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E-20 Catcher Position and Skew Studies

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AGS Studies Report

Date(s) February 10, 1985 Time(s) 0800 - 1600
Experimenter(s) K.A. Brown
Reported by K.A. Brown
Subject(s) E-20 Catcher Position and Skew Studies

Observations and ConclusionsAbstract

The losses around the catcher at L-12 and the total ring sum losses were studied in the time interval between 200 and 250 ms. The most significant observations were the decreasing of the losses in L-12 and the decrease in the total ring losses by positioning and skewing the device. All the data was collected via IAGP.

Observations

There were two basic, initial goals in this study. The first was to determine the optimal position of the device, moving the upstream and downstream drives by the same amount. The second was to study the effect of skewing it around this optimal position. It was found that this position lies around positioning the up and downstream drives at 900 to 1000 (900 to 1000 mils). In this position, the losses in L-12 were decreased with a smaller increase in E-20 and F-02. A slight decrease was observed in the total ring losses.

The catcher was then skewed around the positions 1100, 1000, and 950. The first two positions showed no real dramatic results. At around 950 some significant results were observed. First of all, the CBM remained constant for the total skew. The F-02 and E-20 were seen to increase with increasing skew, the L-12 losses decreased while the losses in E-20 went up slightly, and a drop was seen in the ring sum losses.

Method of Skewing

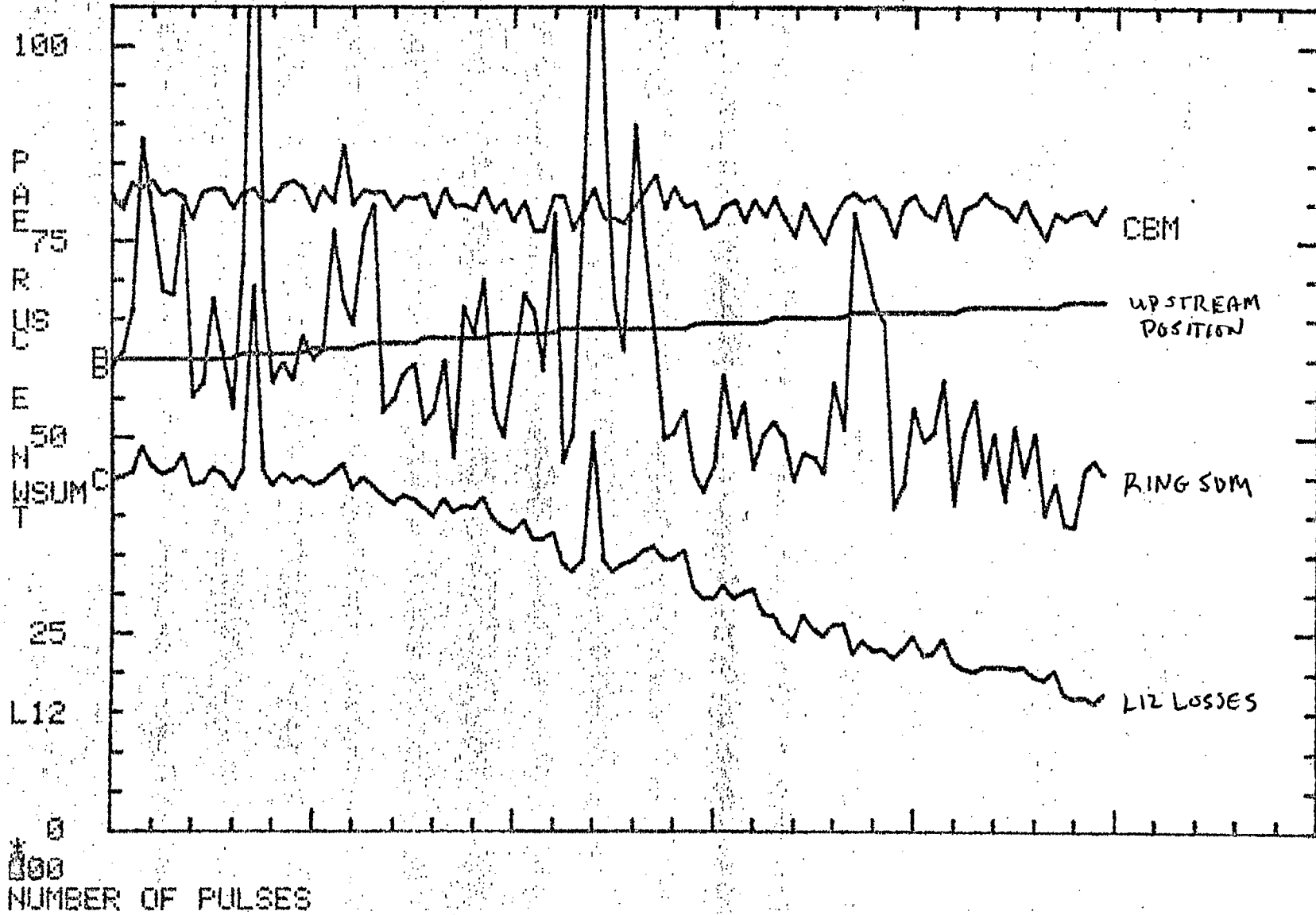
The catcher was skewed such that the upstream inner edge remained fixed (i.e., it was rotated about the upstream inner edge).

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TEST VAR #NONE AVG= 1

YA:CEM .0= 0.000,100= 600.000
YB:WSUM .0= 0.000,100= 12.000
YC:L12 .0= 0.000,100= 400.000
YD:US .0= 0.000,100= 1500.000

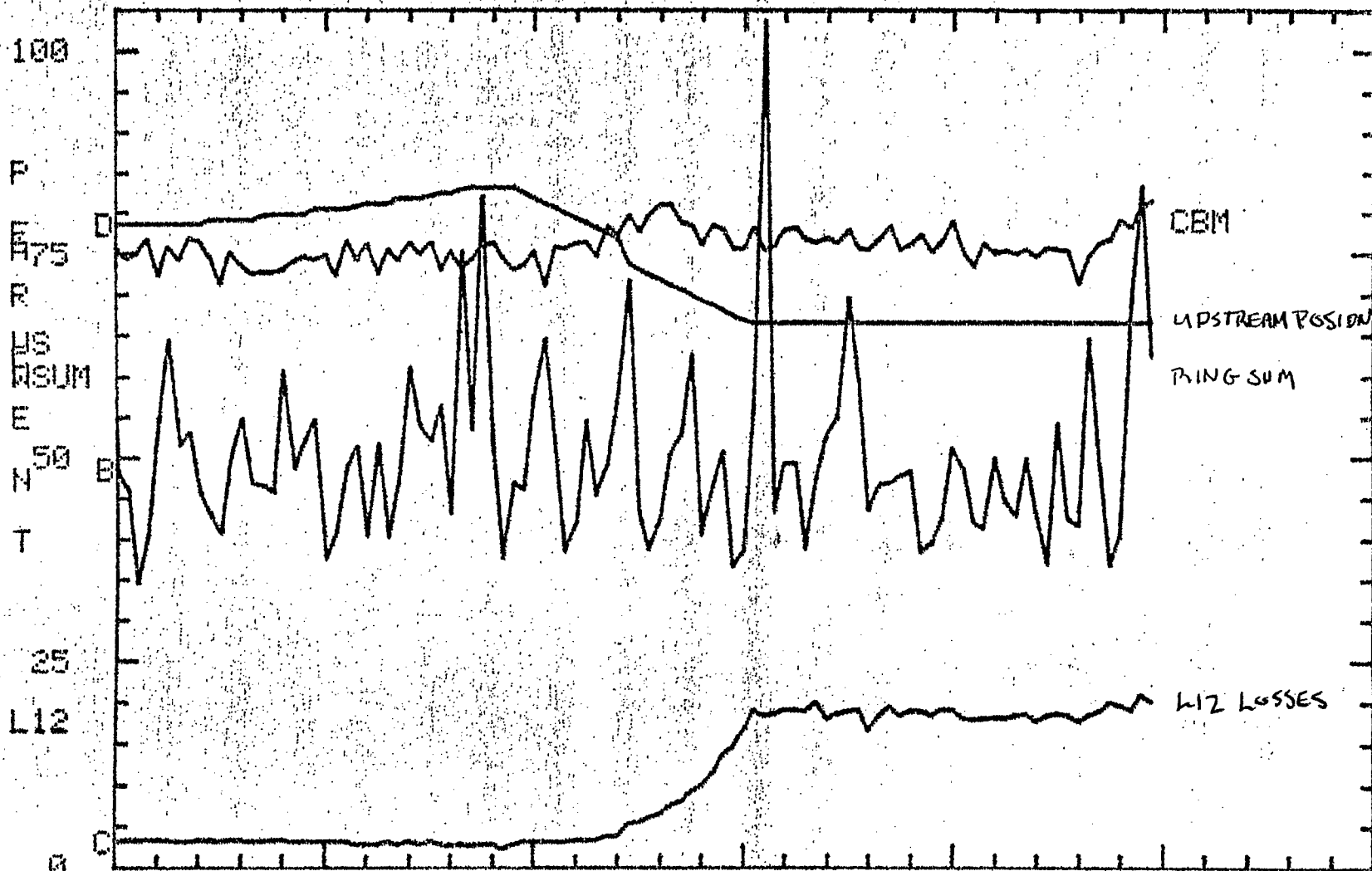


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TEST VAR #NONE AVG= 1

YA: CBM .0= 0.000,100= 500.000
YB: NSUM .0= 0.000,100= 12.000
YC: L12 .0= 0.000,100= 400.000
YD: US .0= 0.000,100= 1500.000



NUMBER OF PULSES

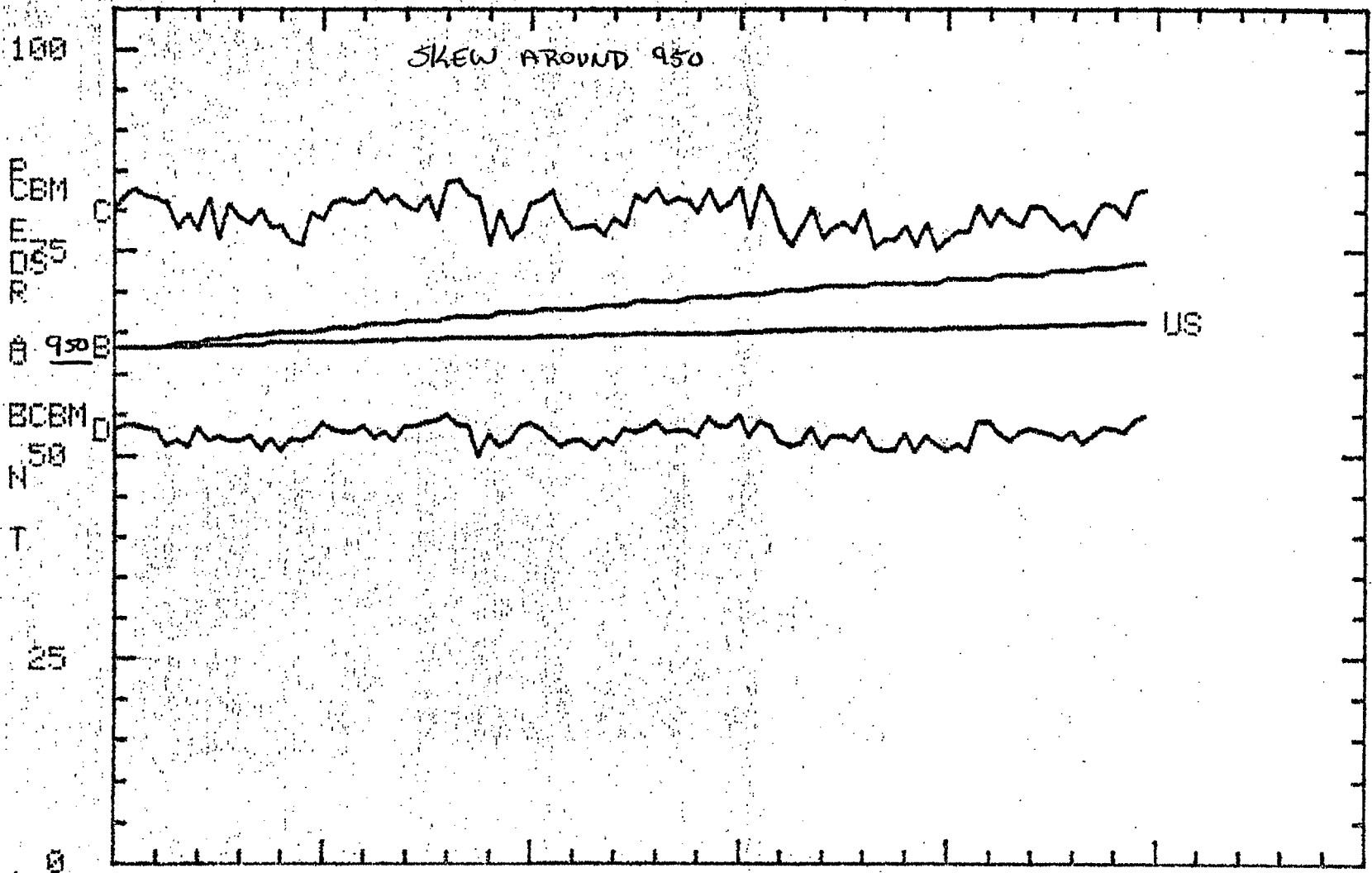
SKEW

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TEST VAR #NONE AVG= 1

YA:US	,0=	0.000,100=	1500.000
YB:DS	,0=	0.000,100=	1500.000
YC:CBM	,0=	0.000,100=	600.000
YD:3CBM	,0=	0.000,100=	1000.000



100
NUMBER OF PULSES

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TEST VAR #NONE AVG= 1

YA:US	.0=	0.000,100=	1500.000
YB:DS	.0=	0.000,100=	1500.000
YC:F2	.0=	0.000,100=	600.000
YD:E205	.0=	0.000,100=	600.000

SKEW AROUND 95°

100

P

E
DS

F

95°

E

250

E205

T

F2

25

US

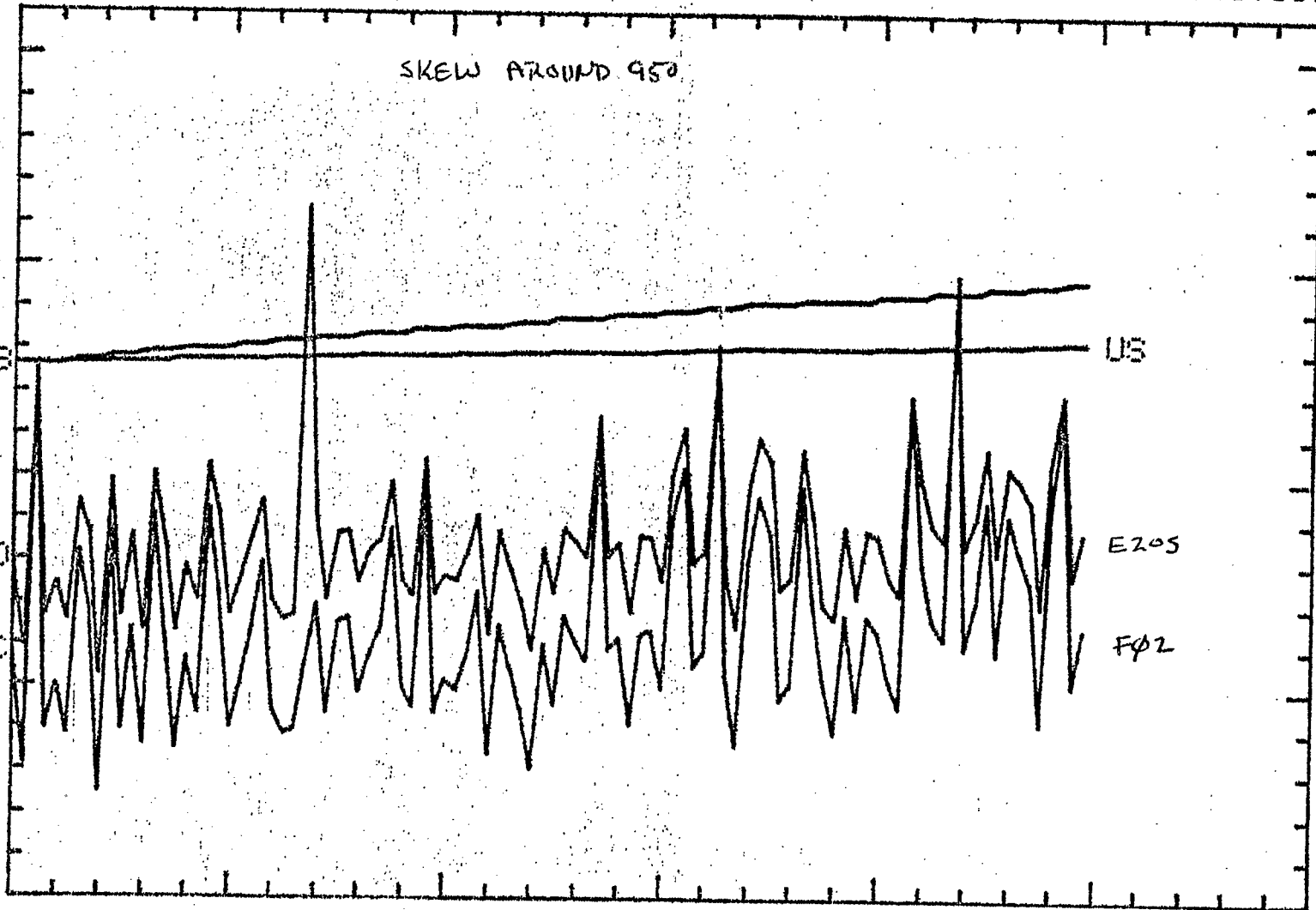
E205

F2

0

100

NUMBER OF PULSES



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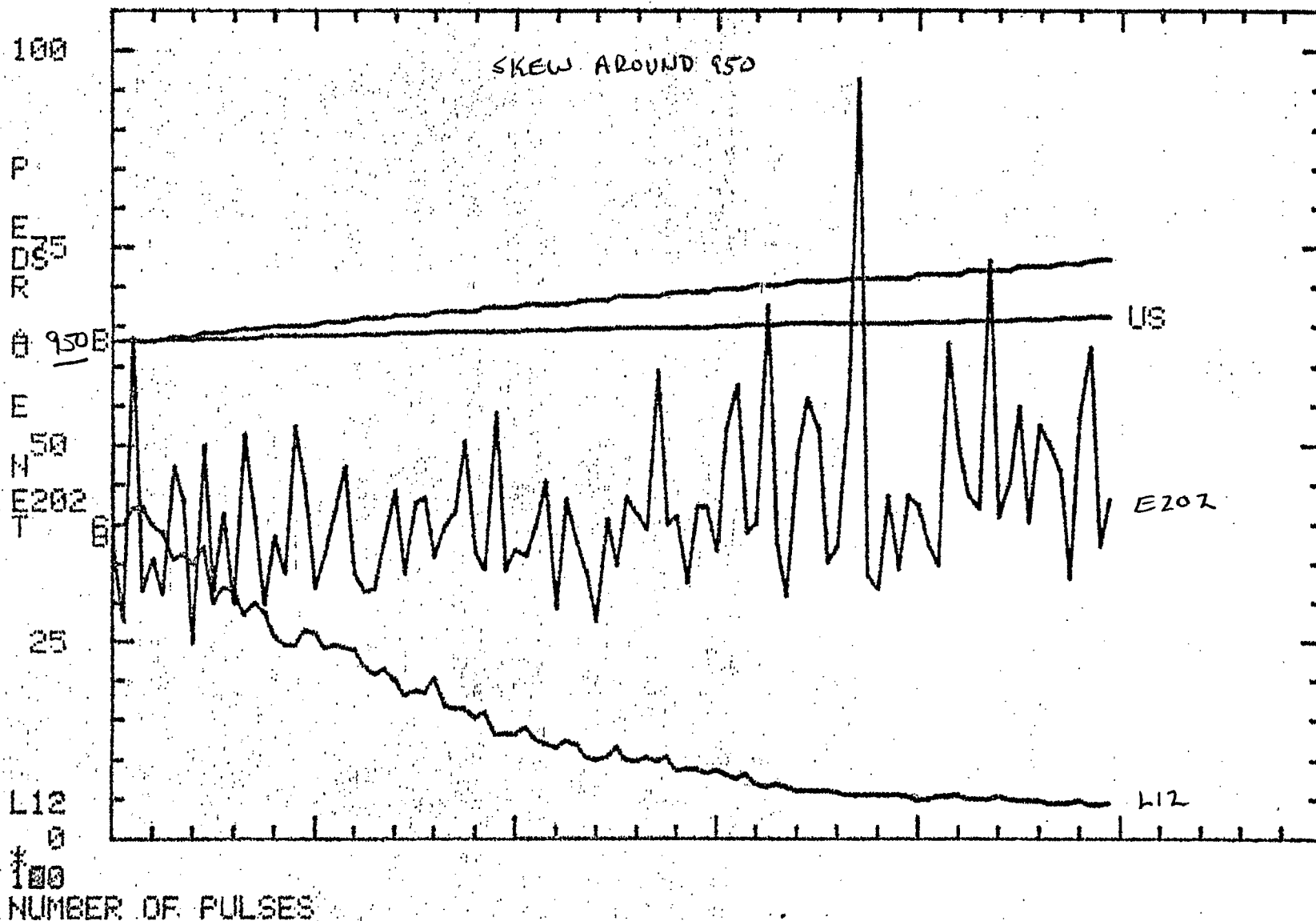
TEST VAR #NONE AUG= 1

YA:US :0= 0.000,100= 1500.000

YB:DS :0= 0.000,100= 1500.000

YC:L12 :0= 0.000,100= 400.000

YD:E202 :0= 0.000,100= 500.000

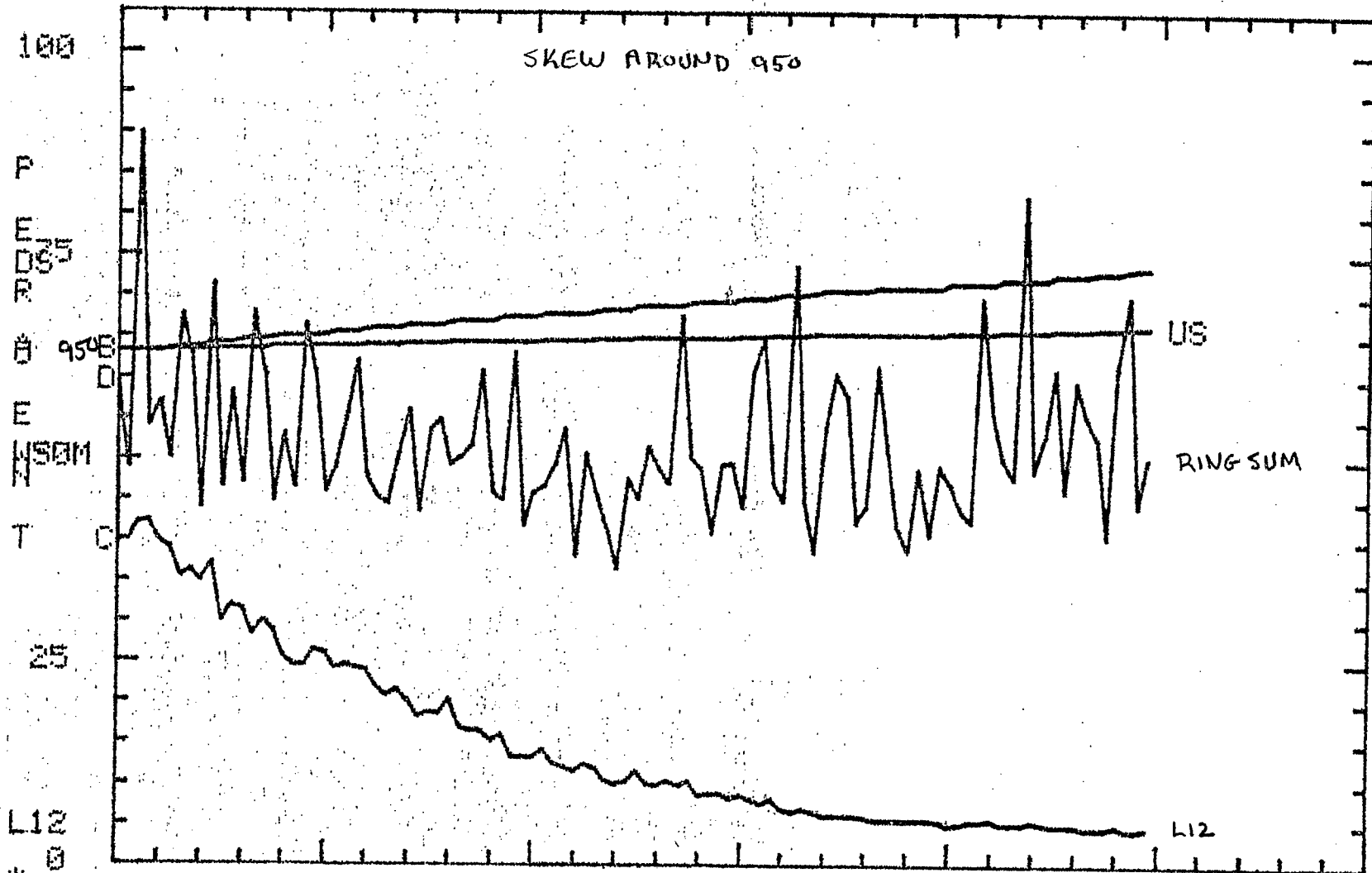


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TEST VAR #NONE AVG= 1

YB:US	,0=	0.000,100=	1500.000
YB:DS	,0=	0.000,100=	1500.000
YB:L12	,0=	0.000,100=	400.000
YB:W5UM	,0=	0.000,100=	12.000



NUMBER OF PULSES

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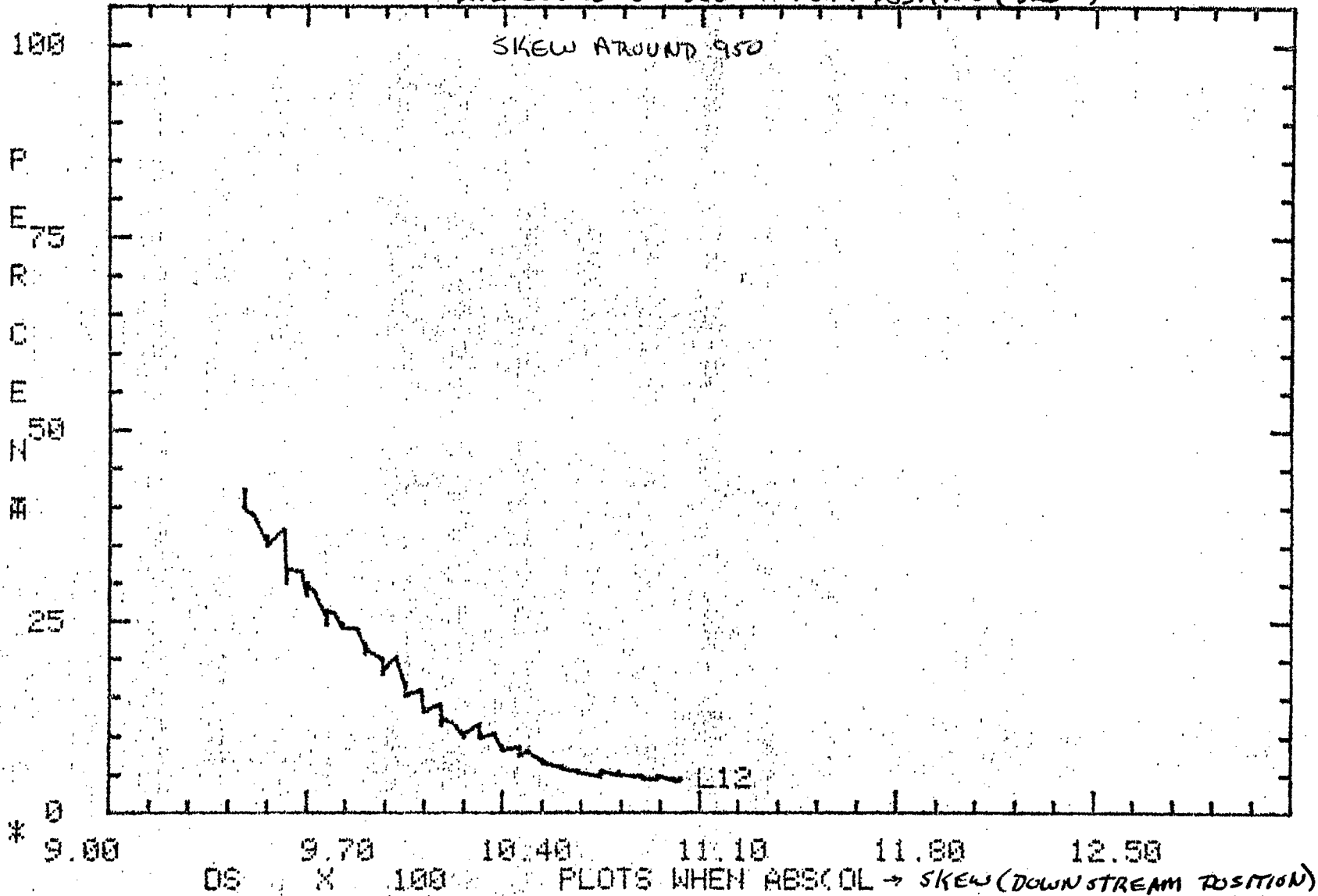
10-FEB-85 15:27:35.7

TEST VAR #NONE AUG= 1

YAD+HEW) 00= 00.000,100= 400.000

X - RZEDS

L12 LOSSES vs. DOWNSTREAM POSITION (SKEW)



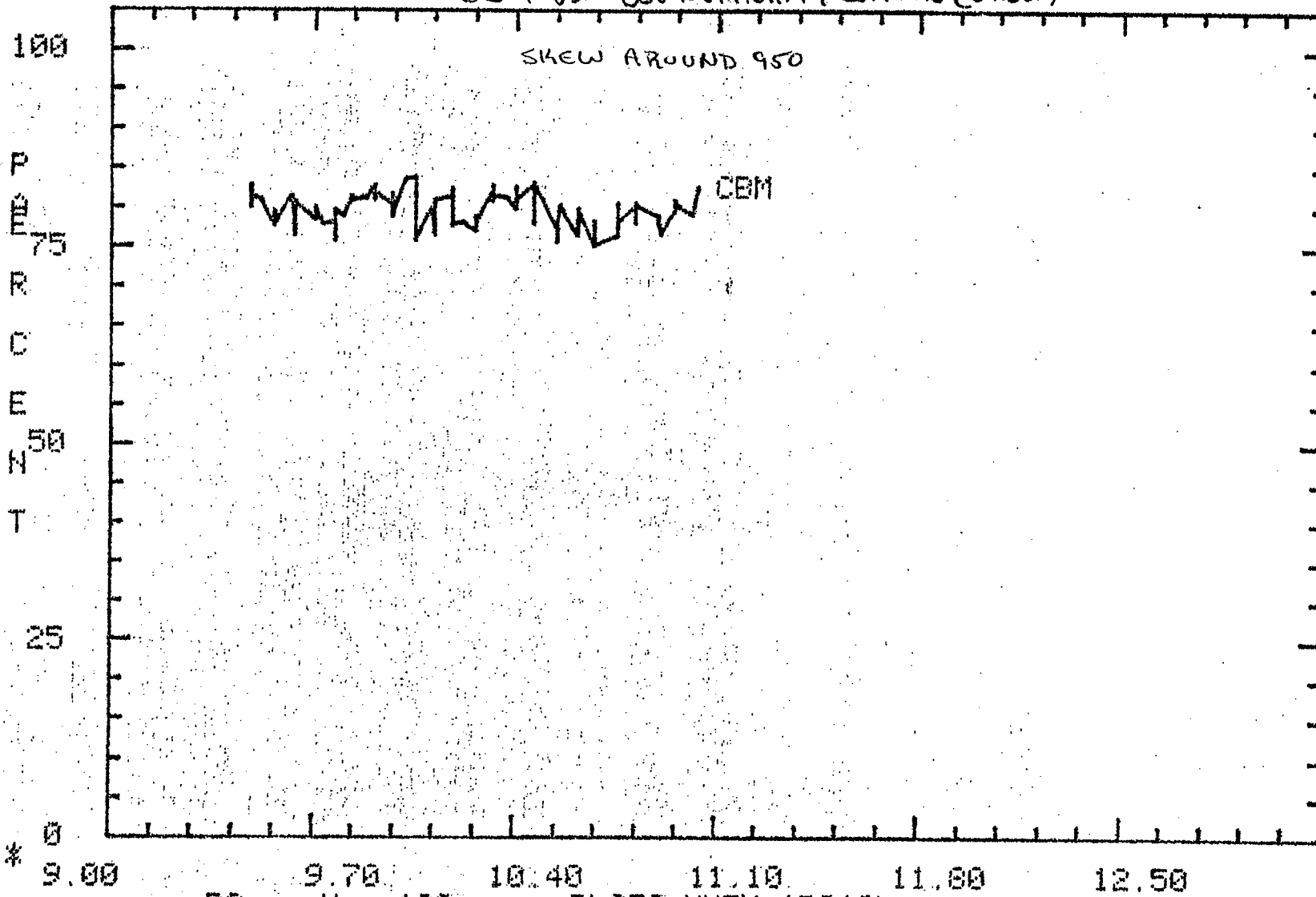
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YAD-0000) .0 = 0.000,100 = 600.000

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TEST VAR: #NONE AUG= 1

CBM VS. DOWNSTREAM POSITION (SKEW)



DS

X

100

PLOTS WHEN ABS(OL) > SKEW (DOWNSTREAM POSITION)

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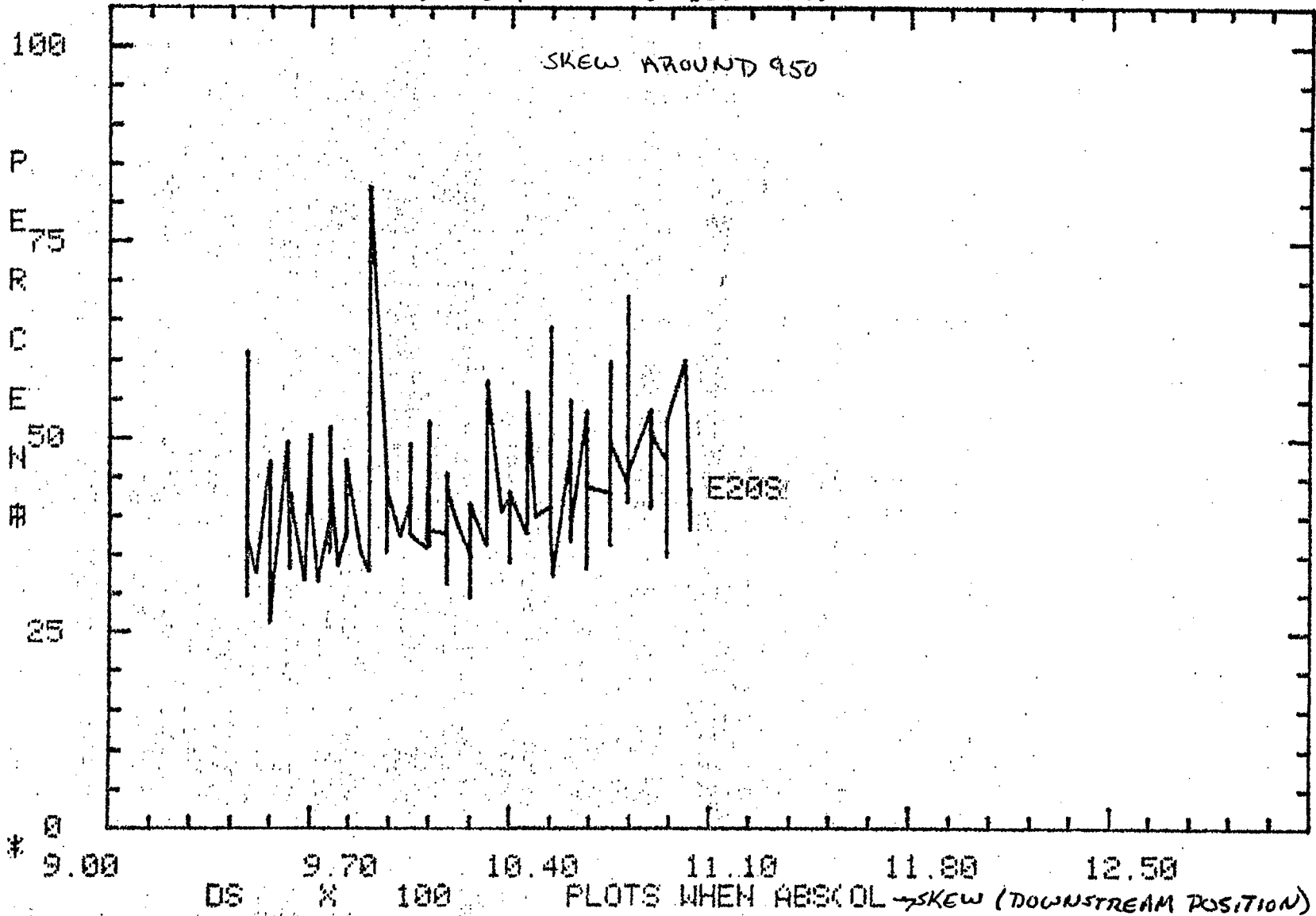
YAD-~~0000~~ 00=

00.000,100= 600.000

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TEST VAR #NONE AUG= 1

E20S LOSSES VS. DOWNSTREAM POSITION (SKEW)



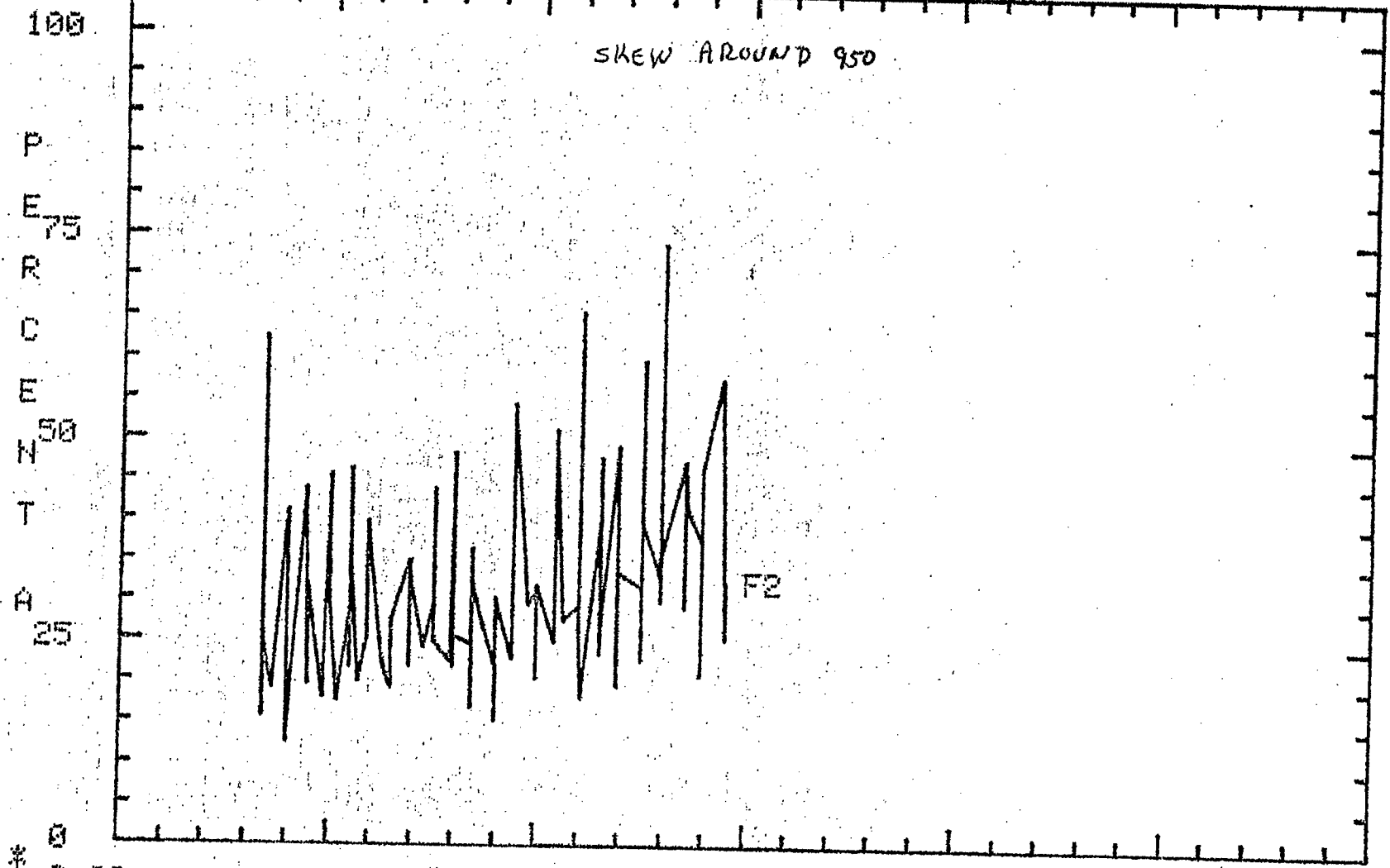
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YAD#NEW) ,X= 00.000,100= 600.000

TEST VAR#NONE AUG= 1

F02 LOSSES US, DOWNSTREAM POSITION (SKEW)



* 9.00

DS

9.70

X

100

10.40

11.10

11.80

12.50

PLOTS WHEN ABS(OL -> SKEW (DOWNSTREAM POSITION))

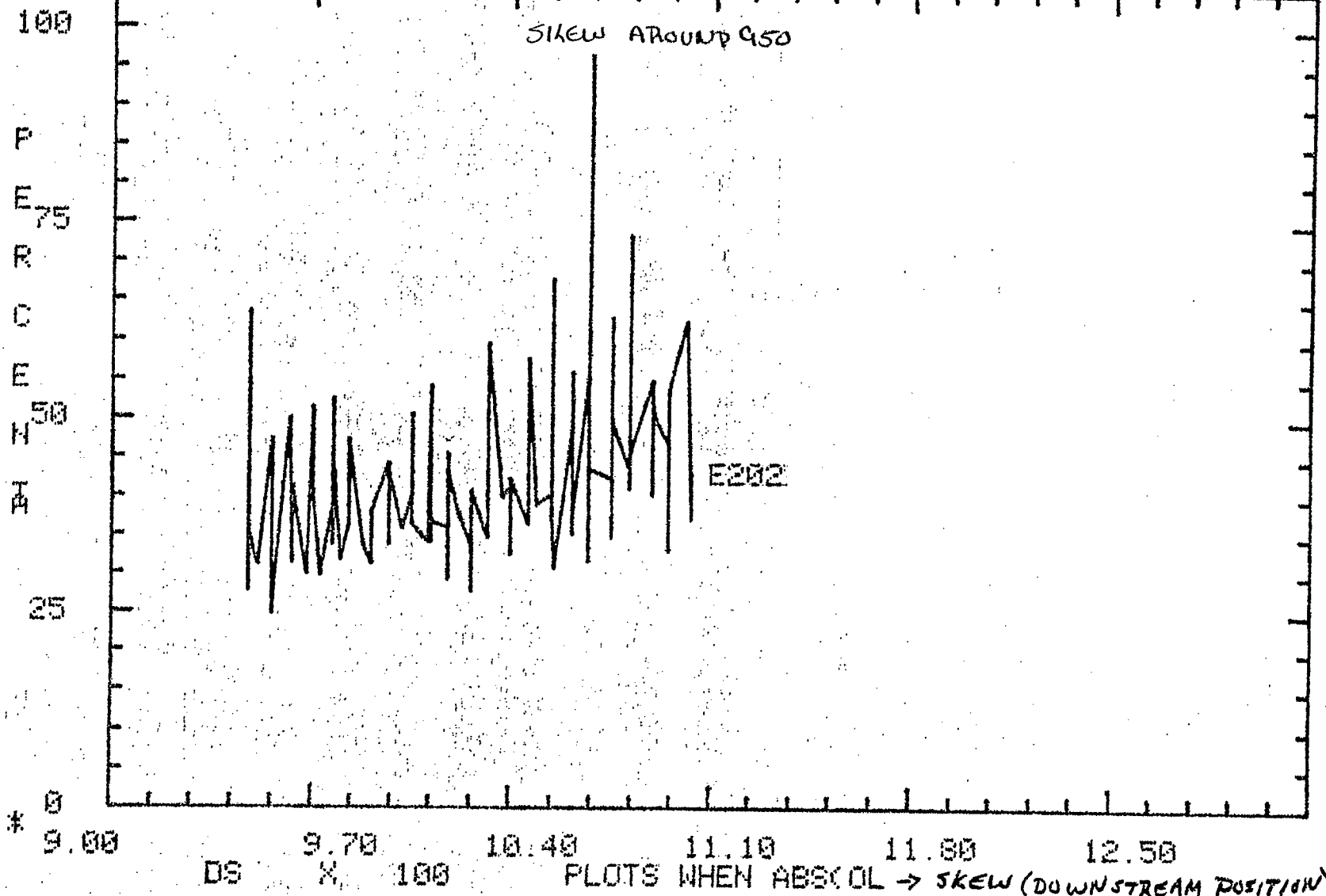
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YAD-B002 X= 0.000,100= 500.000

TEST VAR #NONE AVG= 1

E202 LOSSES VS. DOWNSTREAM POSITION (SKEW)



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YAD+HEAD ,X= 00.000,100= 12.000

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TEST VAR #NONE AVG= 1

