[redacted] UNCLASSIFIED

SANDIA SYSTEMATIC DECLASSIFICATION REVIEW
1st Review Date: 6/8/98
Authority: ADC
Name: [illegible]
2nd Review Date: 6/09/98
Authority: ADC
Name: [illegible]
Determination (Circle Number)
1 Classification Retained
2 Classification Changed to: U
3 Contains No DOE Classified Information
4 Coordinate With:
5 Contains UCAI?
6 Comments:
DECLASSIFY

JAN 10 1962

XW-44, 3-2
T-18211
Completed: 11-15-61

MR. D. S. DREESEN, 7522

ATTN: MR. B. MARQUEZ

Re: Vibration Test of an Inert XW-44 Unit S/N 89097 Type 5A

Object of Test

The object of this test was to fulfill the safety procedure requirements which states that "an inert unit must be tested prior to, and to the same conditions planned for the HE unit".

Authorization for Test

This test was requested by Division 7522 in a Work Order Authorization dated 10-24-61. Mr. B. Marquez was the consultant. The material for test was received 11-9-61.

Summary

The inert XW-44 unit (S/N 89097 Type 5A) was tested in accordance with a Work Order Authorization from Division 7522 and the consultant's instructions.

The environment was vibration at room temperature.

There was no physical damage to the XW-44 unit or its components resulting from the vibration environment.

RECEIVED
JAN 10 1962
CENTRAL RECORD FILE

Procedure and Results

The inert XW-44 unit (S/N 89097 Type 5A) was tested in accordance with a Work Order Authorization from Division 7522 and the consultant's instructions.

The vibration environment was conducted in accordance with SC-4451(M), Paragraph E1.

Vibration at Room Temperature (Vibration Machine No. 7)

The inert XW-44 unit was subjected to the vibration environment at room temperature. This environment consisted of a resonance survey and vibration cycling. Since the axes of the unit were not specified, they were chosen at random.

1009

UNCLASSIFIED

CENTRAL RECORD FILE
ACCOUNTABILITY CARD BB
FILE No. XW 44 3-2

[redacted]

SANDIA SYSTEMATIC DECLASSIFICATION REVIEW
DOWNGRADING OR DECLASSIFICATION STAMP

CLASSIFICATION CHANGED TO: U	AUTHORITY: W.C. Layne
Emelda Selph 6/18/98	
PERSON CHANGING MARKING & DATE	RECORD ID: 98SN2346
WC Layne 6-18-98	
PERSON VERIFYING MARKING & DATE	DATED: 6/09/98

[redacted]

The resonance survey consisted of vibrating the inert XW-44 unit (S/N 89097 Type 5A) along each of its three mutually perpendicular axes at 1.0g from 10 to 50 cycles per second, 5.0g from 50 to 300 cps, 10.0g from 300 to 500 cycles, 3.0g from 500 to 1000 cps, 5.0g from 1000 to 1500 cps, and 1.0g from 1500 to 2000 cps. The critical frequencies found during the resonance survey were 727 and 1340 cps along the X-axis, 1312 cps along the Y-axis, and 663 and 1328 cps along the Z-axis.

Vibration cycling consisted of four 15-minute cycles and one 10-minute cycle along each of the units three mutually perpendicular axes. The 15-minute cycles consisted of vibrating at 1.0g from 10 to 50 cycles per second and 3.0g from 50 to 300 cycles per second. The 10-minute cycle consisted of vibrating at 10.0g from 350 to 500 cycles per second, 3.0g from 500 to 1000 cycles per second, 5.0g from 1000 to 1500 cycles per second, and 1.0g from 1500 to 2000 cycles per second.

Figure 1 shows the axes of vibration and accelerometer location of the inert XW-44 unit (S/N 89097 Type 5A).

Figures 2 through 10 show the input and output accelerations experienced by the inert XW-44 unit during resonance survey.

TEST ENGINEER: J. M. Carmichael
J. M. CARMICHAEL - 7321-3
B.J.

TEST PROJECT ENGINEER: Dulin Westfall
DULIN WESTFALL - 7321-5

JMC:7321-3:mep

Enc. Figs. 1-10

Copy to:
J. M. Wiesen, 1442
D. S. Bliss, 2344
L. E. Snodgrass, 2561
E. H. Copeland, 7321
C. L. Johnson, 7523
R. K. Smeltzer, 3421-3

UNCLASSIFIED

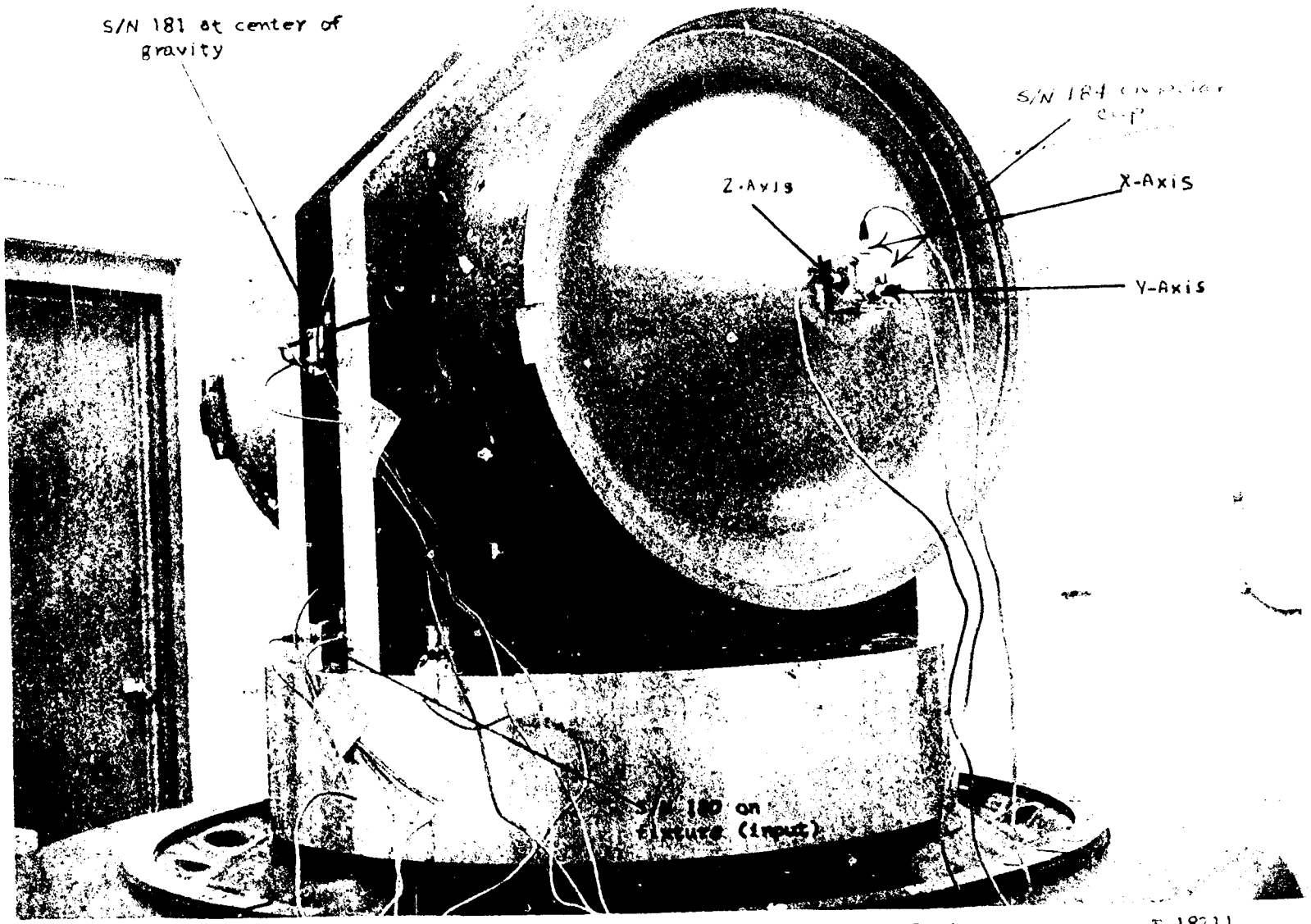


FIGURE 1 INERT XA-44 UNIT S/N 89097 TYPE 5A MOUNTED ON VIBRATION MACHINE NO 7

T-18211

UNCLASSIFIED

UNCLASSIFIED

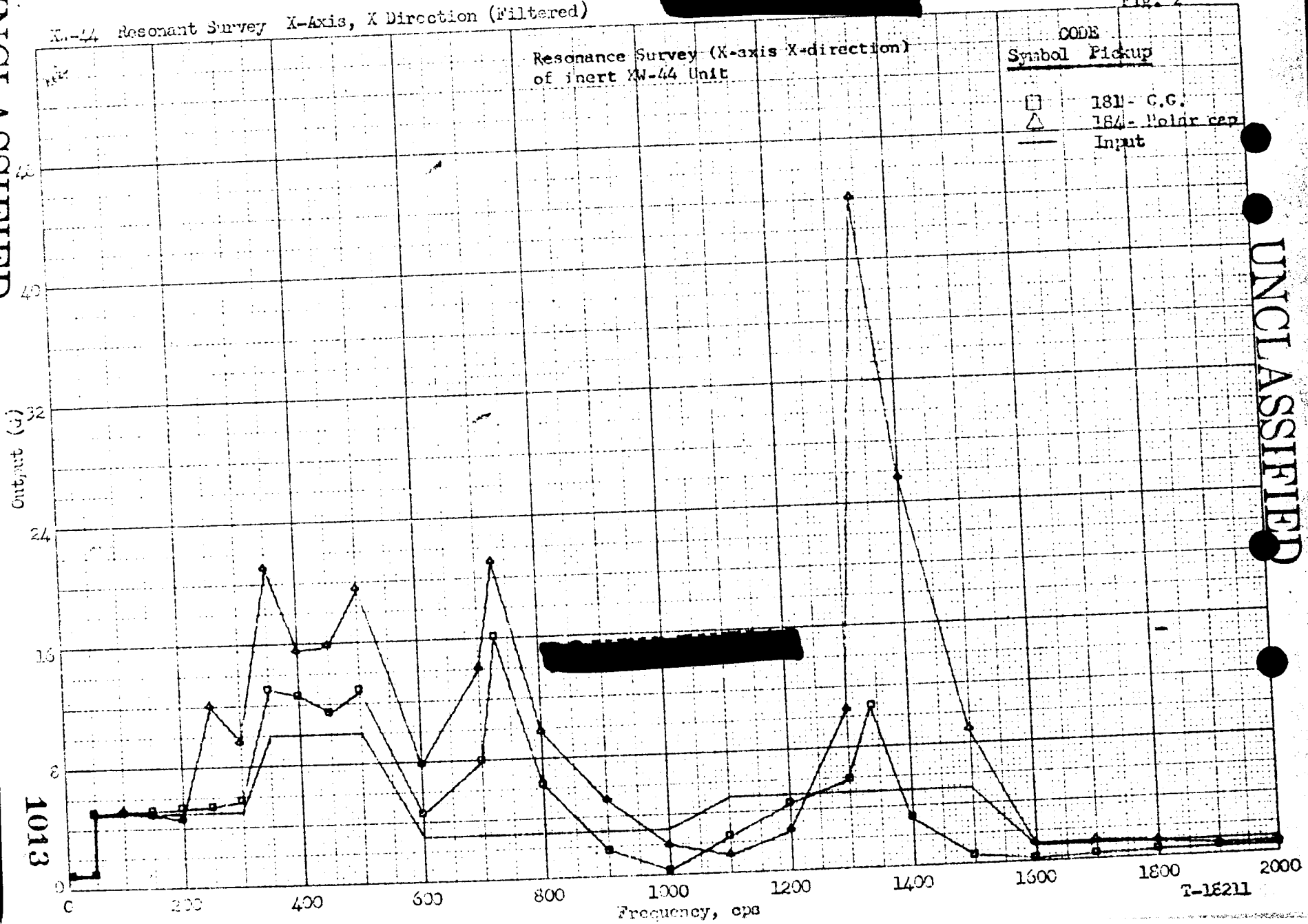
NO. 340 R 20 DIETZGEN GRAPH PAPER
20 X 20 PER INCH

EUGENE DIETZGEN CO.
MADE IN U. S. A.

[redacted]

Fig. 2

XW-44 Resonant Survey X-Axis, X Direction (Filtered)



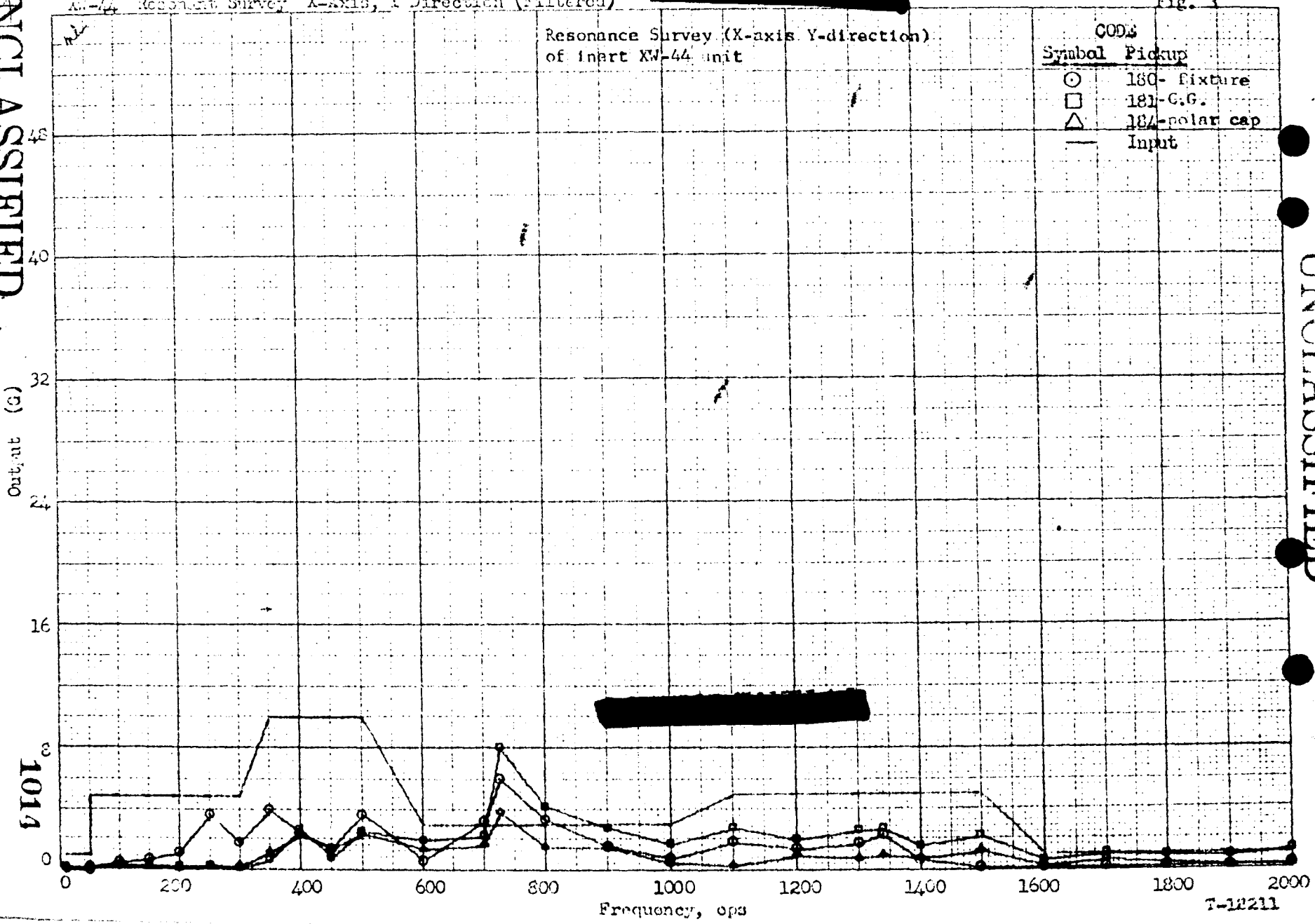
[redacted]

UNCLASSIFIED

UNCLASSIFIED

NO. 340 R 20 DIETZGEN GRAPH PAPER
20 X 20 PER INCH
EUGENE DIETZGEN CO.
MADE IN U.S.A.

XW-44 Resonant Survey X-Axis, X Direction (Filtered) [redacted] Fig. 3



[redacted]

T-12211

UNCLASSIFIED

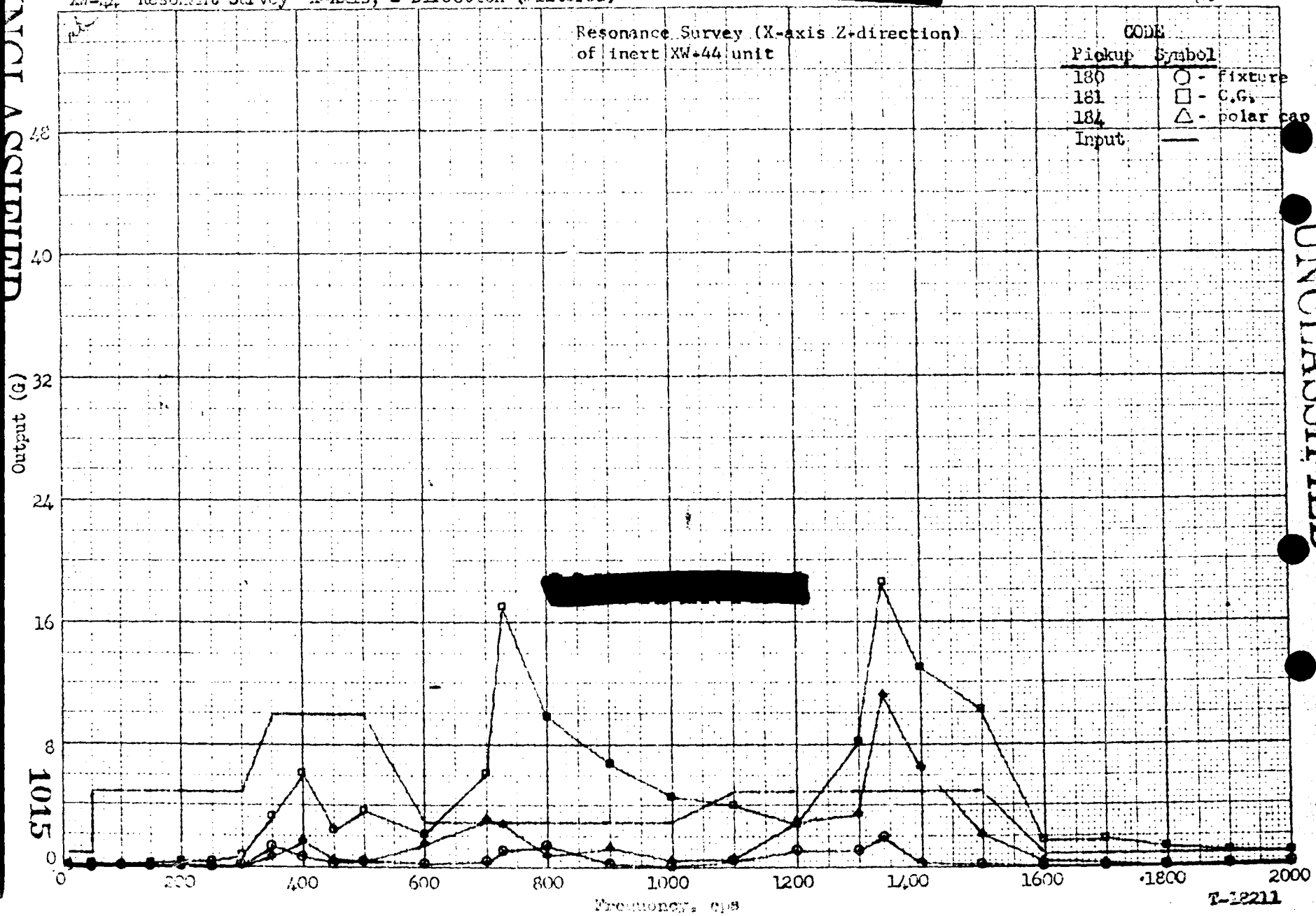
UNCLASSIFIED

NO. 340 R 20 DIETZGEN GRAPH PAPER
20 X 20 PER INCH
EUGENE DIETZGEN CO.
MADE IN U.S.A.

[redacted]

XW-44 Resonant Survey X-Axis, Z Direction (Filtered)

Fig. 4



[redacted]

T-12211

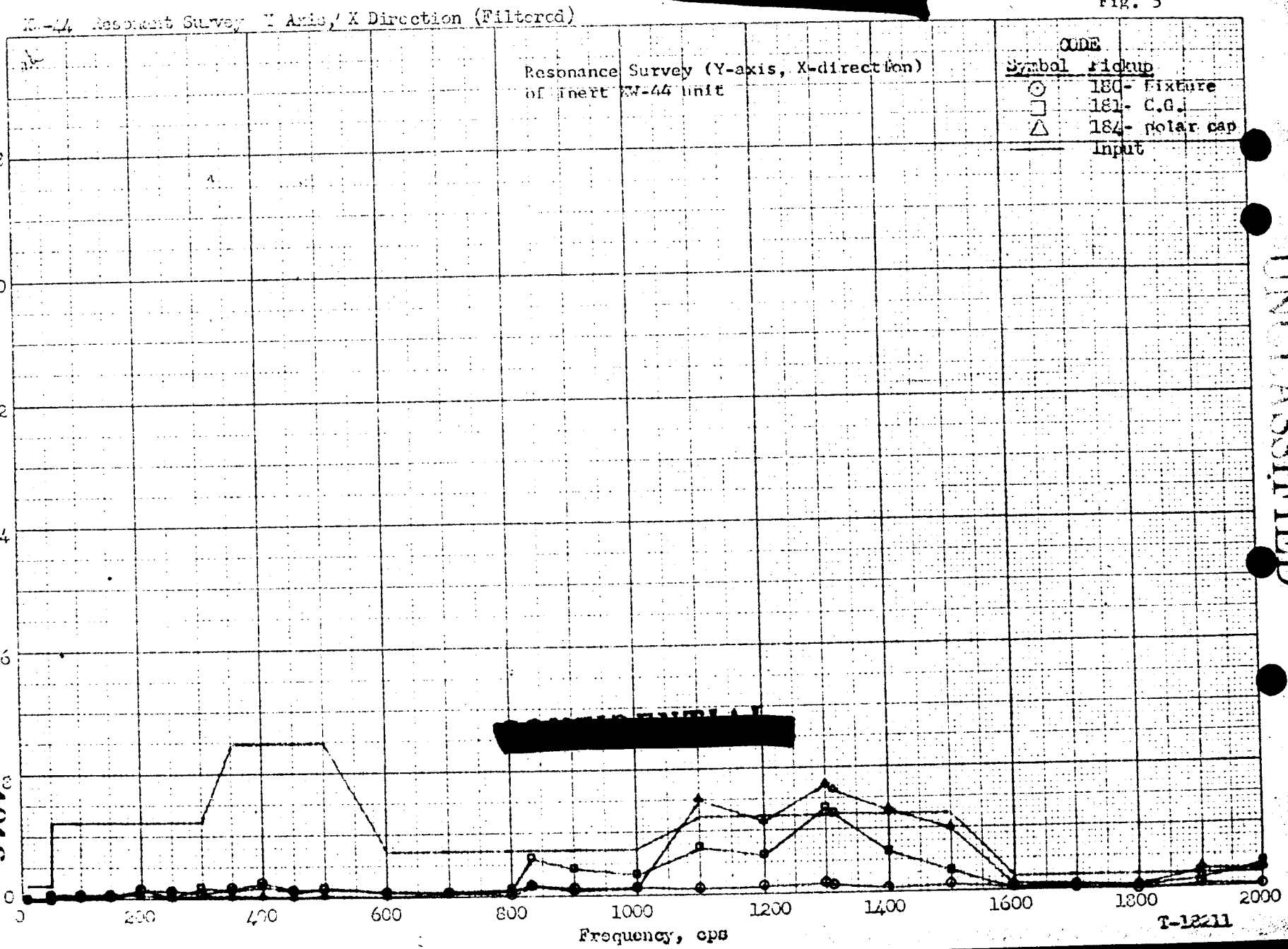
UNCLASSIFIED

NO. 340 R 20 DIETZGEN GRAPH PAPER
20 X 20 PER INCH

EUGENE DIETZGEN CO.
MADE IN U.S.A.

[redacted]

Fig. 5



UNCLASSIFIED

UNCLASSIFIED

UNCLASSIFIED

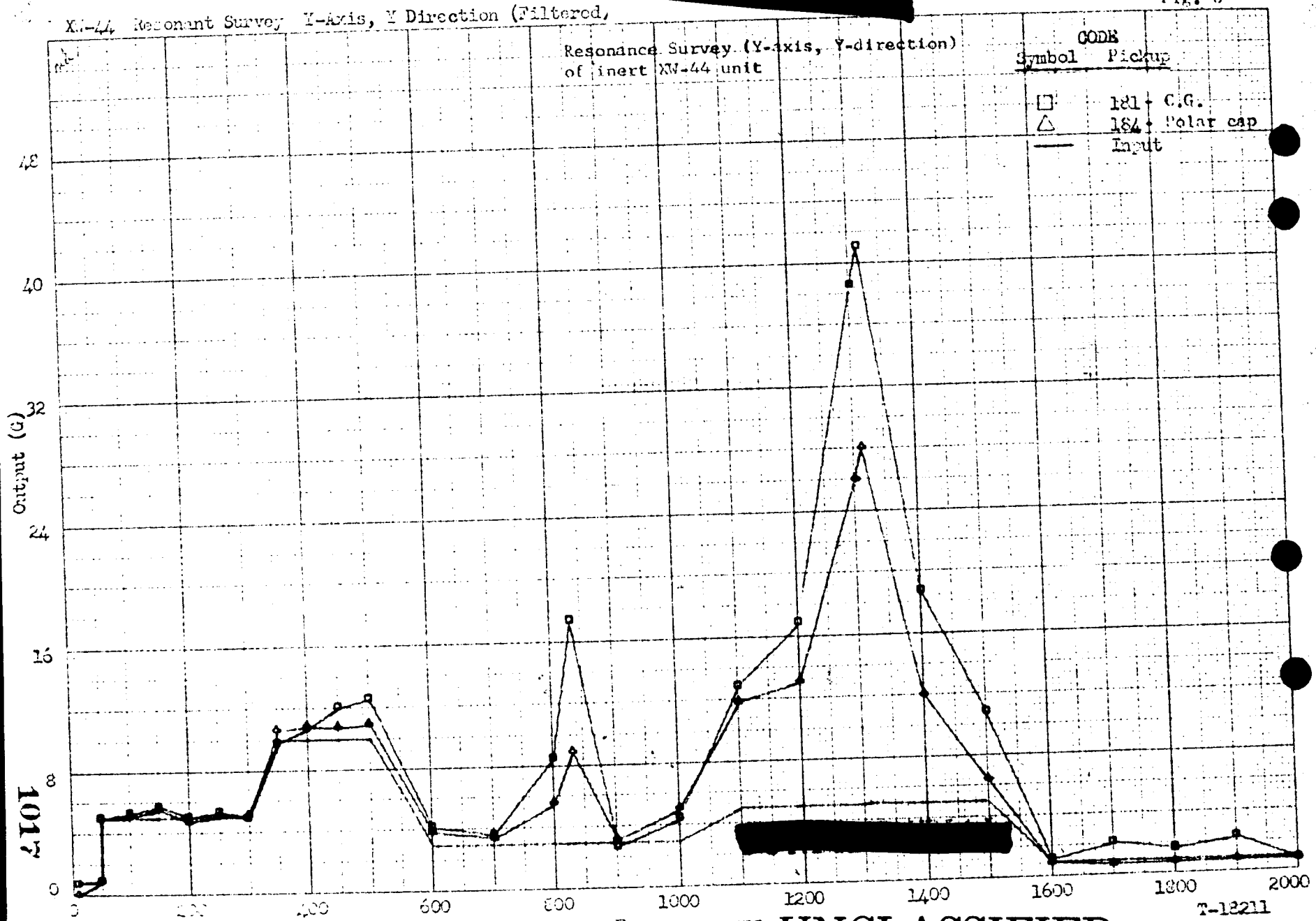
NO. 340 R 20 DIETZGEN GRAPH PAPER
20 X 20 PER INCH

EUGENE DIETZGEN CO.
MADE IN U.S.A.

[redacted]

Fig. 6

XW-44 Resonant Survey Y-Axis, Y Direction (Filtered)



[redacted]

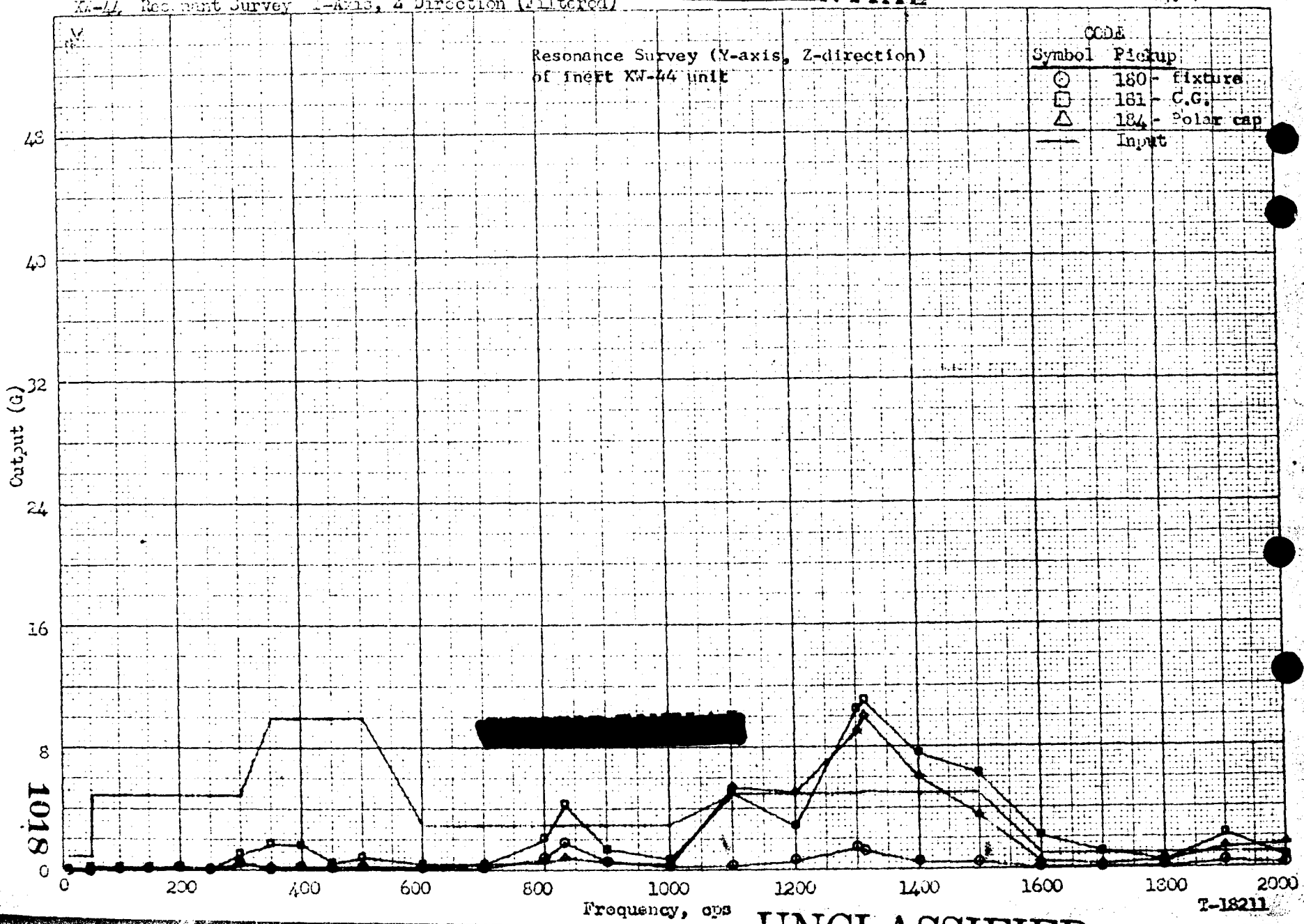
UNCLASSIFIED

UNCLASSIFIED

NO. 340 R 20 DIETZGEN GRAPH PAPER
20 X 20 PER INCH
EUGENE DIETZGEN CO.
MADE IN U.S.A.

[redacted]

Fig. 7



[redacted]

UNCLASSIFIED

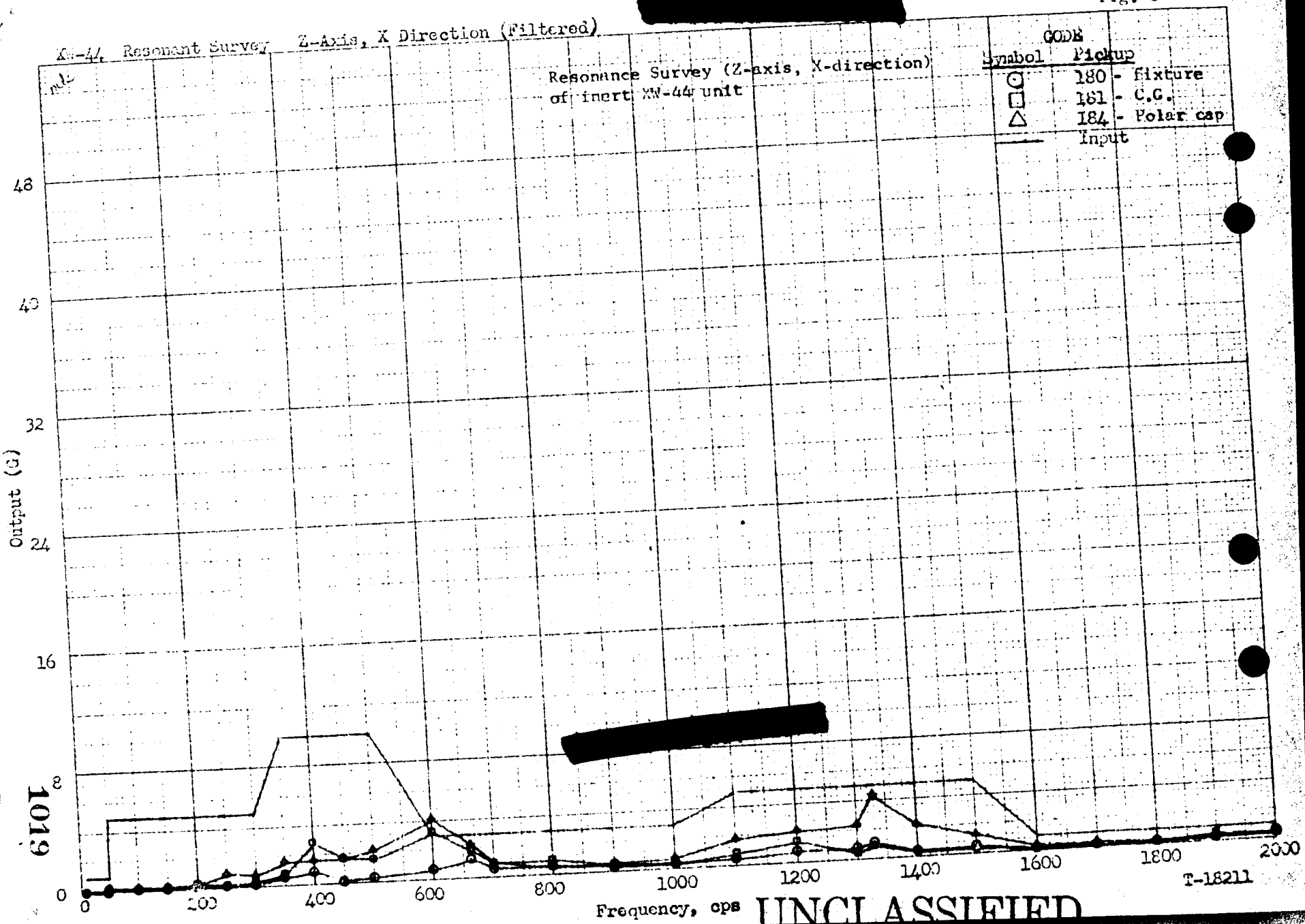
UNCLASSIFIED

NO. 340 R-20 DIETZGEN GRAPH PAPER
20 x 20 PER INCH

EUGENE DIETZGEN CO.
MADE IN U. S. A.

[redacted]

Fig. 8



[redacted]

UNCLASSIFIED

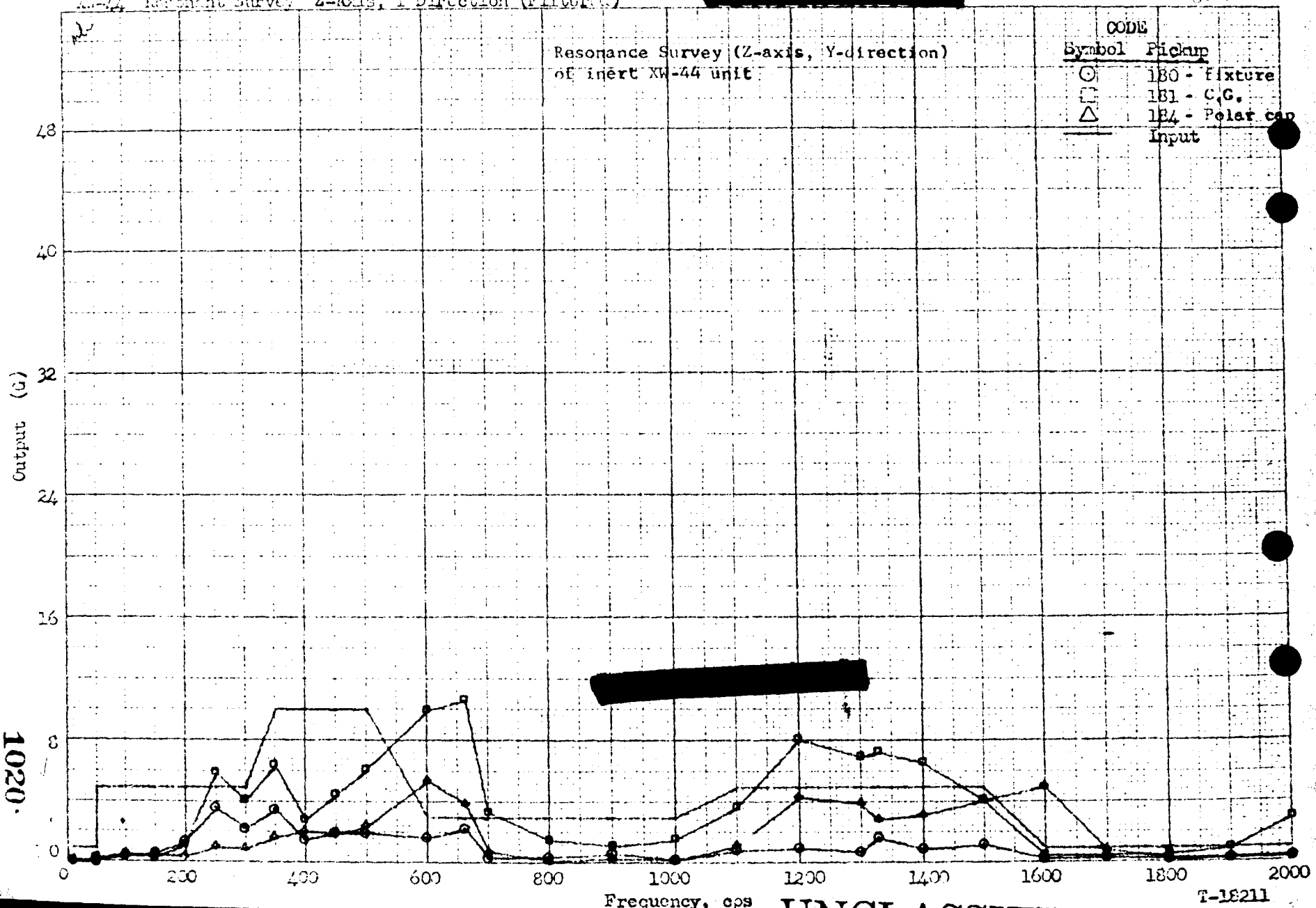
UNCLASSIFIED

NO 340 R 20 DIETZGEN GRAPH PAPER
20 X 20 PER INCH

EUGENE DIETZGEN CO.
MADE IN U. S. A.

[redacted]

Fig. 9



[redacted]

T-18211

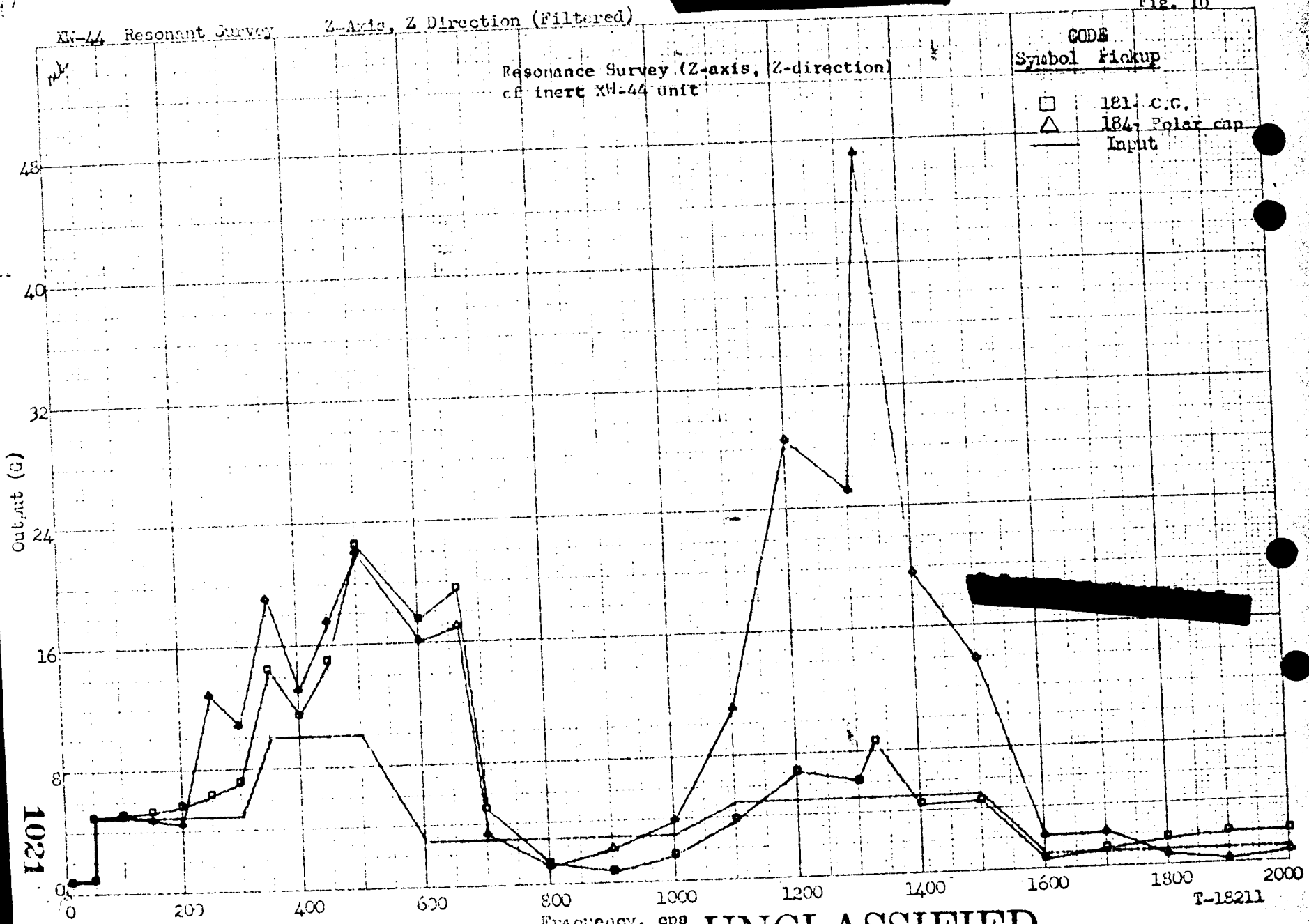
UNCLASSIFIED

UNCLASSIFIED

[redacted]

Fig. 10

XW-44 Resonant Survey Z-Axis, Z Direction (Filtered)



[redacted]

UNCLASSIFIED