

QC
Avro
C-105
P/AD/55

QCX
Avro
CF105
P-AD-55

(21)

FILE IN VAULT

C-105 ANALYZED P/Aero Data/55

LATERAL STABILITY DERIVATIVES

IN 4 'G' FLIGHT

WING NOTCHED AND EXTENDED

copy 5

April 1955

UNCLASSIFIED



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et de génie mécanique

TO
A

DATE

Report no.: QCX - AVRO - CF105 - P-AD-55

has been

☐

downgraded to: _____

☒

de-classified

by (Name): Michel W. Drapeau

(Dept.): A/DND Coordinator, Access to Information

Date: Dec. 7, 1992

R. Anger
Signature



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A.V. ROE CANADA LIMITED

MALTON - ONTARIO

TECHNICAL DEPARTMENT (Aircraft)

AIRCRAFT:

REPORT NO. P/AERO DATA/55

FILE NO.

NO. OF SHEETS:

TITLE:

ANALYZED

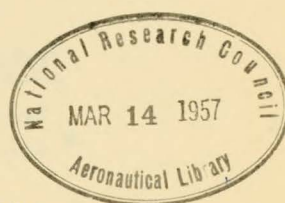
G-105

LATERAL STABILITY DERIVATIVES

IN 4 "G" FLIGHT

WING NOTCHED AND EXTENDED

confirmed as
Classification ~~cancelled~~ / changed to: UNCLASSIFIED
By authority of: DRDA 7/DARET 5-8/DAS Eng 6-4-5
Date: 5 Nov 1992
Signature: B Aubrey
Unit / Rank / Appointment: DSIS 3, Secretary CRAD HQ DRP



PREPARED BY

DATE April 1955

CHECKED BY

DATE

SUPERVISED BY

DATE

APPROVED BY

DATE

ISSUE No.	REVISION No.	REVISED BY	APPROVED BY	DATE	REMARKS

45124

12422576

P/AD/55

1.2

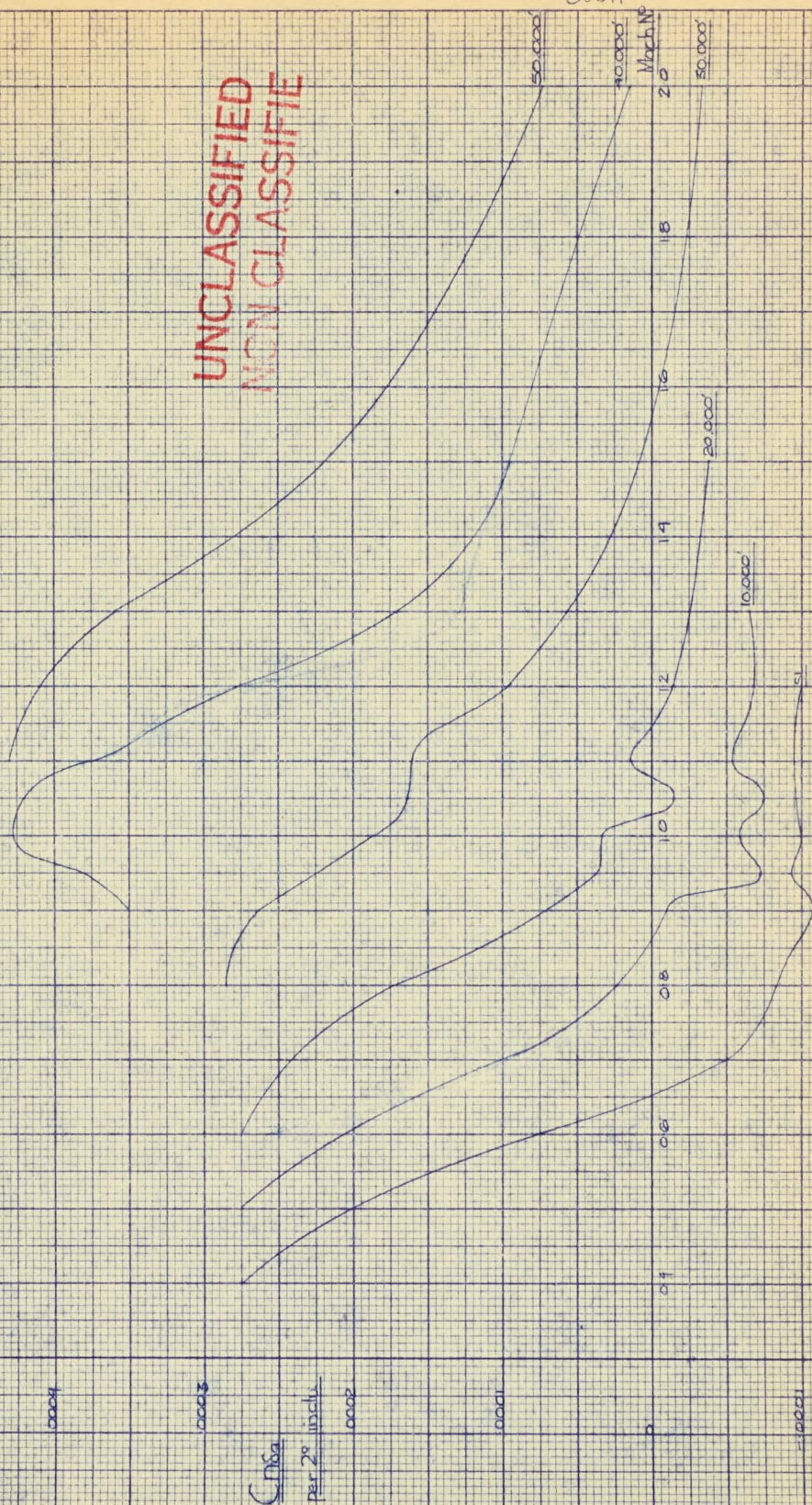
~~R/Stab/75~~

GUSH

~~6.1.4~~

C-105
CNSA VS Mach No
Elastic
1/2 g Flight
Wing Notched and Extended

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P/AD/55

1.3

APRIL 15

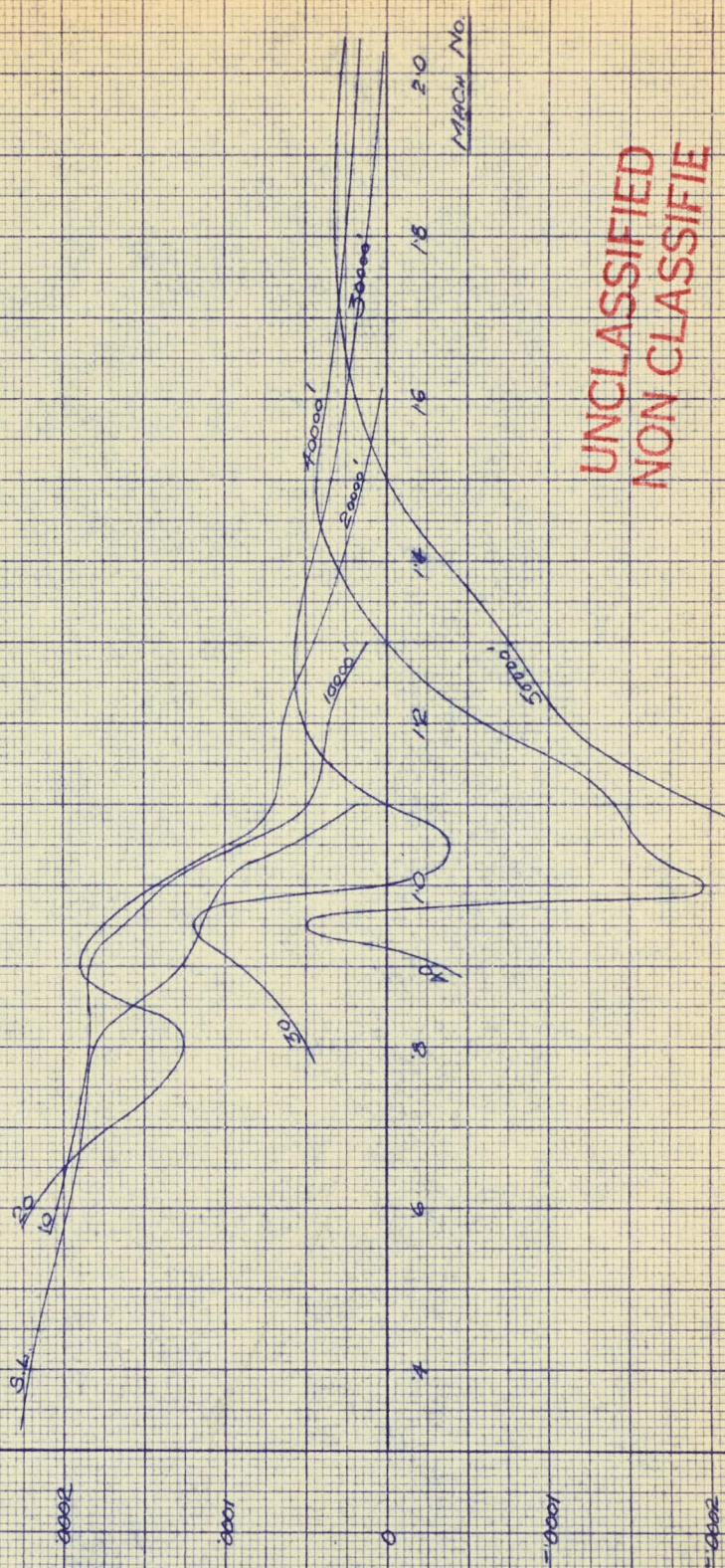
P/STAB/15 6.2.2.

Kniathorn L.

C105
ELASTIC CYCLES 15. MARCH NO
IN 45' FLIGHT

WING NOTCHED & EXTENDED

Cycle
PER 2"
INCLUDED
2003



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P/AD/55

2.1.1

~~P/AD/75~~

GSH

3.3.7

C-105

Cn_δ vs Mach N°

Elastic

1/2 g, Flight

181 K³ 151 K¹⁰

c.g. 0.312

Wing notched and extended

-0.0007

0.0000

0.0005

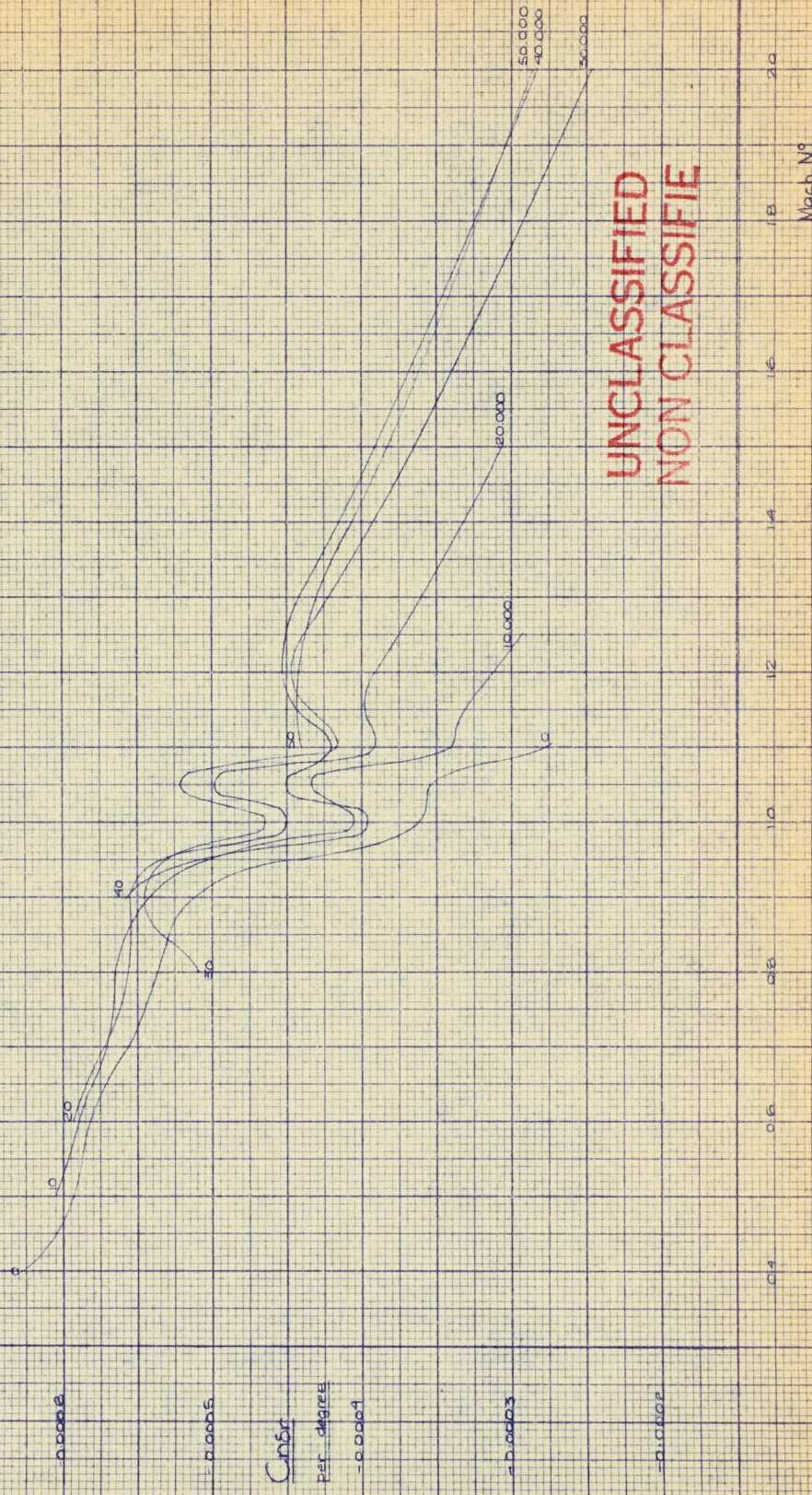
Cn_δ

per degree

-0.0004

0.0003

-0.0002



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Mach N°

P/AD155

2.1, 2

P/Slab/75

GLST

3.4.7

C-105

$C_{m\delta}$ VS Mach No

Elastic

$\delta > 3^\circ$ $\delta < 10^\circ$

$\frac{4g}{\text{Flight}}$

c.g. 0.315

Wing notched and extended

-0.0007

-0.0006

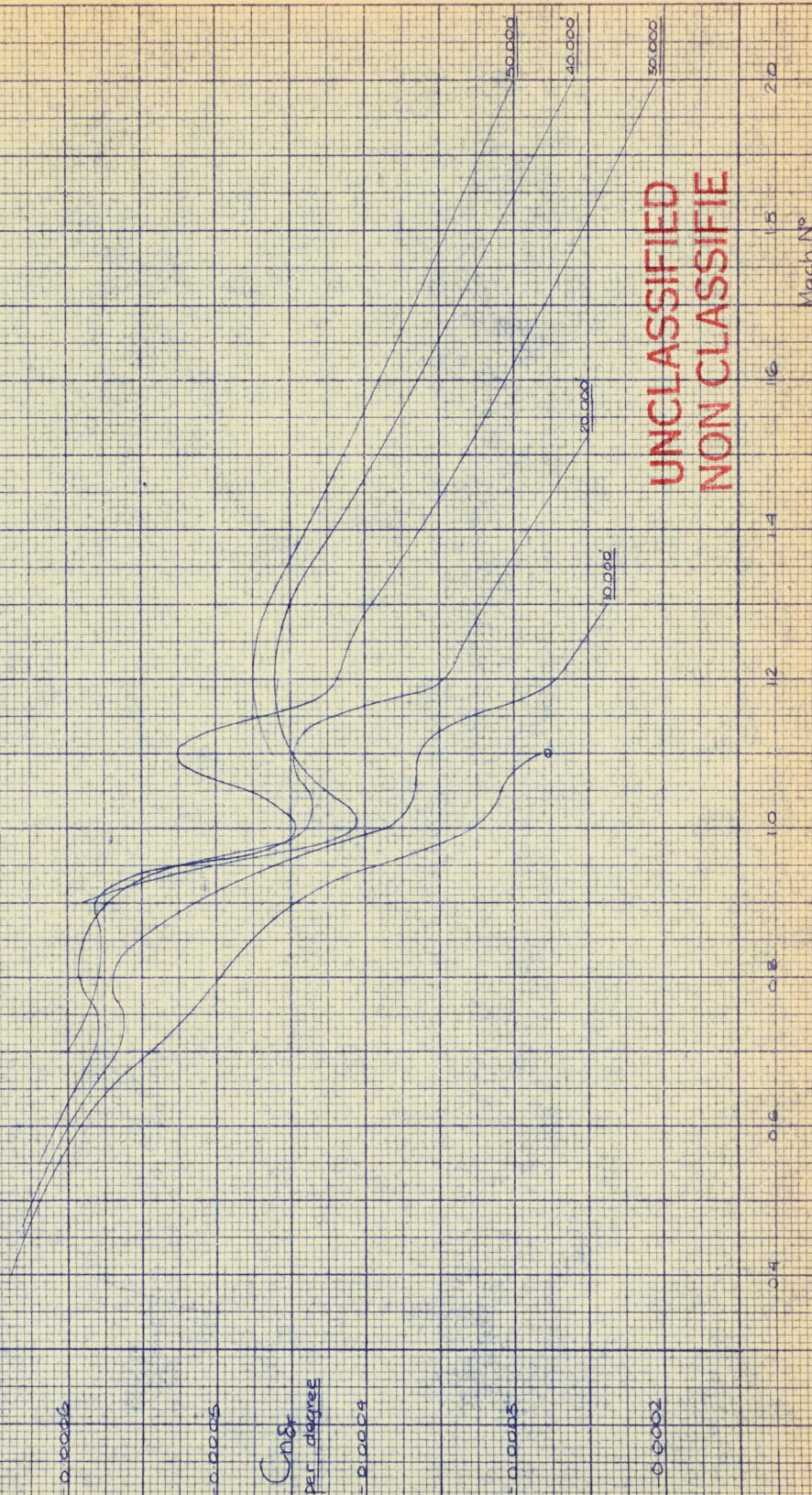
-0.0005

$C_{m\delta}$
per degree

-0.0004

-0.0003

-0.0002



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C-105

Crit vs Mach No

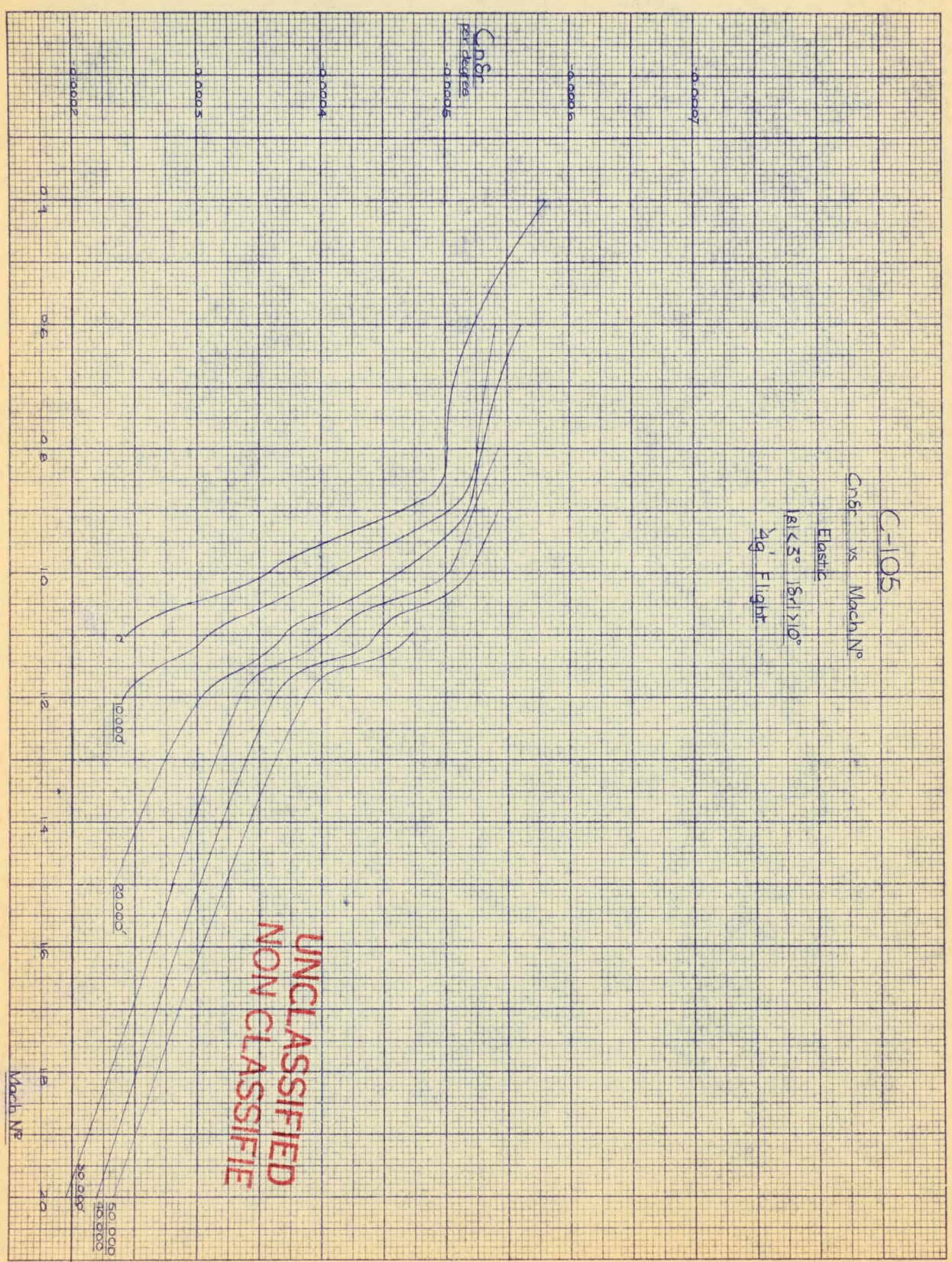
Elastic

18.5° 18.1° 10°

4g Flight

Crit
per Kg/sec

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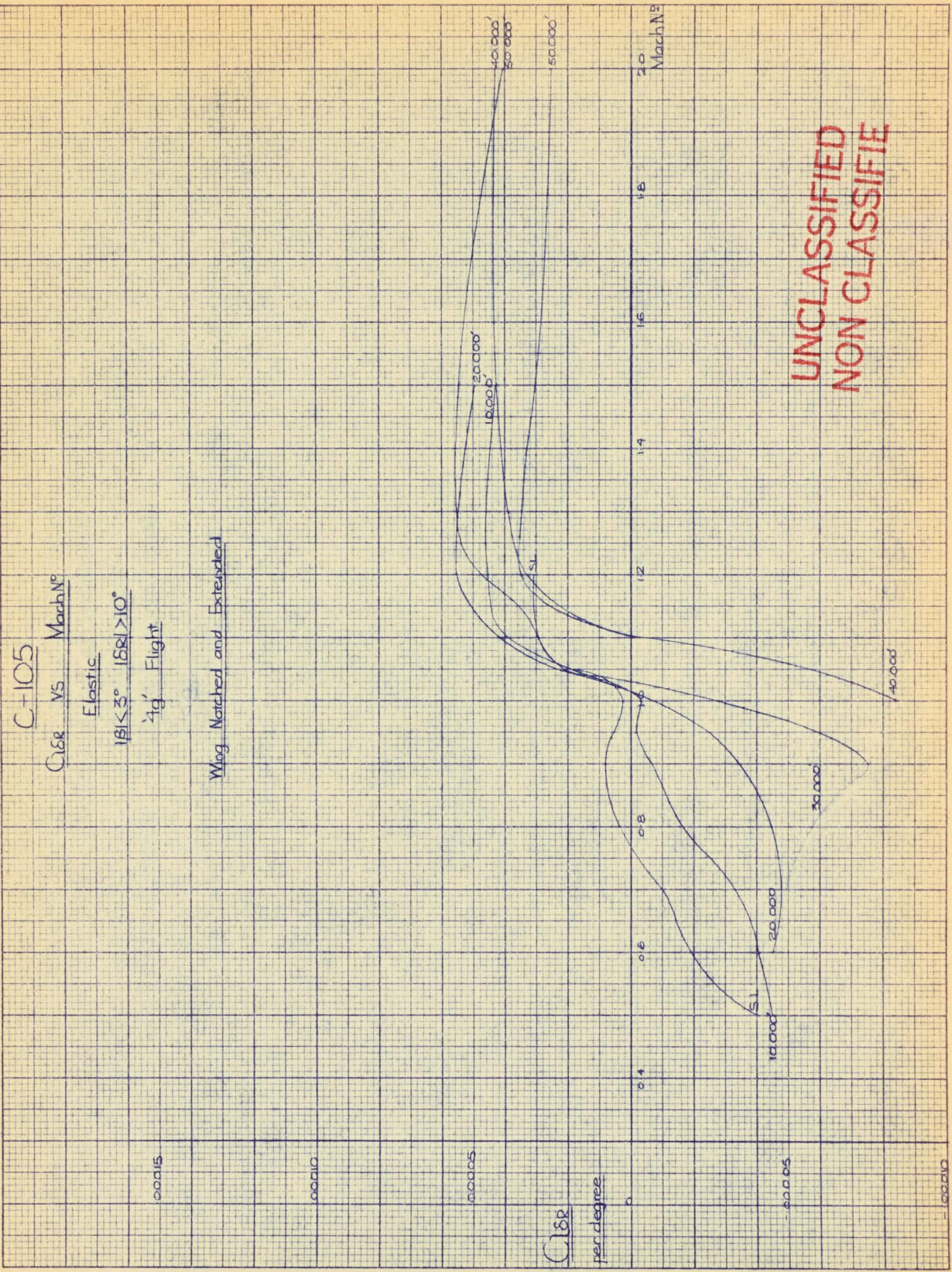


P/A0155 2.1.13 P/stab/75 12.2.2 GSH

PIAD/55 2.2.3

P/SUB/75
G34

4.13



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C-105
Q188 VS Mach No
Elastic
 $181 \leq 3^\circ$ $1881 > 10^\circ$
4g Flight

Wing Natched and Extended

C188
per degree

PIADIS

Z. 3.1 P/STAN 175 416

March/15 Kniatlov

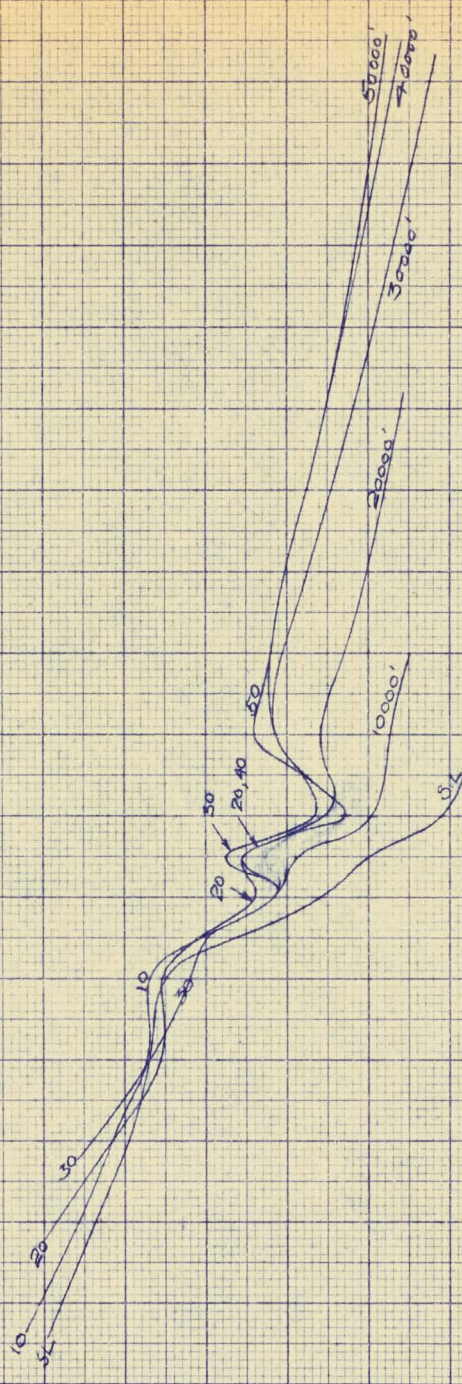
C105
ELASTIC CYCLES MACH NO
IN 1/2 G FLIGHT
WING NOTCHED AND EXTENDED
 $\beta_1 < 5^\circ$ $\beta_2 < 31^\circ$
 $\beta_1 < 10^\circ$

CYCL
PER DES

00015

00010

00020



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Mach No

20

18

16

14

12

10

8

6

4

P/A0155

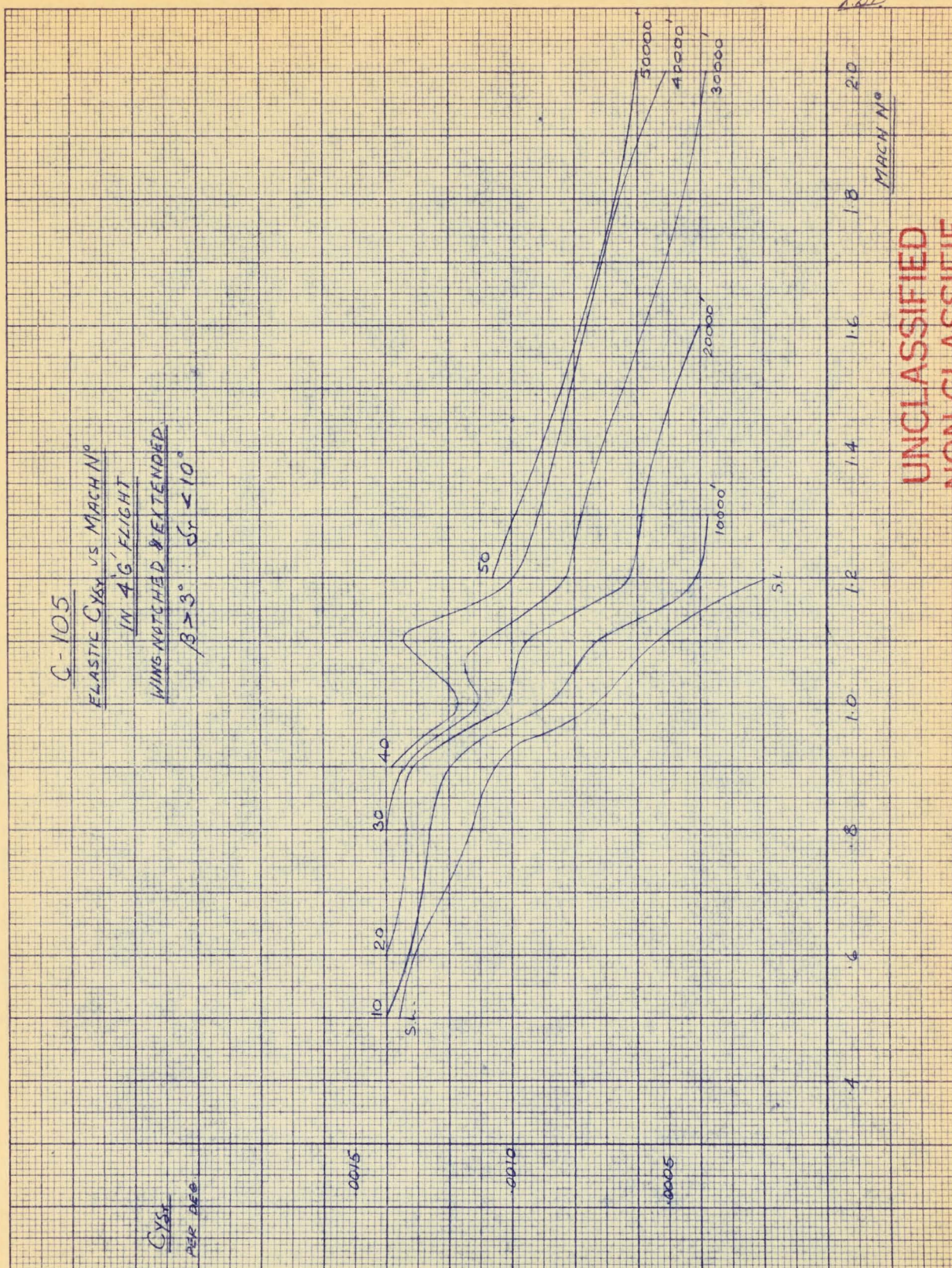
2.3.2

P/STAB/75
MARCH 55

4.10

PBB

C-105
ELASTIC CYST VS MACH N°
IN 46' FLIGHT
WING NOTCHED & EXTENDED
 $\beta > 3^\circ$; $\sigma_r < 10^\circ$



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PIAD/55

3.1.1

~~P/57713/17~~ 2.18.
Sand/IT Karakoram

C105
V3 MACH No
W 4 B' FLIGHT
1/31 < 5°
CG = 1512

WING NOTCHED & EXTENDED

C_{my}
PER DEG.

0004

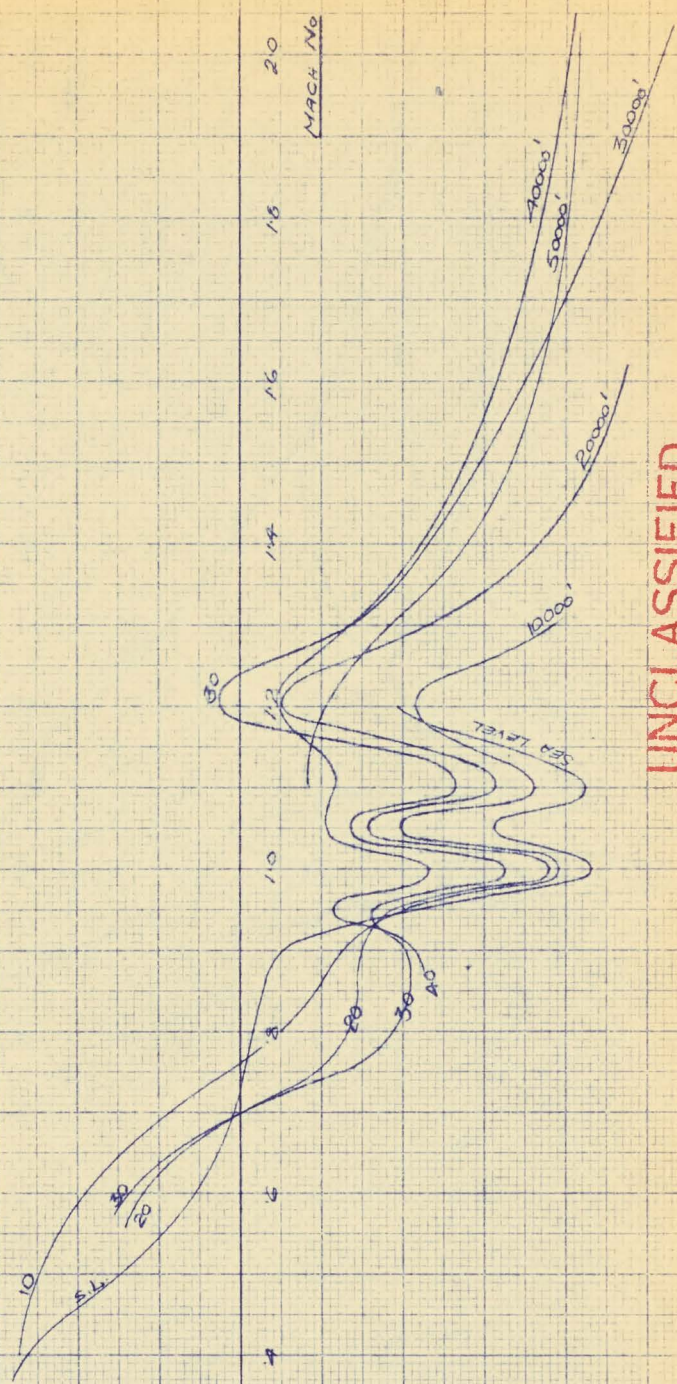
0002

0

-0002

-0004

MACH No



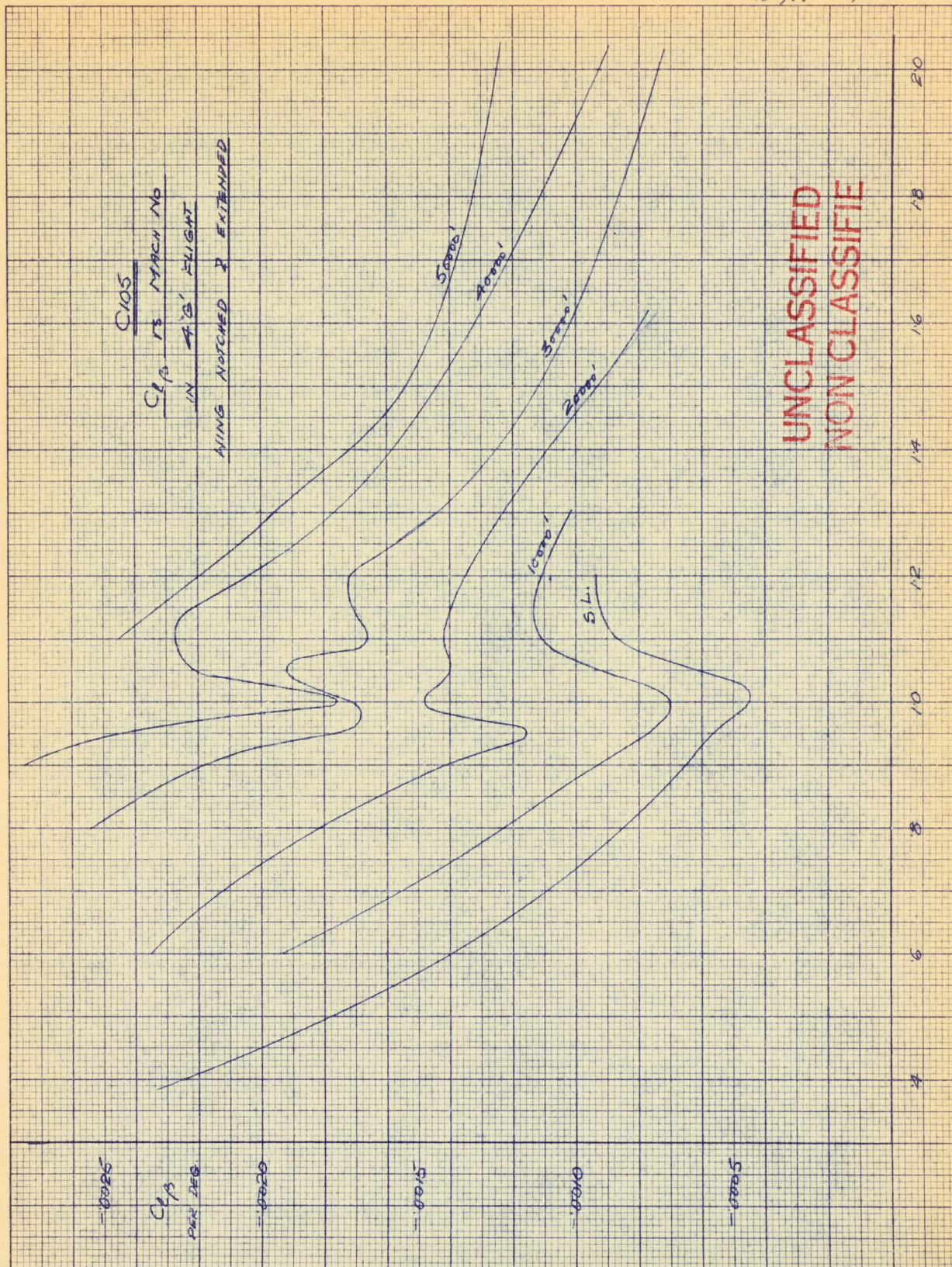
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P/AD155

3.2.1

P13TAB/15 5-5

March/15 Kina/15



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P1AD155 3.3.1 P/57413/75 5.13

March 1st Kinak Mountain

C105

CYB 15 MACH NO
IN 415' FLIGHT

1/4 ± 3°

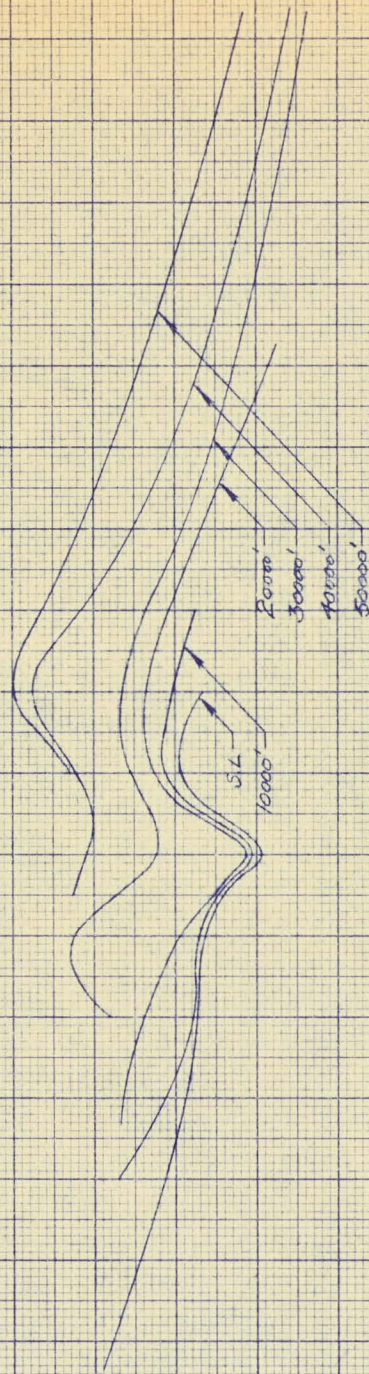
WING NOTCHED & EXTENDED

CYB
P/57413/75
- 0005

- 0006

- 0007

- 0008



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2.0

1.8

1.6

1.4

1.2

1.0

.8

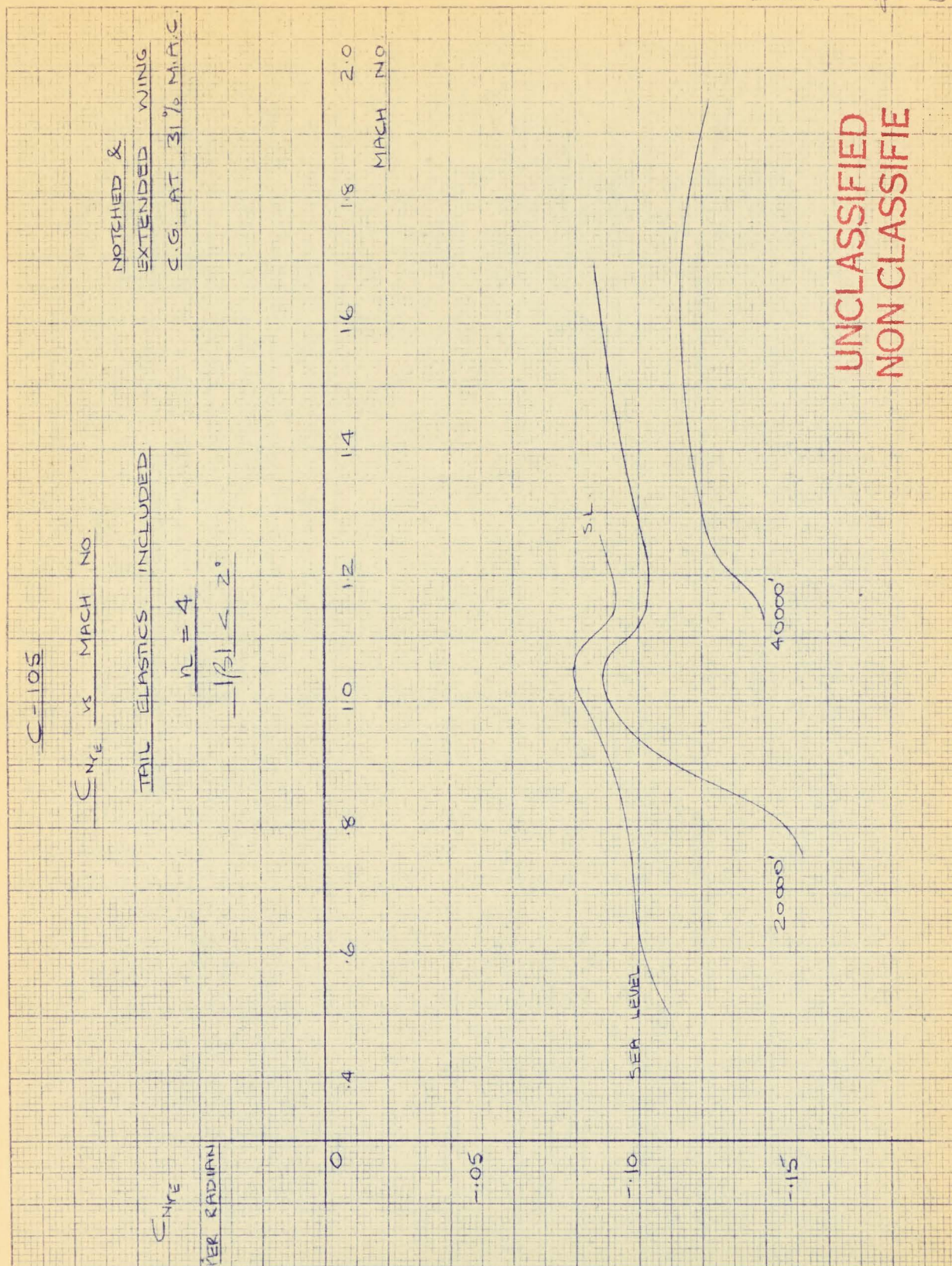
.6

.4

MACH NO

PIAD/55

4.1.1 P/State/10
DDO Apr '55



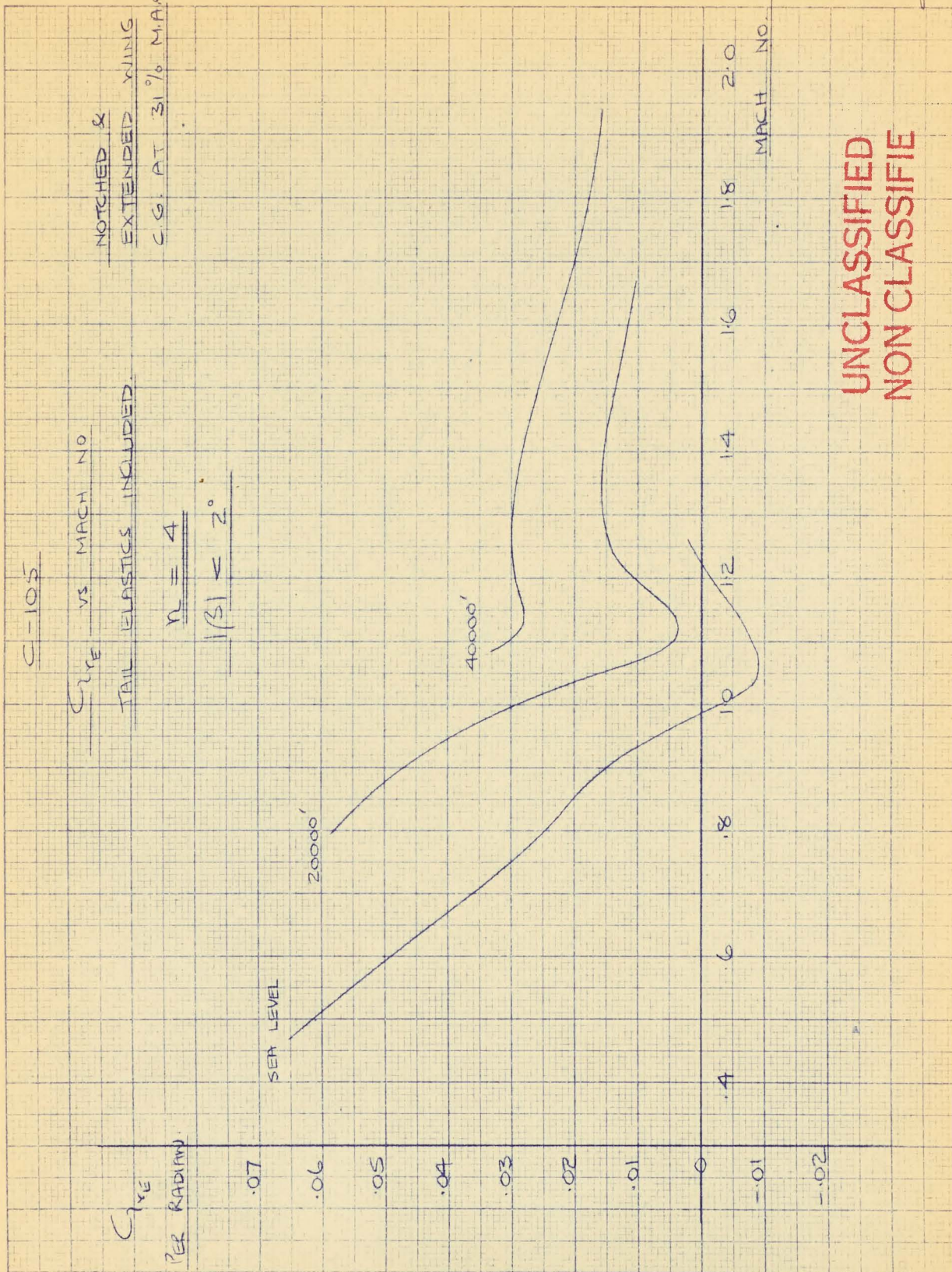
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PIAD/55

4.2.1

P/Stab/70

BDG. Apr '55

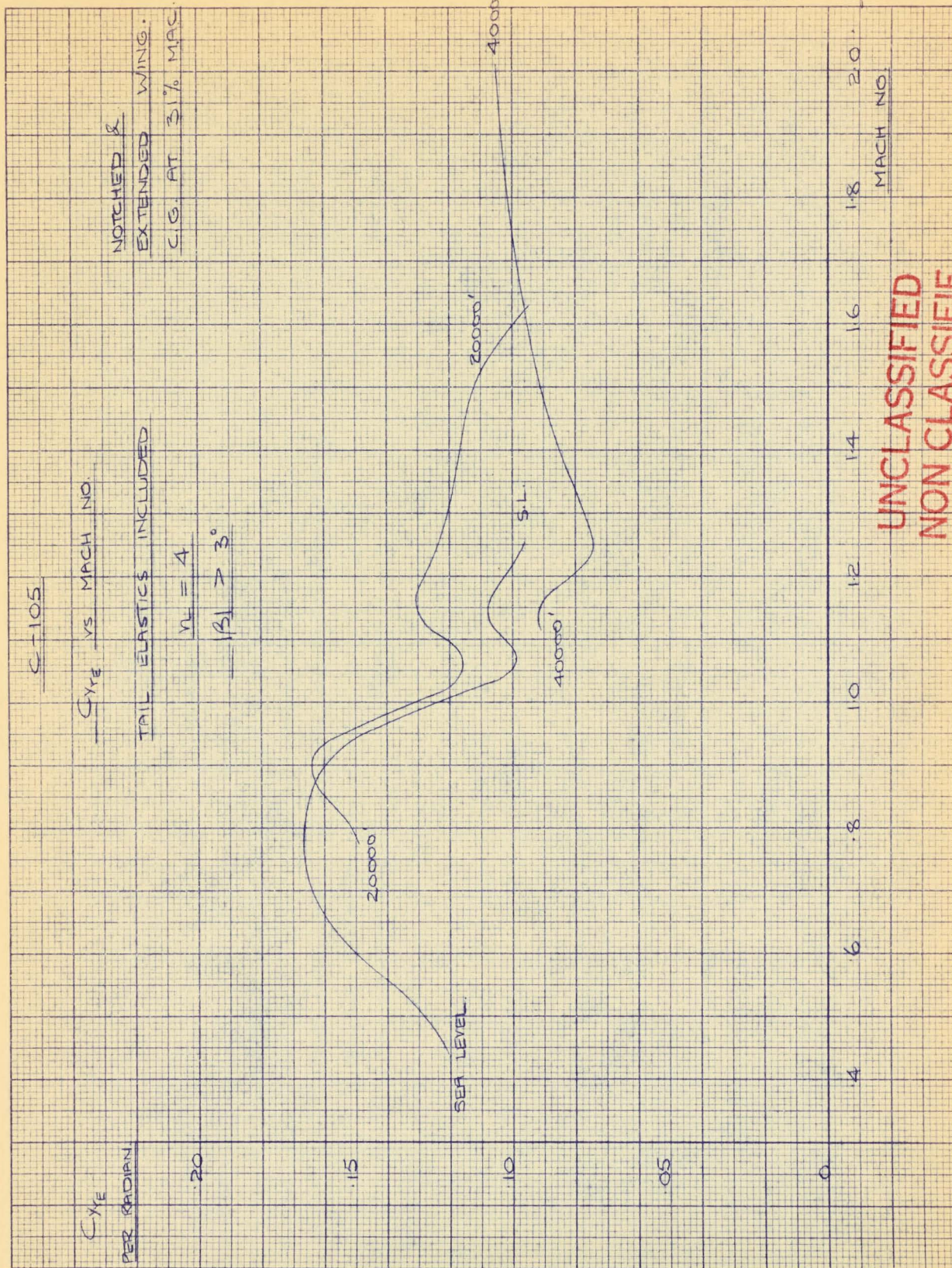


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PIAD155

4.3.2 P/Slab/76

DD8 Per. '55



P/AD155

5.3.1

May 1935 ~~P/516/76~~
C.A. Ford ~~218~~

C-105

Yawing-in - Roll

Cnp vs Mach No.

Plain, Notched, or
Notched and Extended Wing

131 x 3°

131 x 3°

$n_0 = 4.0$

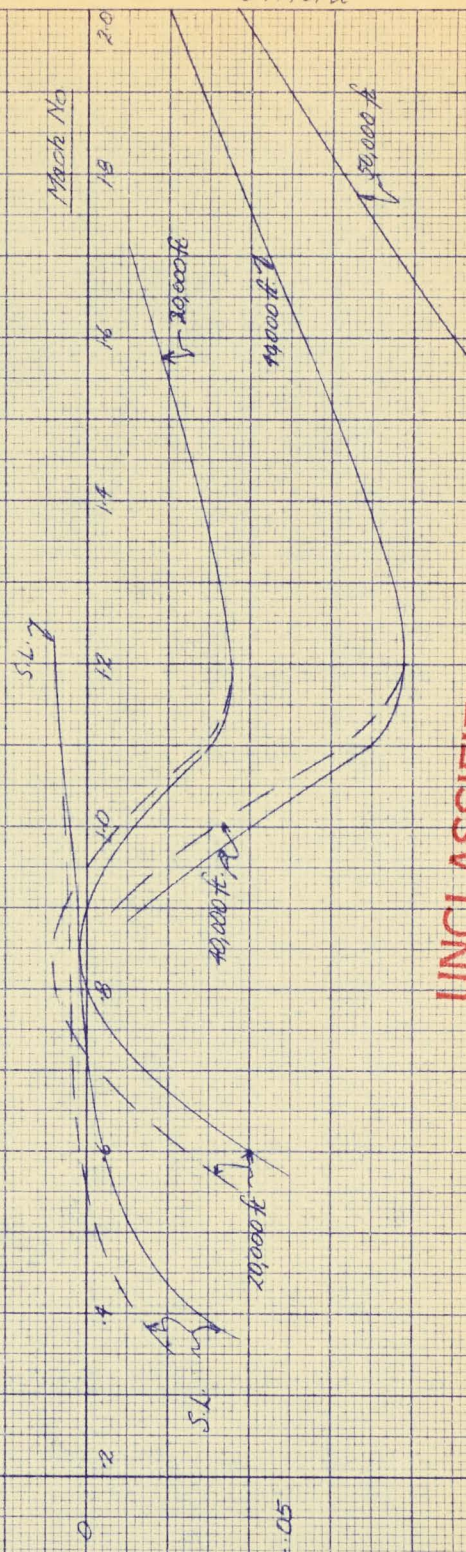
Cnp
per radian

Complete Elastic
Aircraft

Load Factor = 4.0

Weight = 47,000 lbs

C.G. at .31E



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PIADISS

5.1.1

25/3/55

C.A. Ford

P/5tab/16

216

C-105

Aeroelastic Side-force-in-Roll

$C_{Y_{\beta}}$ vs Mach No.

Plain, Notched, or Notched
and Extend Wing.

$\eta = 4$

Complete Aircraft
Load Factor = 4
Weight = 42,000 lbs
C.G. at .31c

$|\beta| > 3^\circ$

$|\beta| < 3^\circ$

$C_{Y_{\beta}}$ per radian

30

20

10

0

20,000 lb

40,000 lb

50,000 lb

Sea Level

8

10

12

14

16

18

20

Mach No.

UNCLASSIFIED
NON CLASSIFIED

