

QCX
Avro
CF105
Misc-8

C-105

EXTRACT

from

ANALYZED

STABILITY REPORTS

August 1954.

ANALYZED



45724
15-784941

TECHNICAL DEPARTMENT (Aircraft)

REPORT No _____

SHEET No _____

AIRCRAFT:

C-105

PREPARED BY _____

DATE _____

August 1954.

CHECKED BY _____

DATE _____

APPENDIX A

EXTRACT

from

A.V. ROE STABILITY REPORTS

Classification cancelled / Changed to UNCLASS

By authority of AVRS

Date 27 Sept 96

Signature [Signature]

Unit / Rank / Appointment AVRS

1. Yawing Moment due to Sideslip

1.1 $C_{N\beta}$ vs M $- 2^\circ < \beta < +2^\circ$

1.2 $C_{N\beta}$ vs M $2^\circ < \beta < 8^\circ$

1.3 $C_{N\beta}$ vs Q $M = .5$

1.4 C_N vs β $Q = 2^\circ$

2. Rolling Moment due to Sideslip

2.1 $C_{l\beta}$ vs M $Q = 0$

2.2 $C_{l\beta}$ vs M $Q = 2^\circ$

2.3 $C_{l\beta}$ vs M $Q = 6^\circ$

2.4 $C_{l\beta}$ vs Q $M = .5$

2.5 C_l vs β $Q = 2^\circ$

3. Rudder Effectiveness

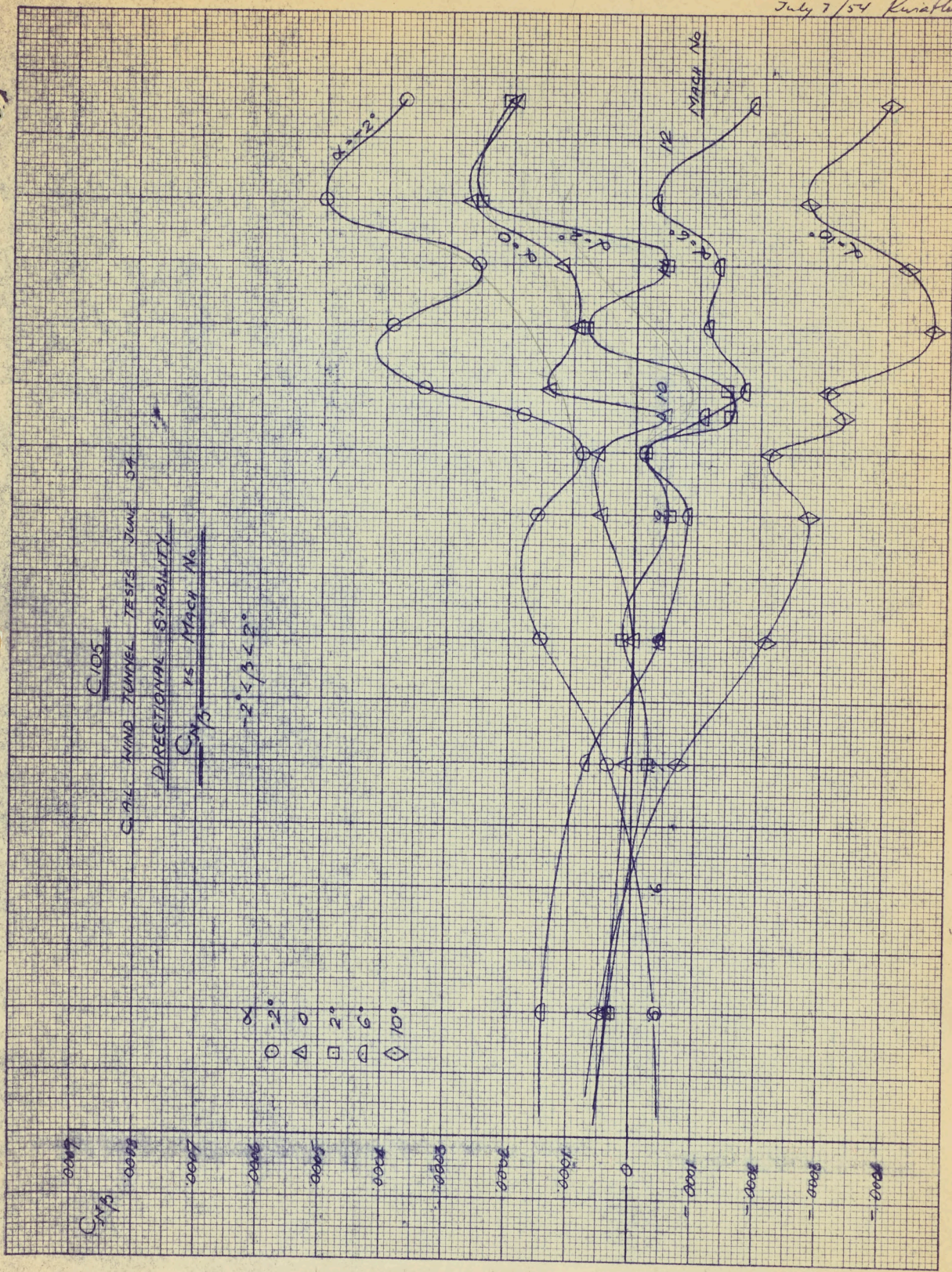
3.1 $C_{N\delta_r}$ vs Q $M = .5$

4. Aileron Effectiveness

4.1 $C_{l\delta_a}$ vs Q $M = .5$

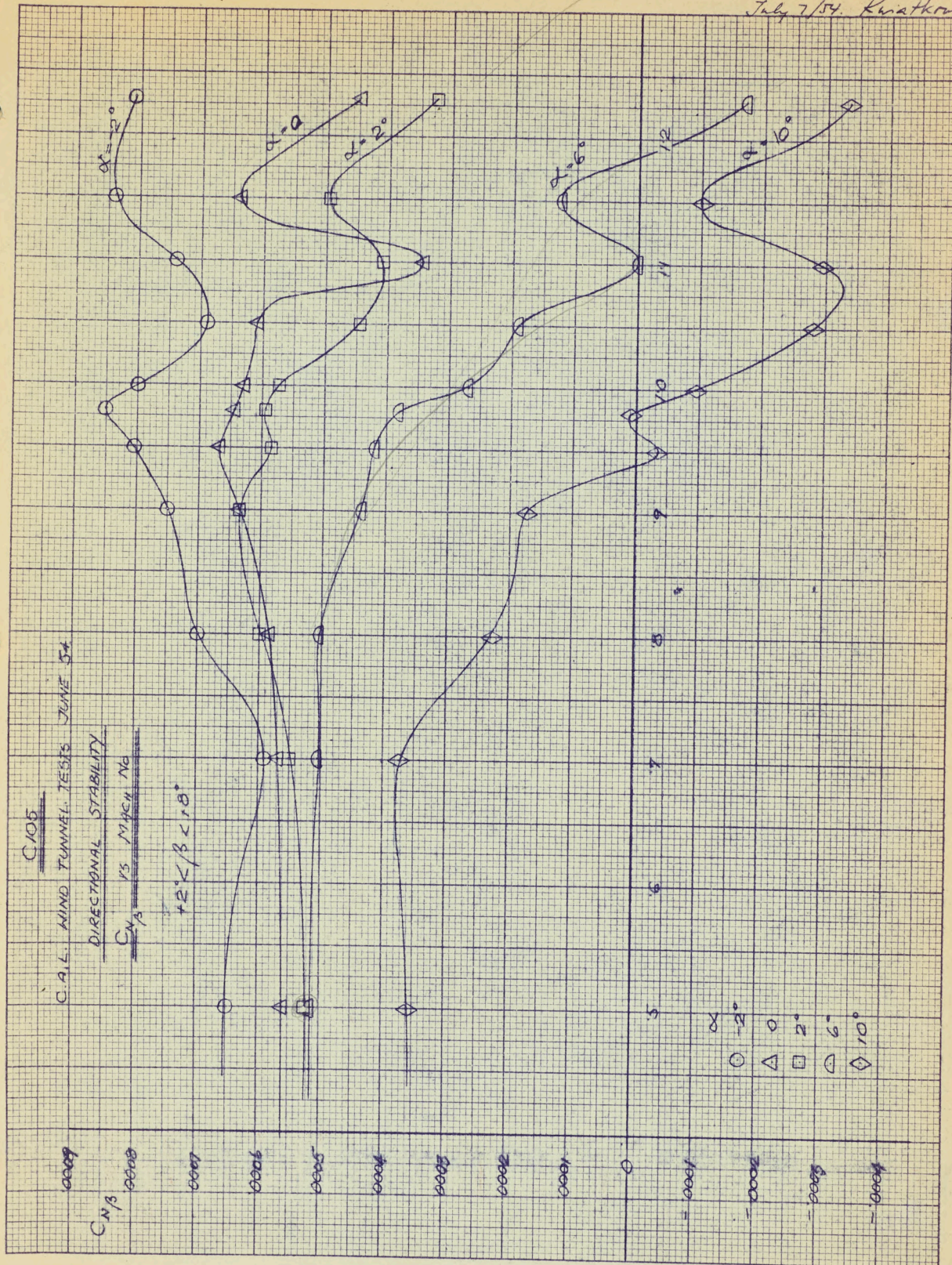
3.1.1.1. P/H.T/30
 July 7/54 Karakoram

31612 KEUFEL & BESSER CO.
 10 X 10 TO THE INCH AND 5/16 IN. HOLE ACCURACY
 MADE IN U.S.A.

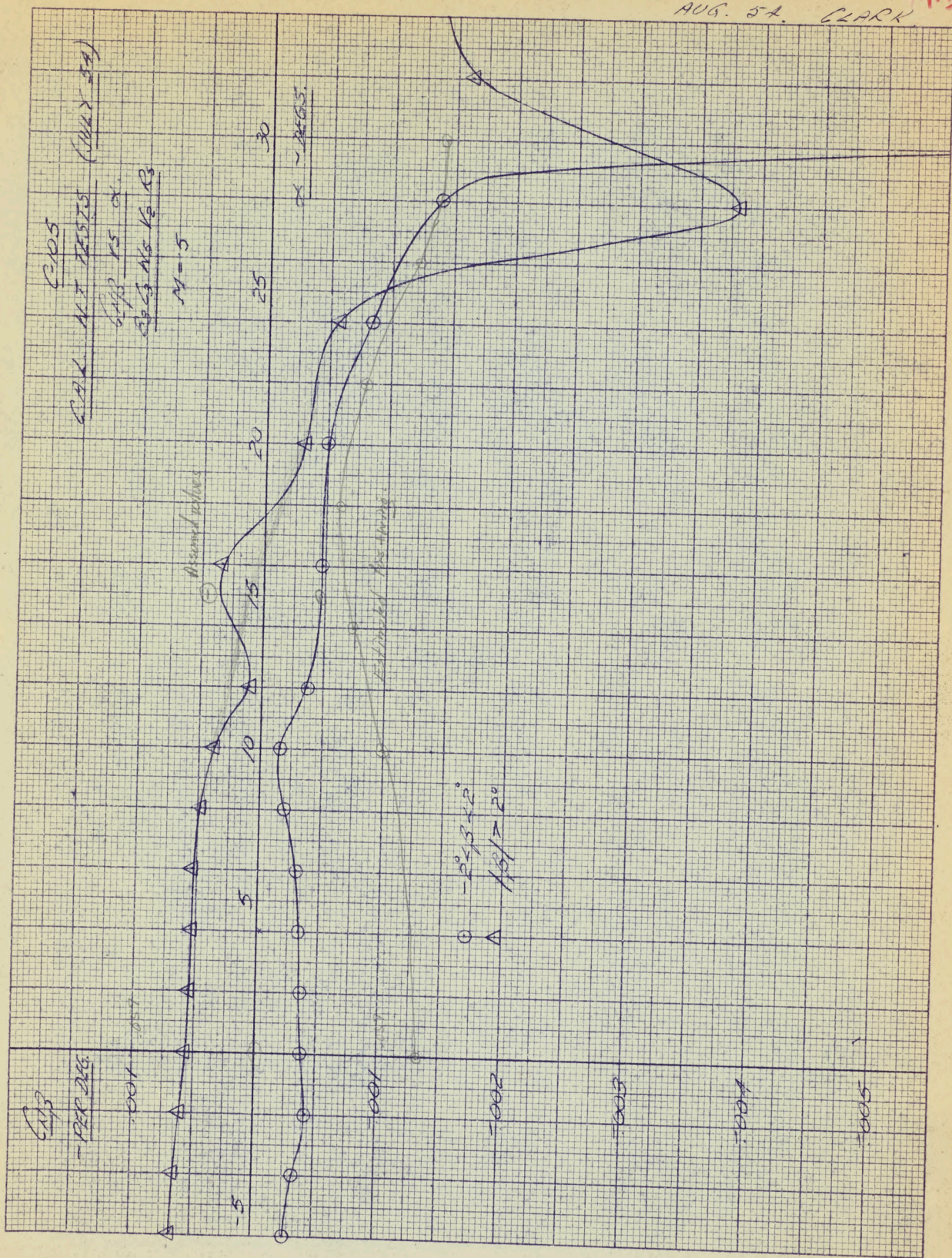


3.1.1.2. P/W.T./30 1.2
 July 7/54. Kwatkonk

38513 KUFEL & ESSER CO.
 10 X 10 IN. X 5.5 IN. 50 LBS. ACCURAC.
 MADE IN U.S.A.



P/W.T./40
 1.3
 AUG. 57. CLARK



June 23/74. Kammkond.

C105
C.A.L. WIND TUNNEL TESTS JUNE 57

C_N vs β

$\alpha = 2^\circ$

NEW / CANOPY

FIN ON

RUN MACH No

711 ○ 1.23

710 □ 1.15

712 △ 1.10

713 ◇ 1.05

715 ◆ 1.00

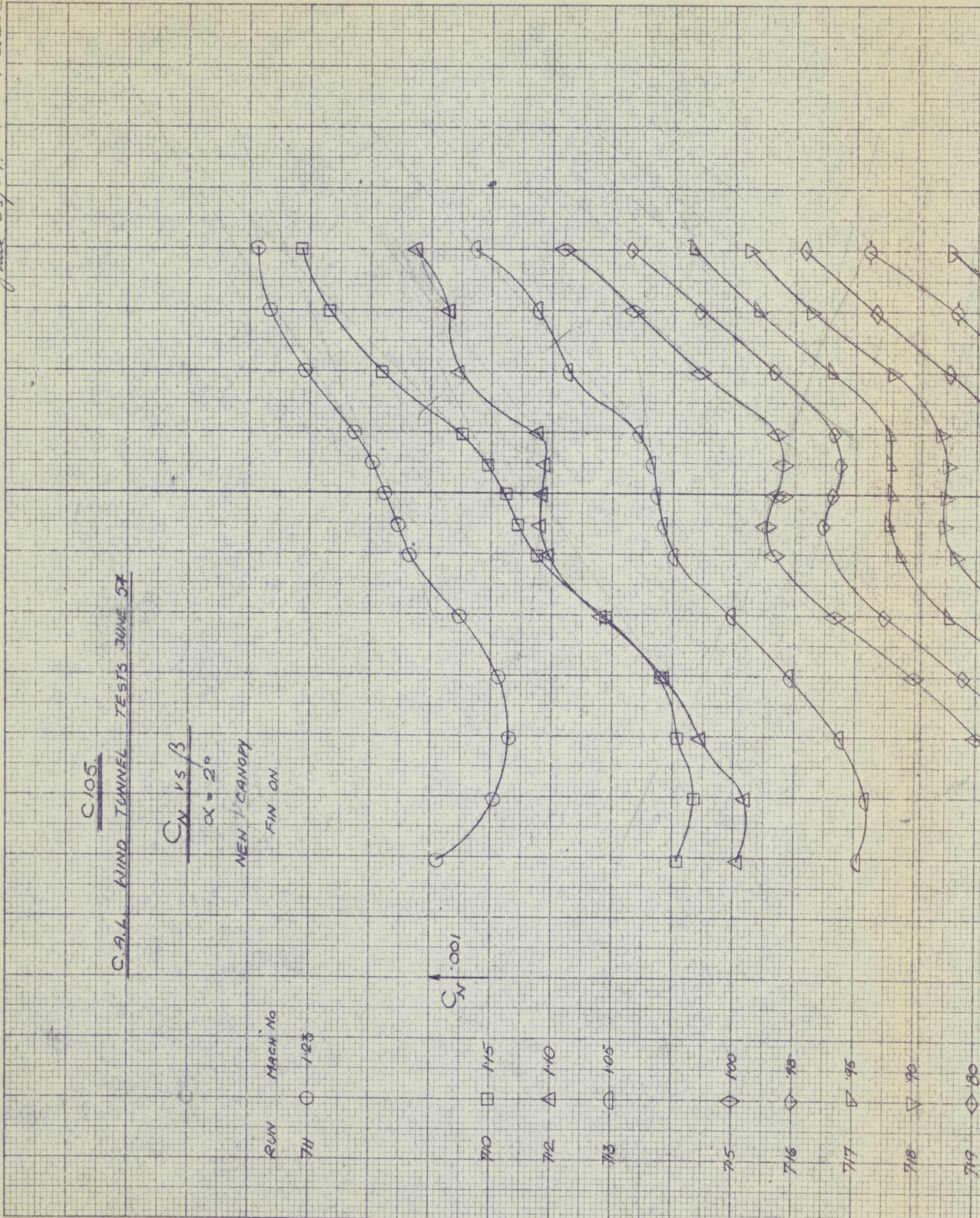
716 ◇ 98

717 ▽ 95

718 ▽ 90

719 ◇ 80

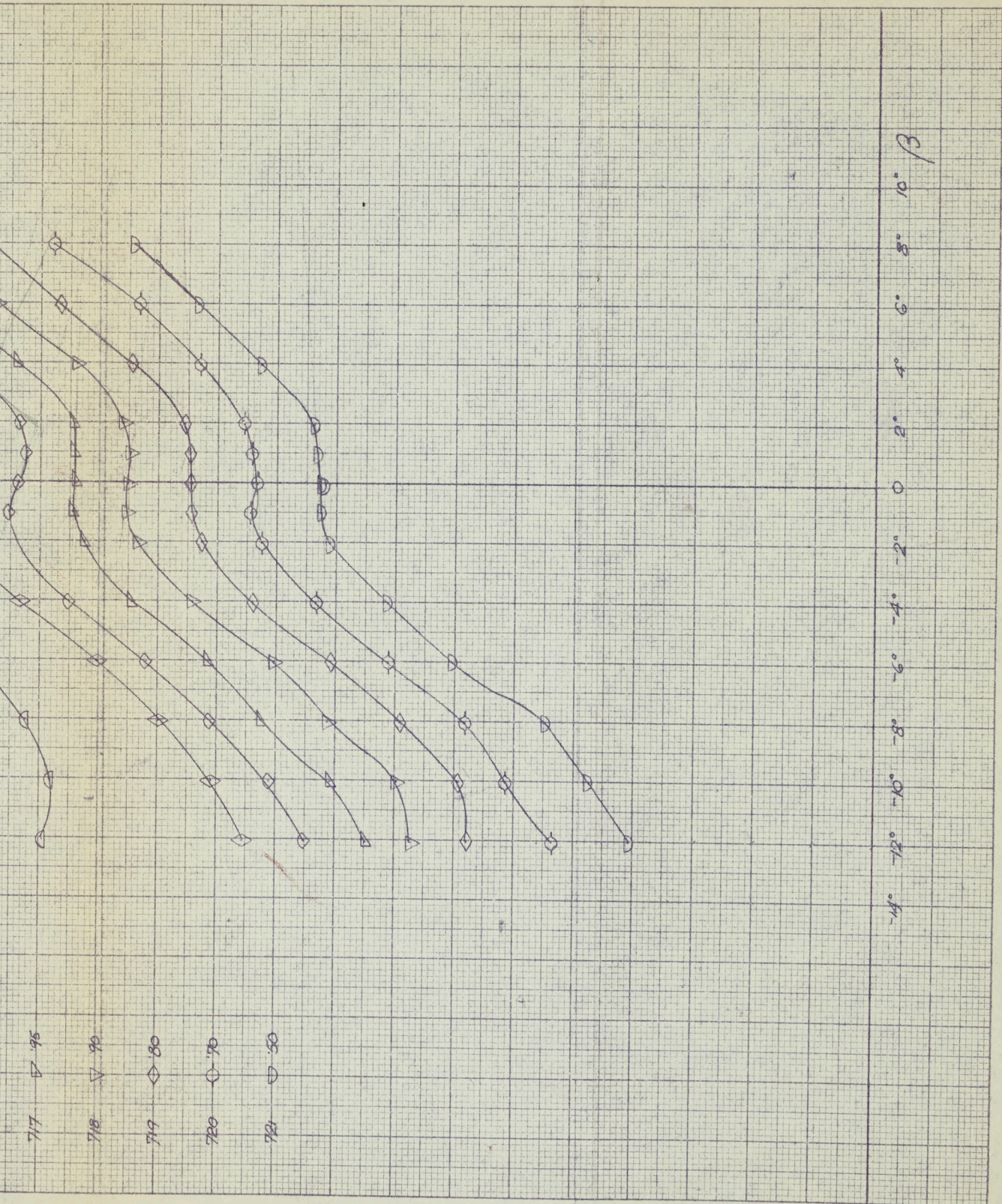
$C_N \cdot 001$



P/W.T./29.

3.14.

1-1-4



C-105
C.A.L. WIND TUNNEL TESTS JUNE '54

CAP vs. M

TAIL ON

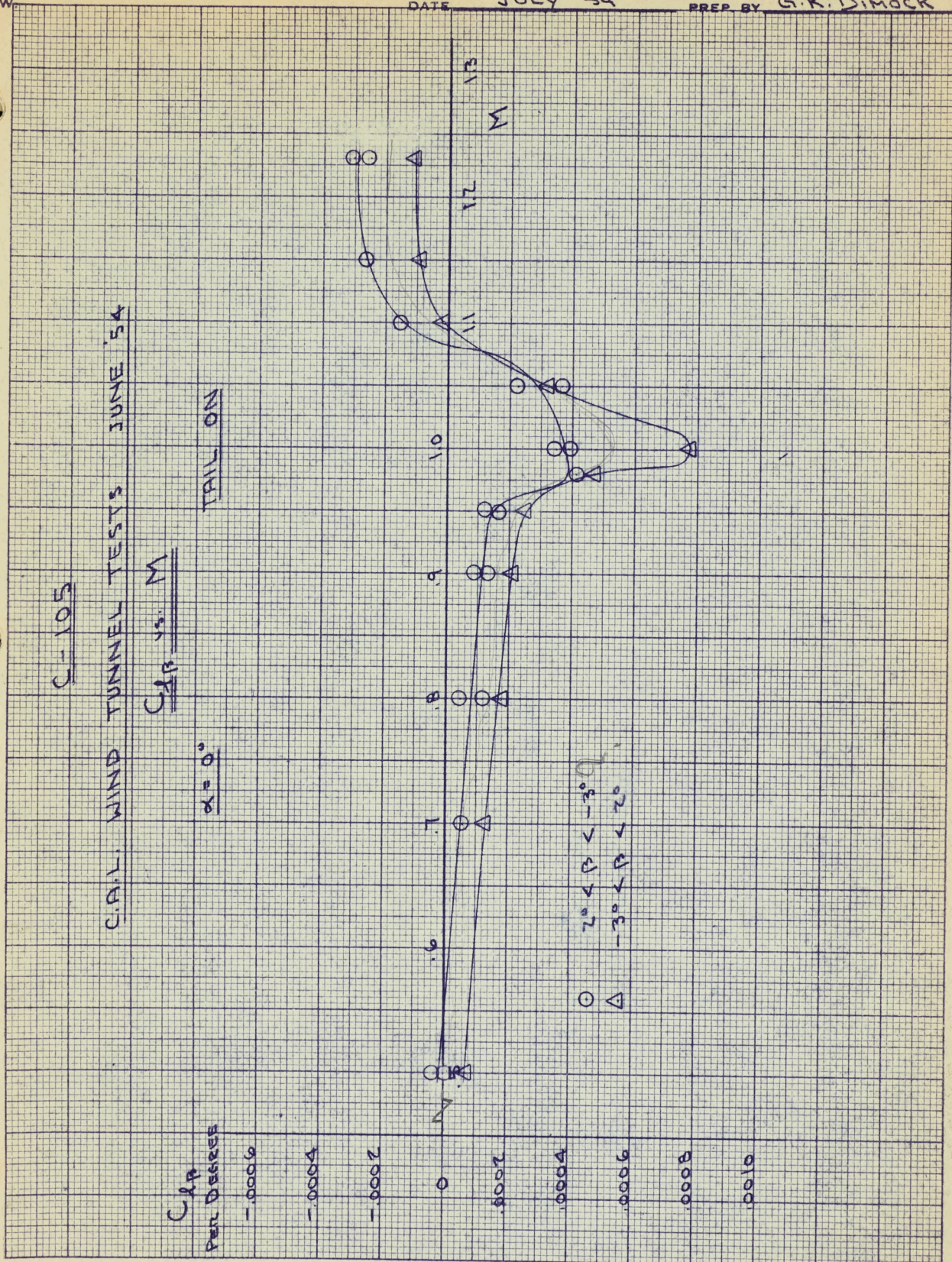
$\alpha = 0^\circ$

CAP
PER DEGREE

-0.0006
-0.0004
-0.0002
0
0.0002
0.0004
0.0006
0.0008
0.0010

0.6 0.7 0.8 0.9 1.0 1.1 1.2 1.3
M

○ $2^\circ < \beta < -3^\circ$
△ $-3^\circ < \beta < 2^\circ$



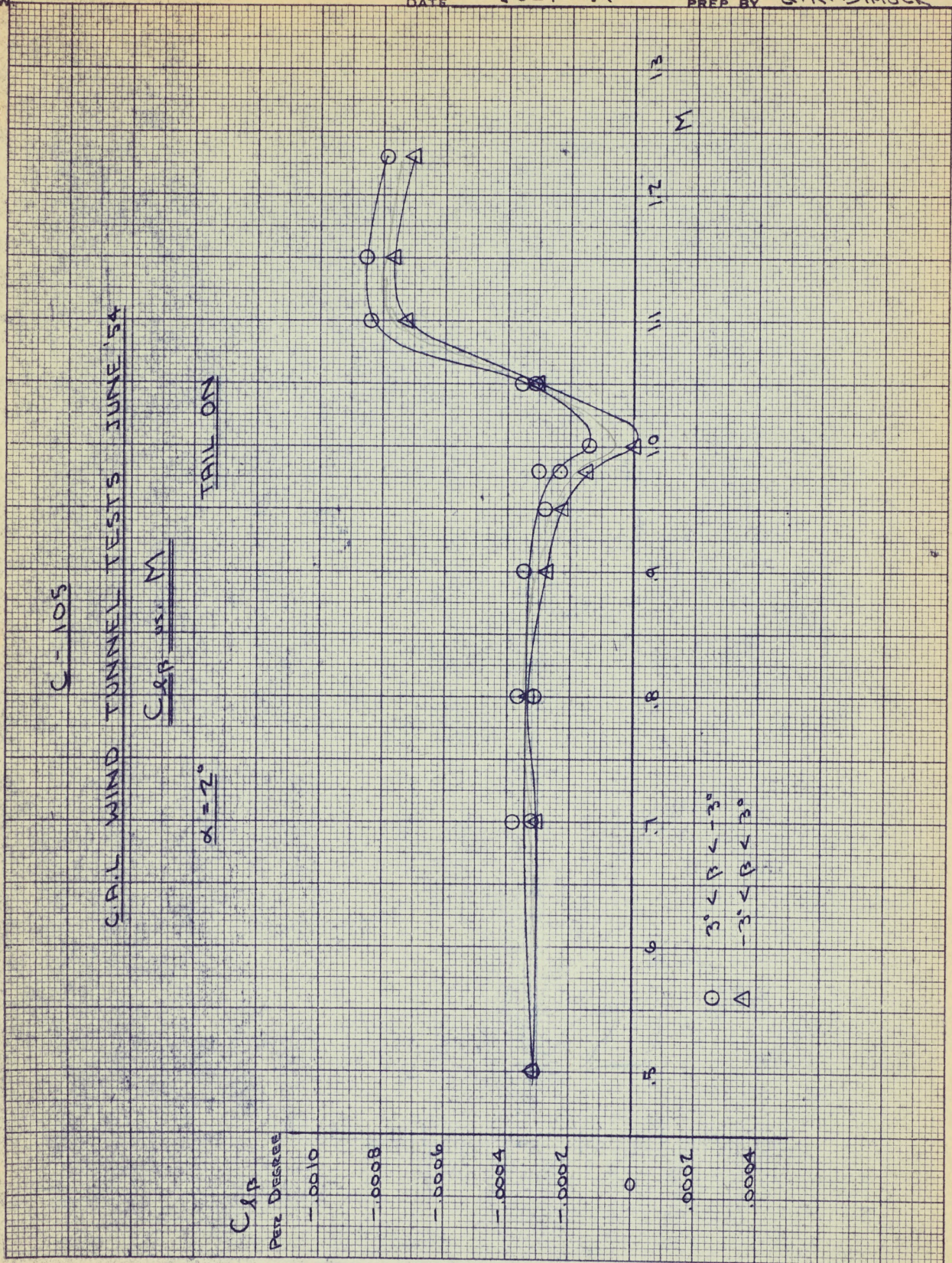
359.12 KUEFFEL & SESSLER CO.
10 X 10 TO THE 1/2 INCH, 5th LINE ACCENTED.
MADE IN U.S.A.

C-105
C.A.L. WIND TUNNEL TESTS JUNE '54

C_{LP} vs. M

TAIL ON

$\alpha = 2^\circ$



O $3^\circ < \beta < -3^\circ$
Δ $-3^\circ < \beta < 3^\circ$

359.12 KEUFFEL & ESSER CO.
10 X 10 to the 1/2 inch, 5th lines accented.
MADE IN U.S.A.

2.2.3

C-105
CAL. WIND TUNNEL TESTS JUNE '54

CLP vs. M

$\alpha = 0^\circ$

TAIL ON

CLP
PER DEGREE

-0.0018

-0.0016

-0.0014

-0.0012

-0.0010

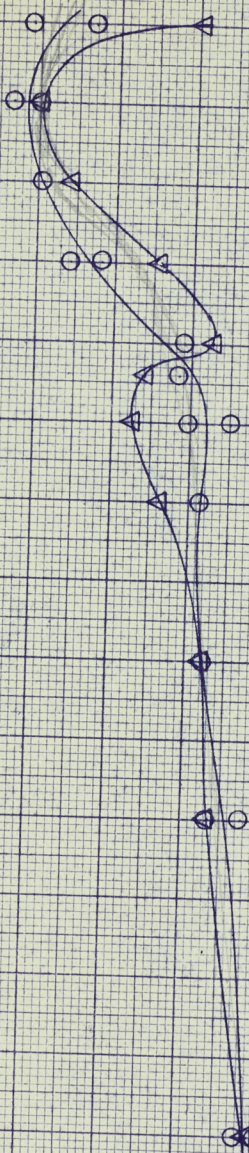
-0.0008

-0.0006

-0.0004

-0.0002

0



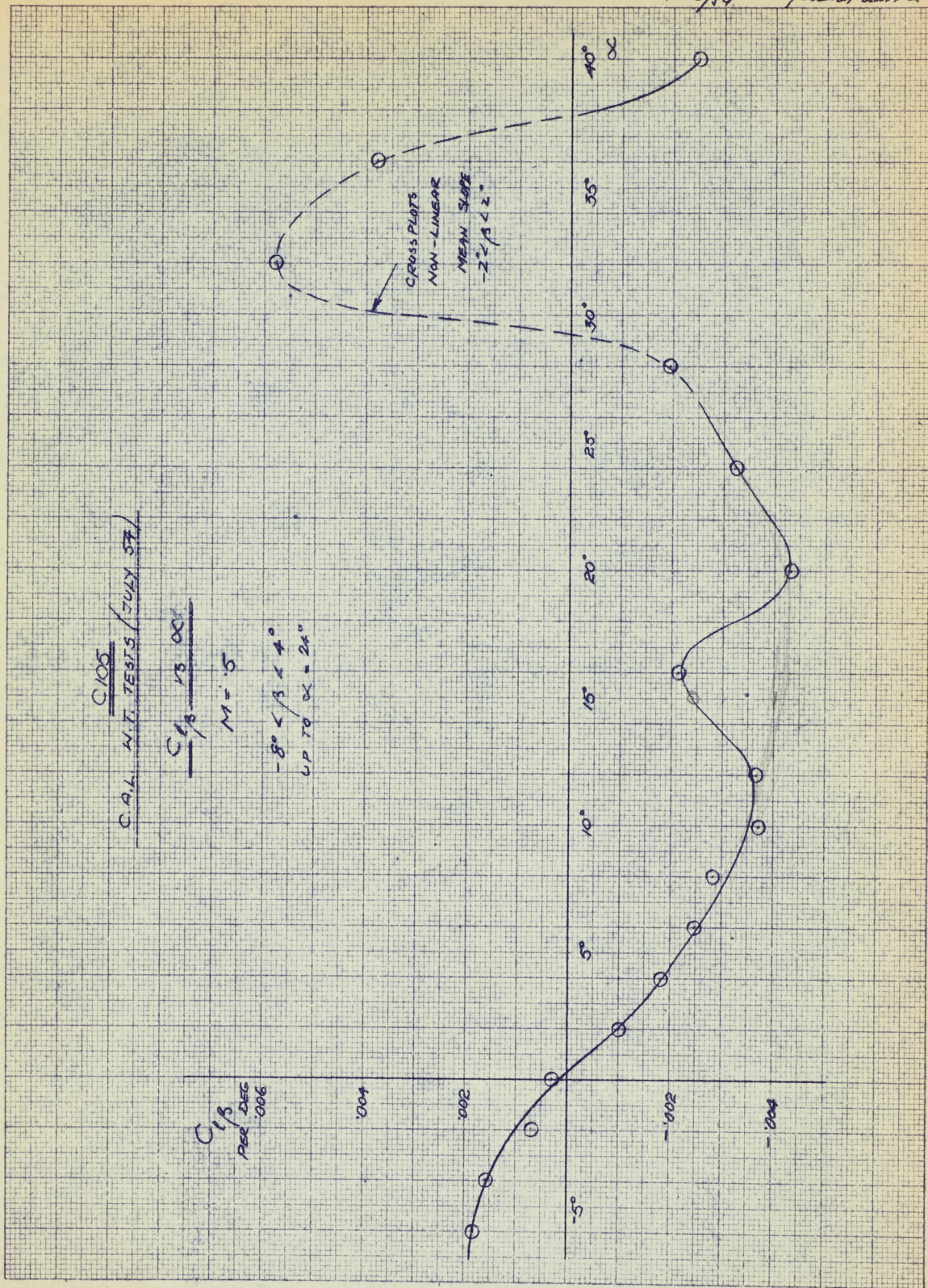
M

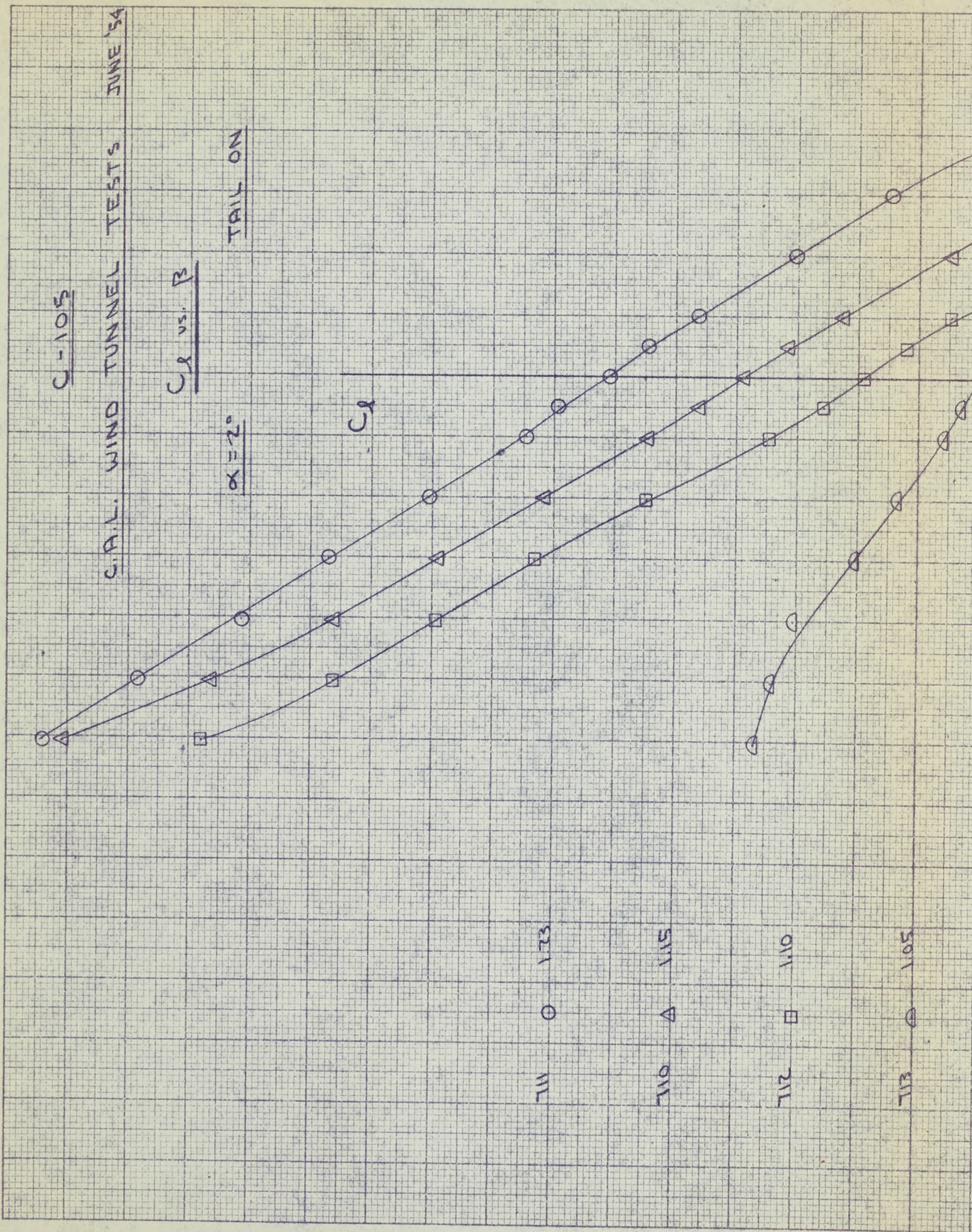
C105
CAL. N.T. TESTS (JULY 57)

C₁₃ VS. α
 M = .5

-8° < α < 4°
 UP TO α = 24°

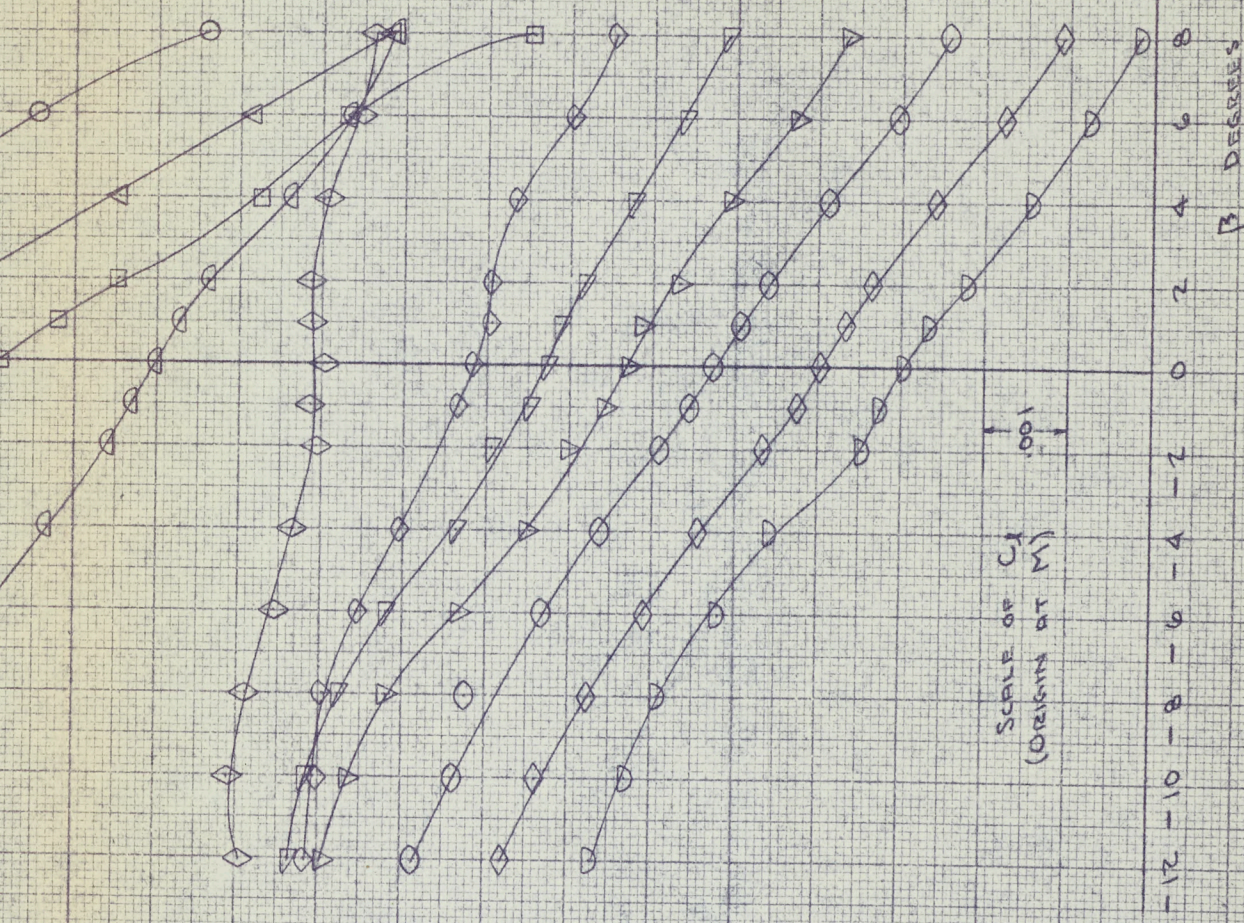
C₁₃
 PER DEG
 .006





10.14 P/W.T. 129
JULY 58 G.K. DIMOCK

2.5



713 1.05
715 1.00
716 0.98
717 0.95
718 0.90
719 0.80
720 0.70
721 0.50

Run No. March No.

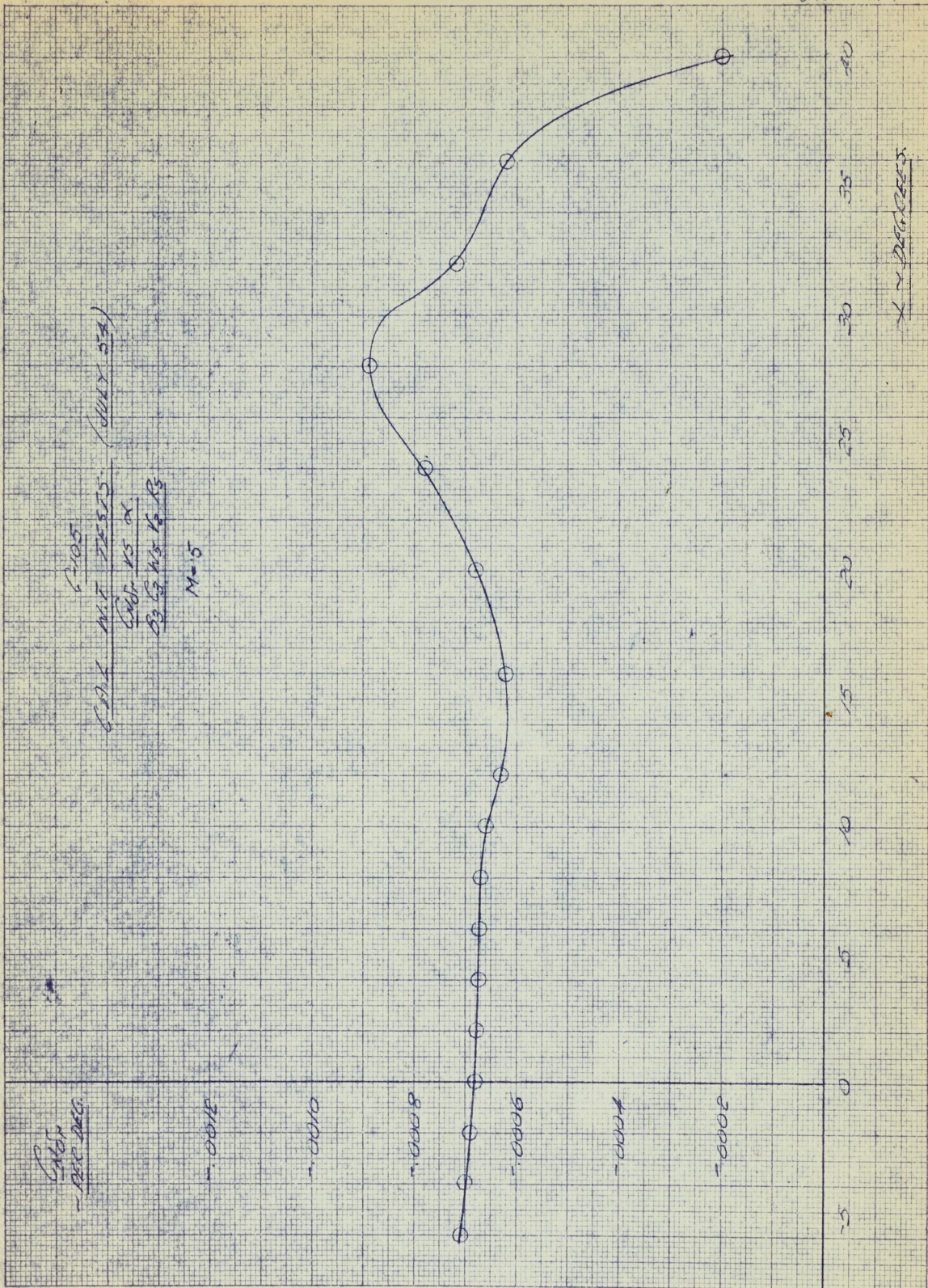
SCALE OF C_1
(ORIGINAL AT V)

0.001

P/W T. 140.
33.1

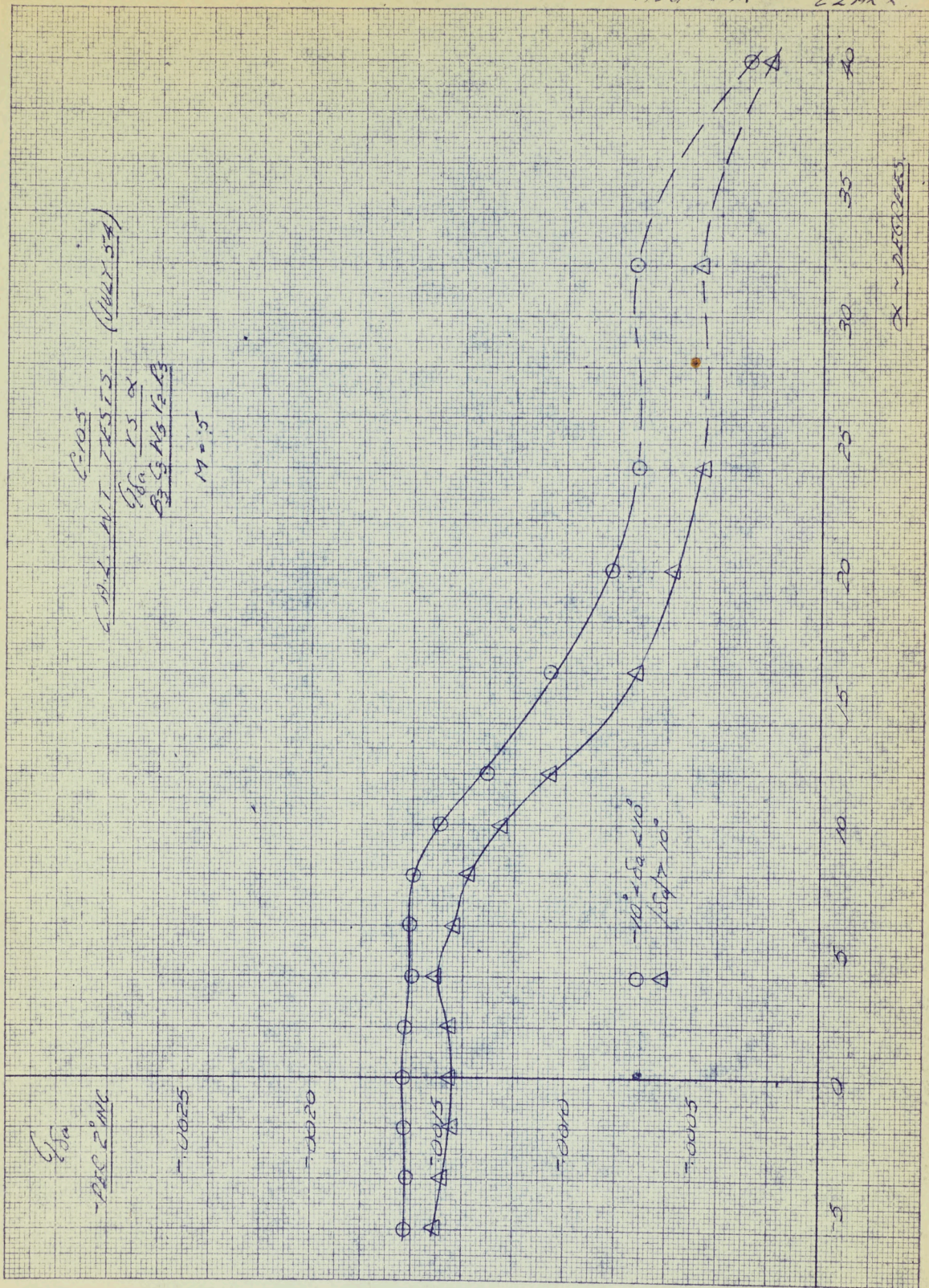
AUG 21.

CLARK.



AUG 54.

P/W.T / AP
 4-1
 CLARK





W. B. E. SMITH
BOSTON
MADE IN U.S.A.