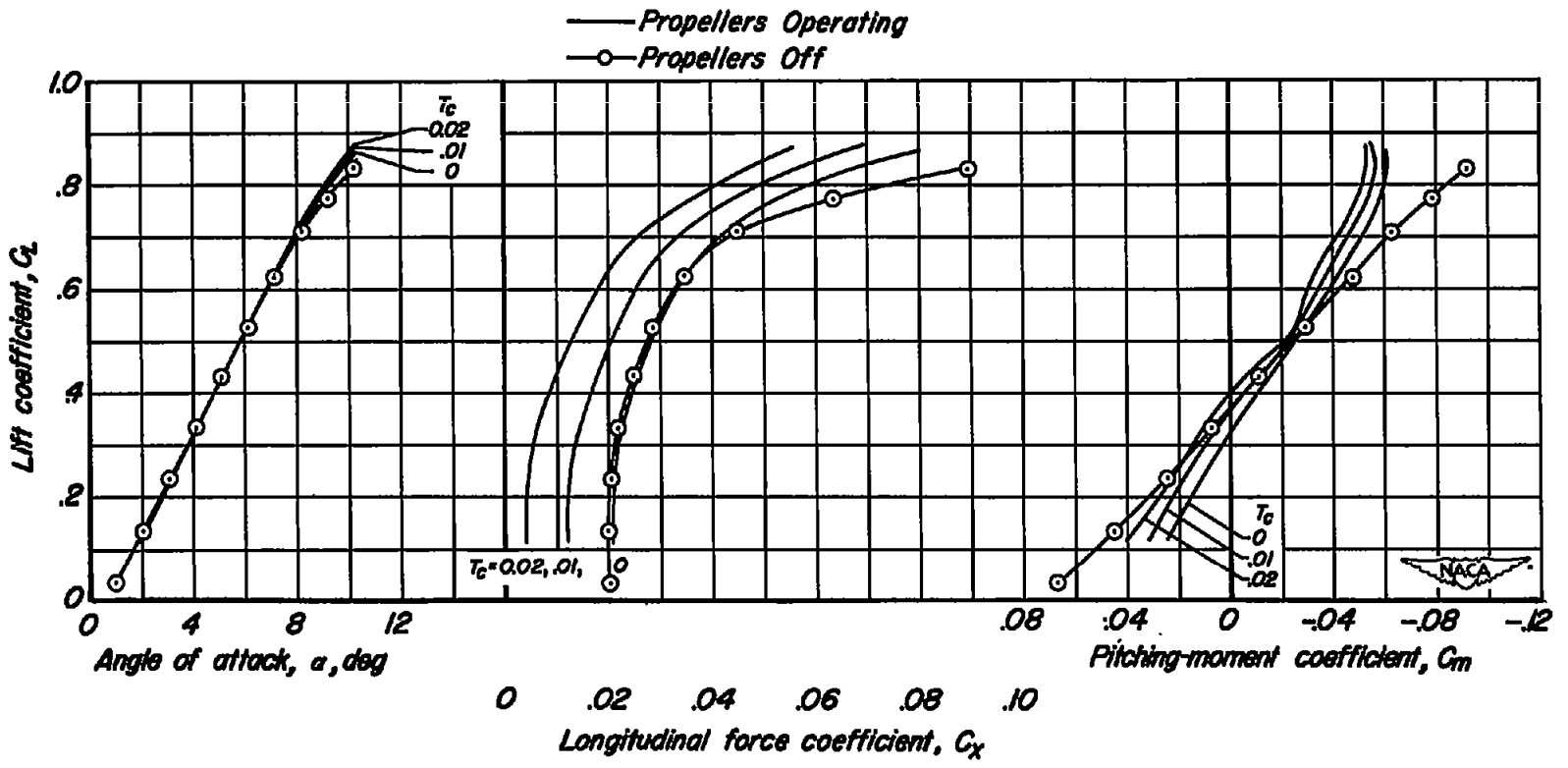
(d) M = 0.86

Figure 47.- Continued.



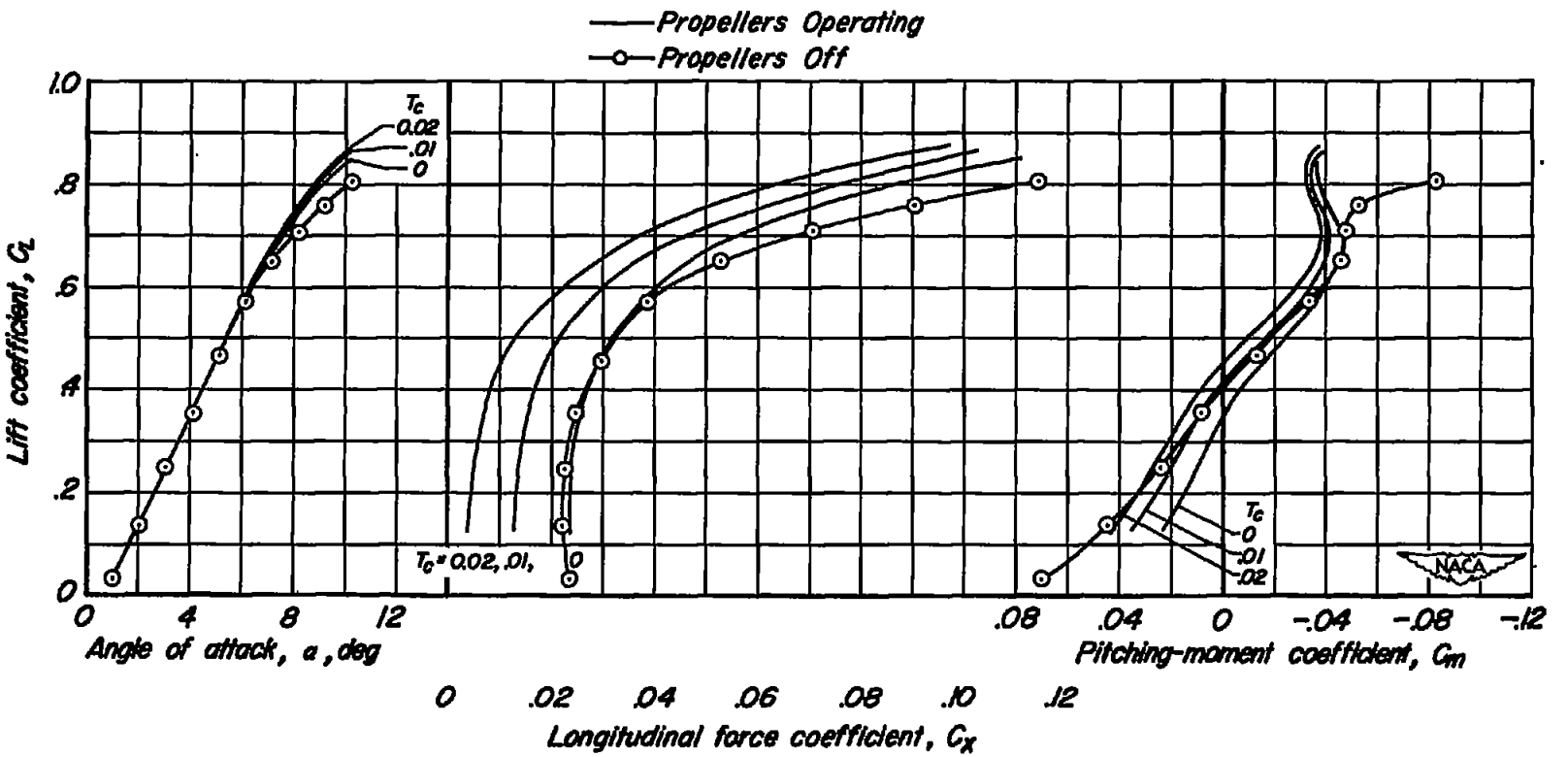
(e) M = 0.90

Figure 47.- Concluded.



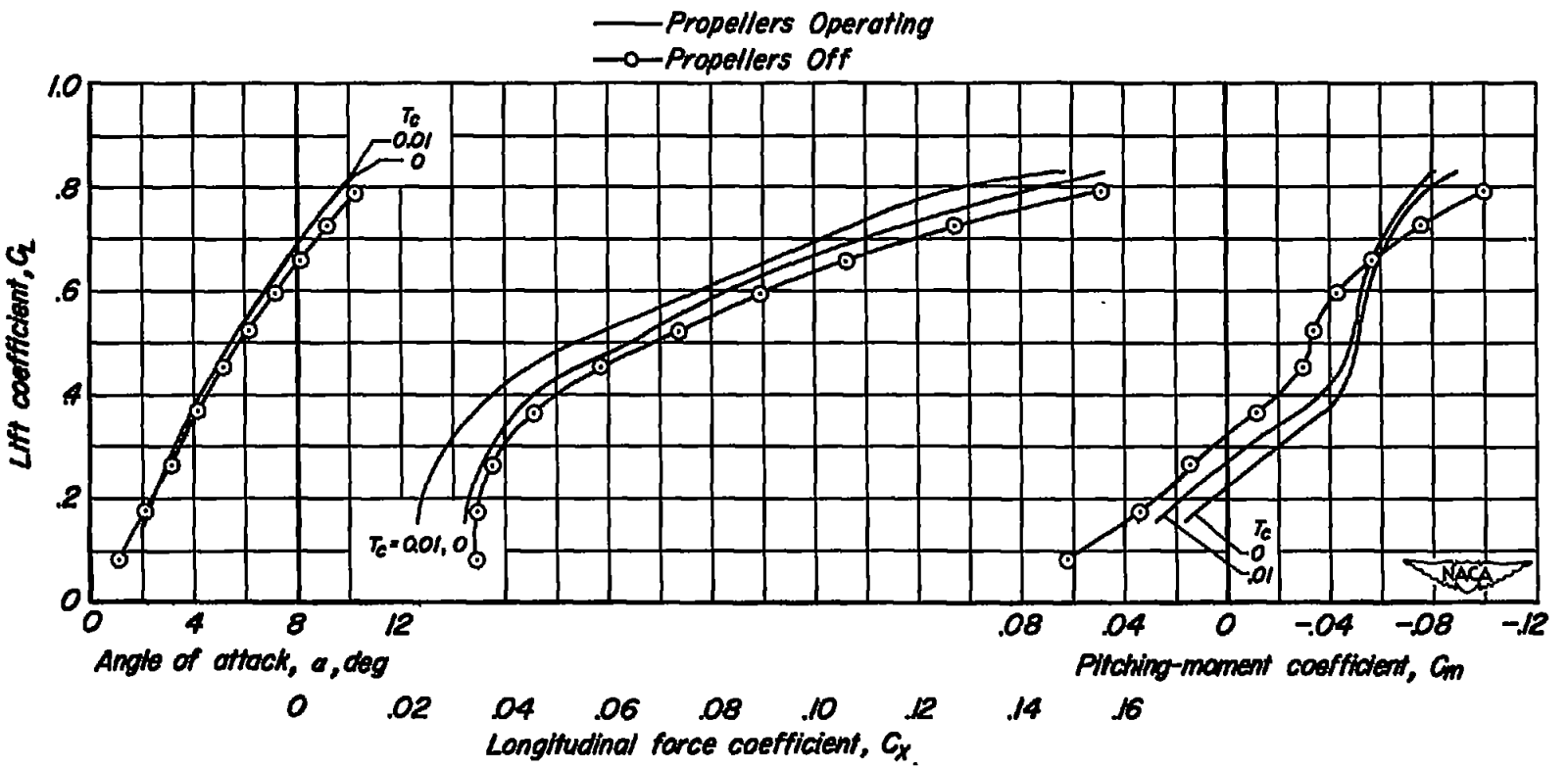
(a) M = 0.70

Figure 48.- The effect of operating propellers on the longitudinal characteristics of the model. Tail height = 0 b/2, i_t = -4°, β = 51°, R = 2,000,000.



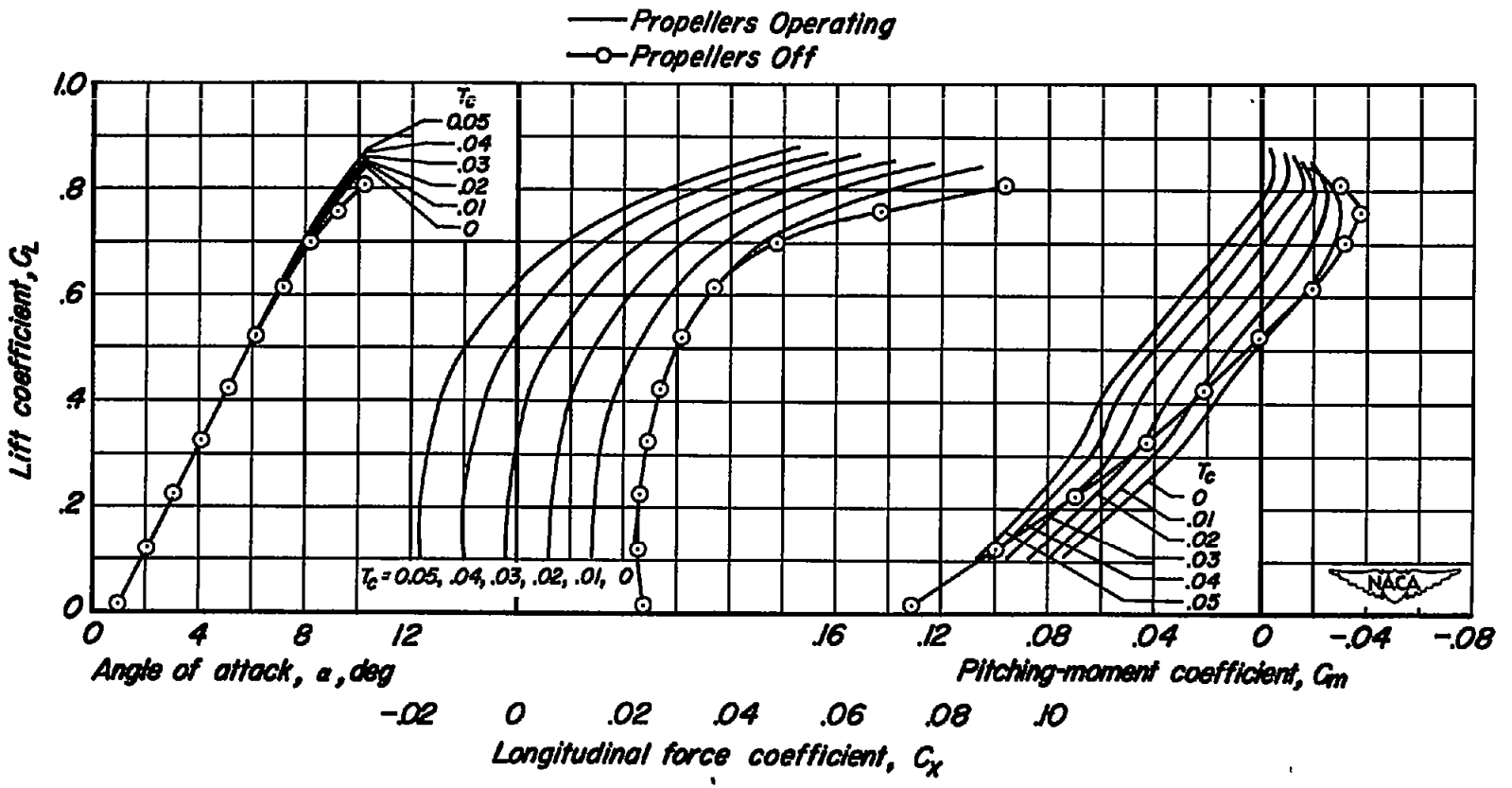
(b) M = 0.80

Figure 48.- Continued.



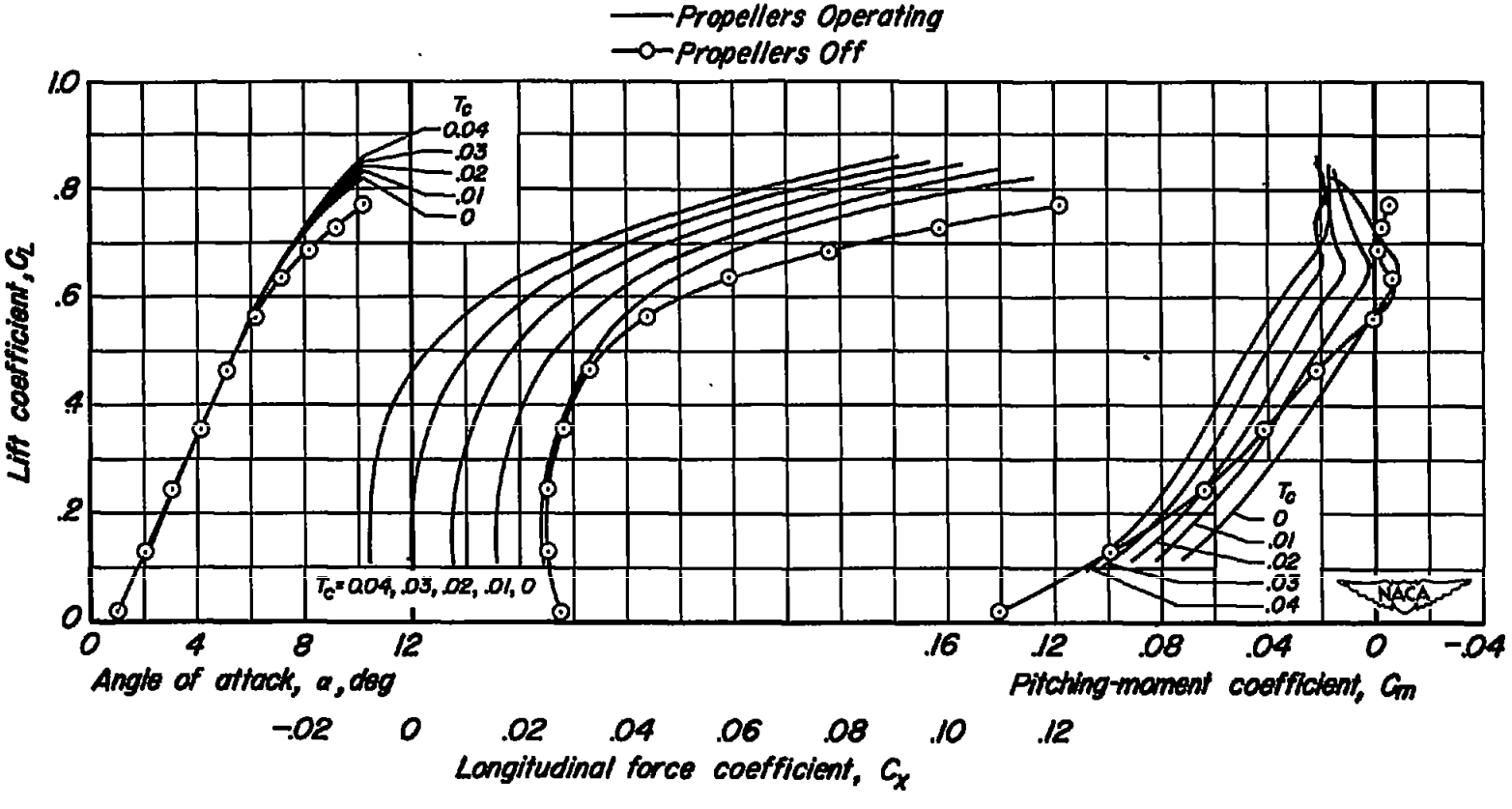
(c) M = 0.90

Figure 48.- Concluded.



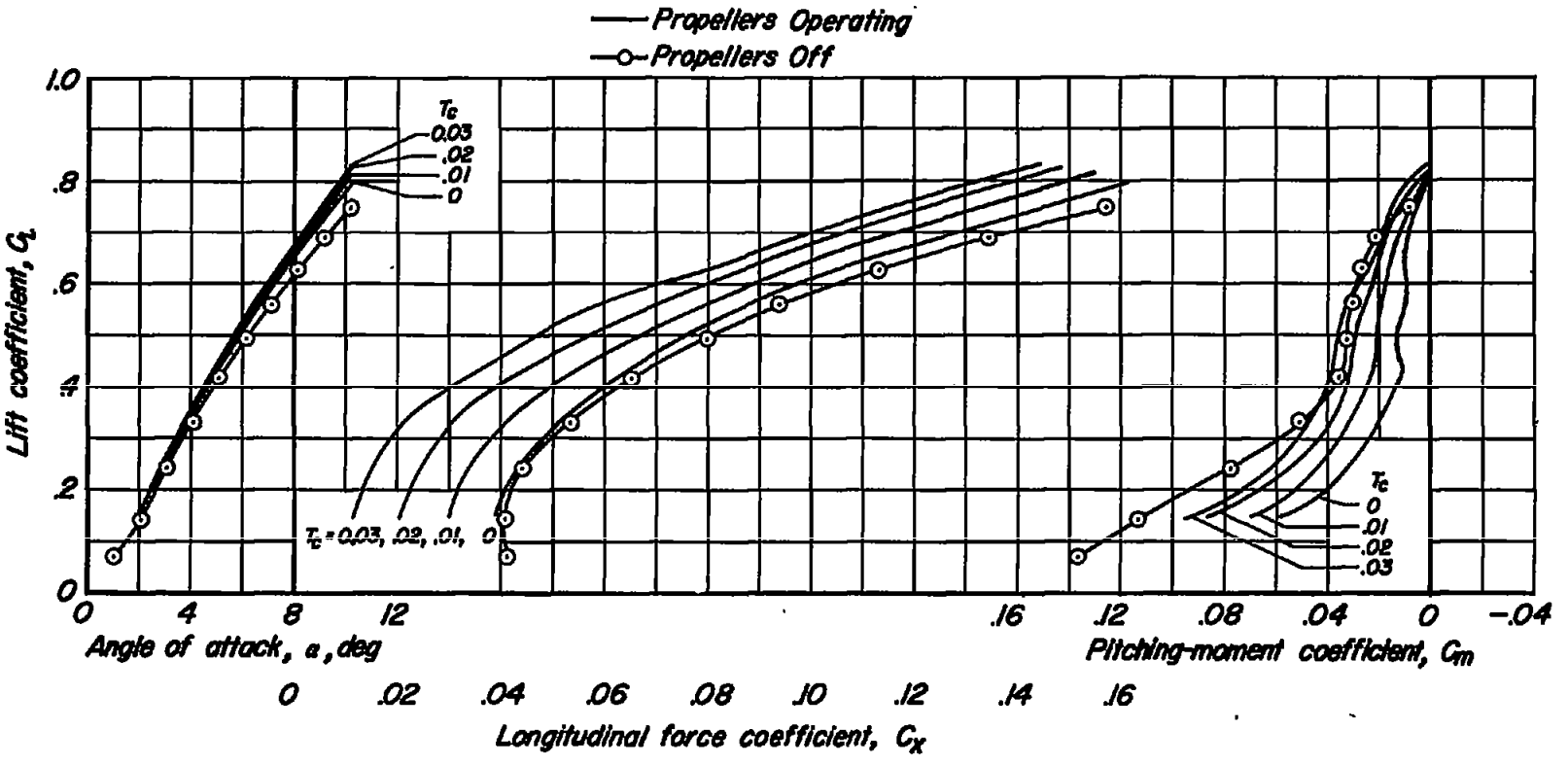
(a) M = 0.70

Figure 49.- The effect of operating propellers on the longitudinal characteristics of the model. Tail height = 0.10 b/2, $i_t = -4^\circ$, $\beta = 51^\circ$, R = 1,000,000.



(b) M = 0.80

Figure 49.- Continued.



(c) M = 0.90

Figure 49.- Concluded.

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