

JEF MEETING 1/12/1993

1° CALCULATION OF CRITICAL MASSES OF SOME FAST EXPERIMENTS
PERFORMED ON MASURCA (w.Assal)

Importance of critical mass data

ECCO cell calculation
 ERANOS spatial treatment (transport S_N)

 $S_4, S_8 \Rightarrow$ extrapolated S_∞ value B_1 inconsistent, P_1 inconsistent, P_1 consistent calculations . P_1 consistent extrapolated results

	E	C	(E-C)/C
R1	1.00093	1.00704	-606
R2N12Na	1.00277	1.00770	-490
R260	1.00272	1.00765	-473
R290	1.00174	1.00686	-508
R390	1.00099	1.00492	-391
Z2	1.00265	0.99923	342
Z3	1.00335	1.00051	284
ZONA2	1.00263	1.01109	-837
ZONA3	1.00113	1.00063	50
MAS1B	1.00236	1.00387	-150
MAS1AP	1.00135	0.99645	492
ZOCO1	1.00824	0.99996	867

2° REANALYSIS OF THE COMPLETE INTEGRAL DATA SET BY RECONSIDERING THE SENSITIVITIES .

first approach

present approach

V

$S_{n,f}$

$\Rightarrow$

$$S_{n,f} + \frac{\sigma_{n,f}}{\sigma_{tr}} S_{tr}$$

$S_{n,\gamma}$

$\Rightarrow$

$$S_{n,\gamma} + \frac{\sigma_{n,\gamma}}{\sigma_{tr}} S_{tr}$$

$S_{n,n}^{\text{removal}}$

$S_{n,nf}^{\text{removal}}$

limitation to 5 nuclear constants justified by the size of the system : 21 MW
 $\Rightarrow$ condition on σ_t or σ_{tr} not included . The new approach solves the
 problem at least approximately , without changing the size .

RESULTS

General improvement : better χ^2 for $N=138$ limits are $0.88 < < 1.12$

first approach

$$\chi^2 = 1.07$$

new approach

$$\chi^2 = 0.93$$

less experiments excluded from the adjustment .(ACTION)

x-section modification slightly different ,but "gross tendencies"

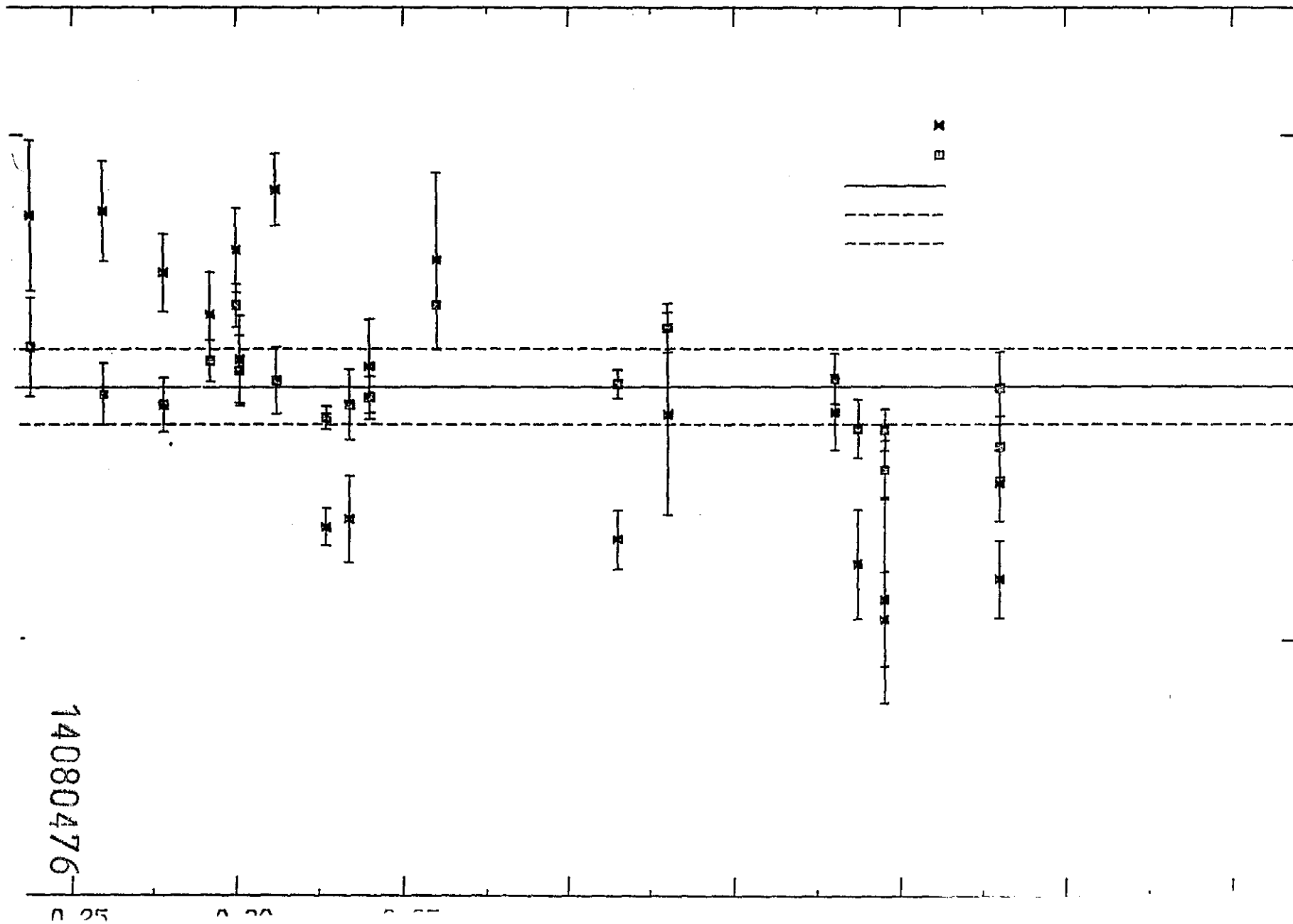
confirmed. Particular point : the adjustment on the O removal

scattering

x-section is reduced .

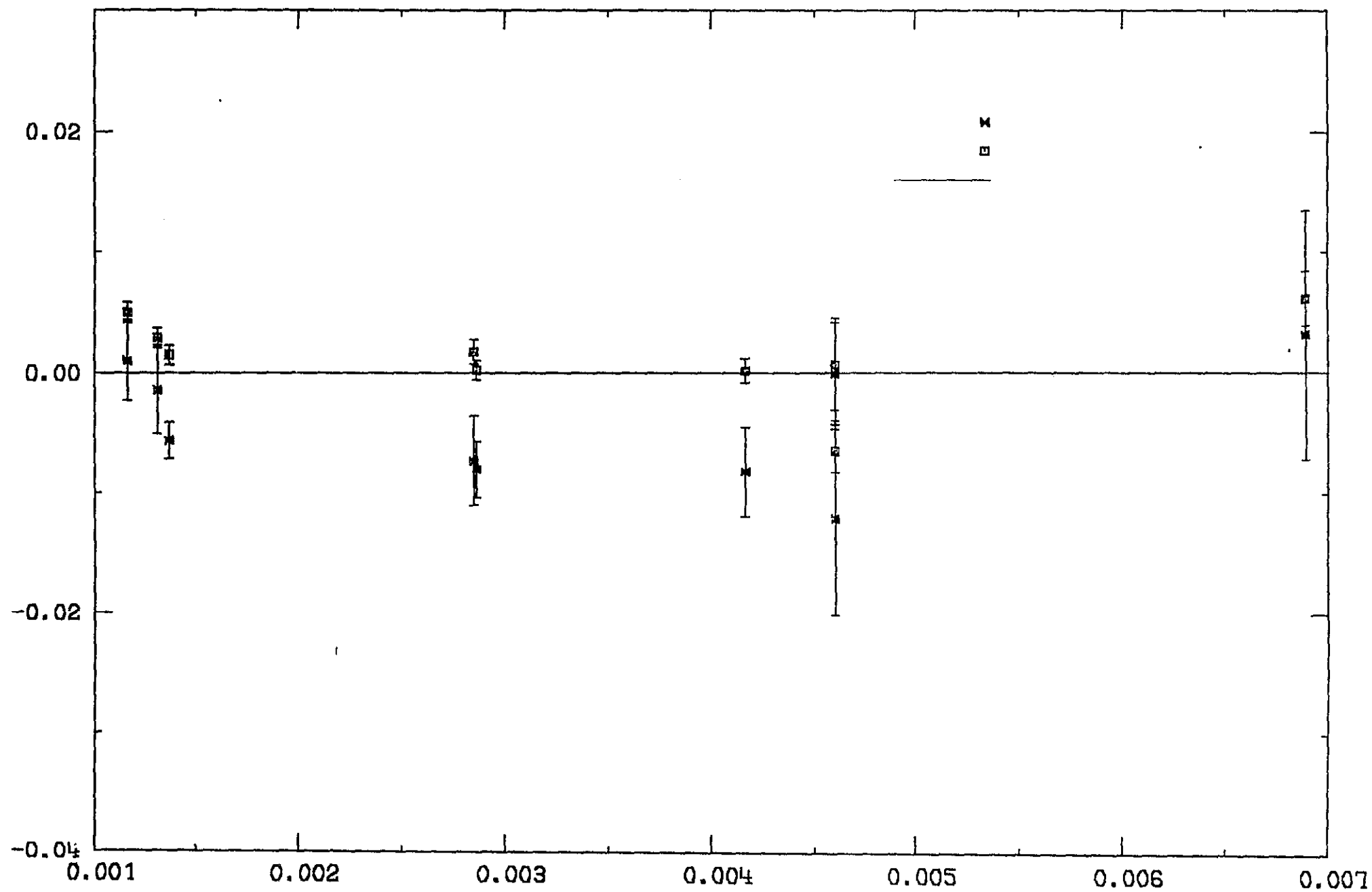
14080475

KEFF R 137 EXP



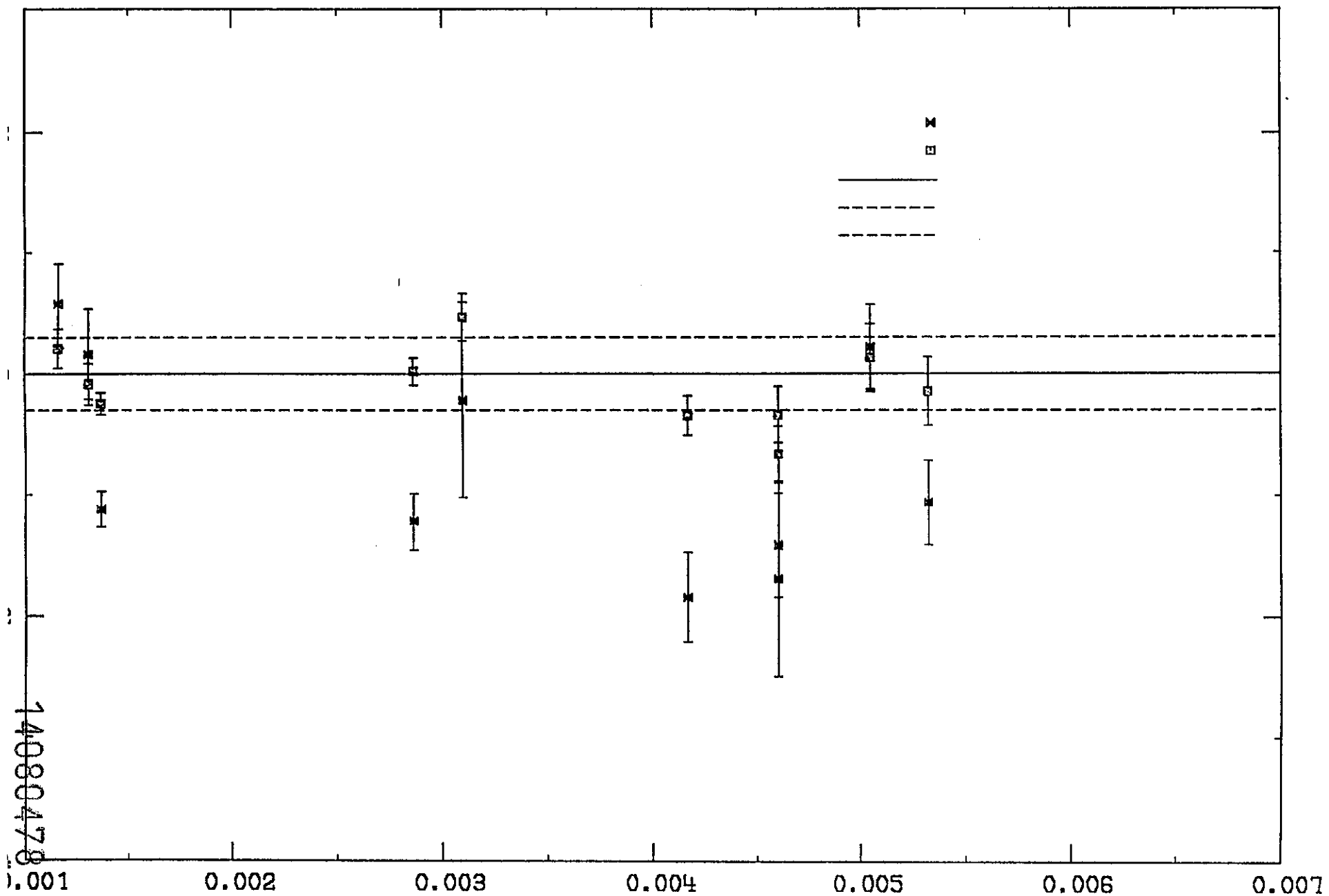
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MASSE CRITIQUE DB2 135 EXP

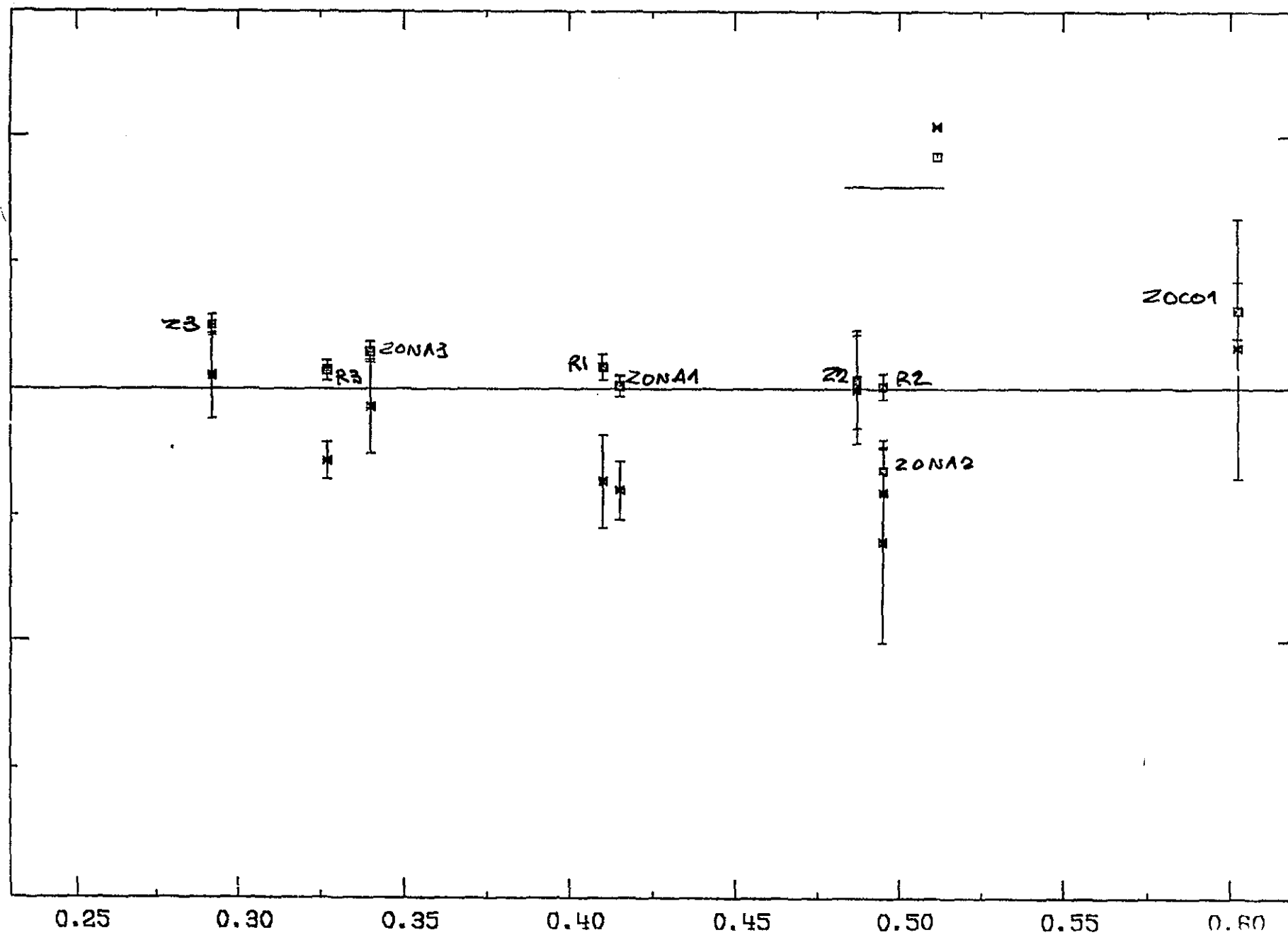


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~~OFF~~ DB2 137 EXP

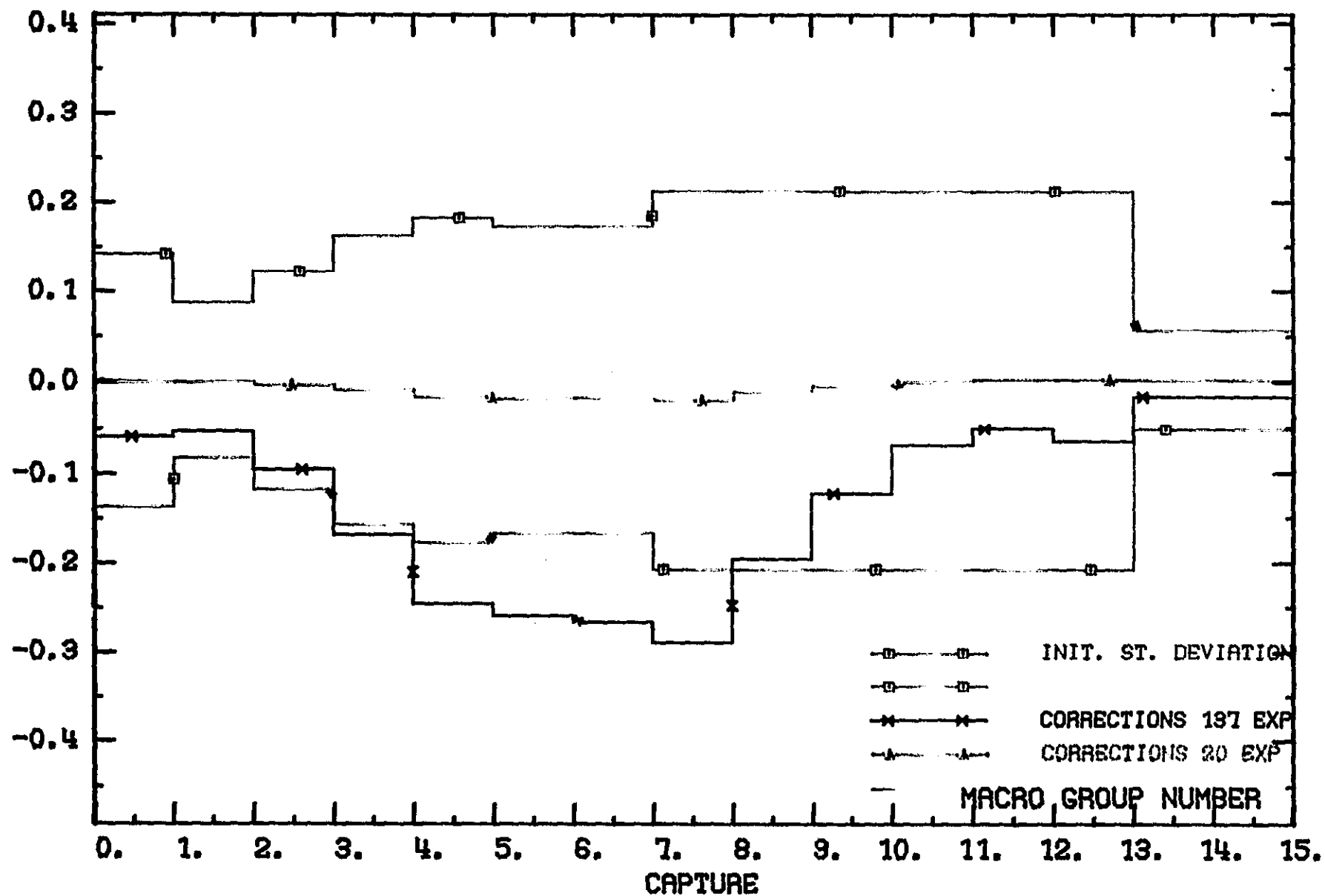


MASSE CRITIQUE R 137 EXP



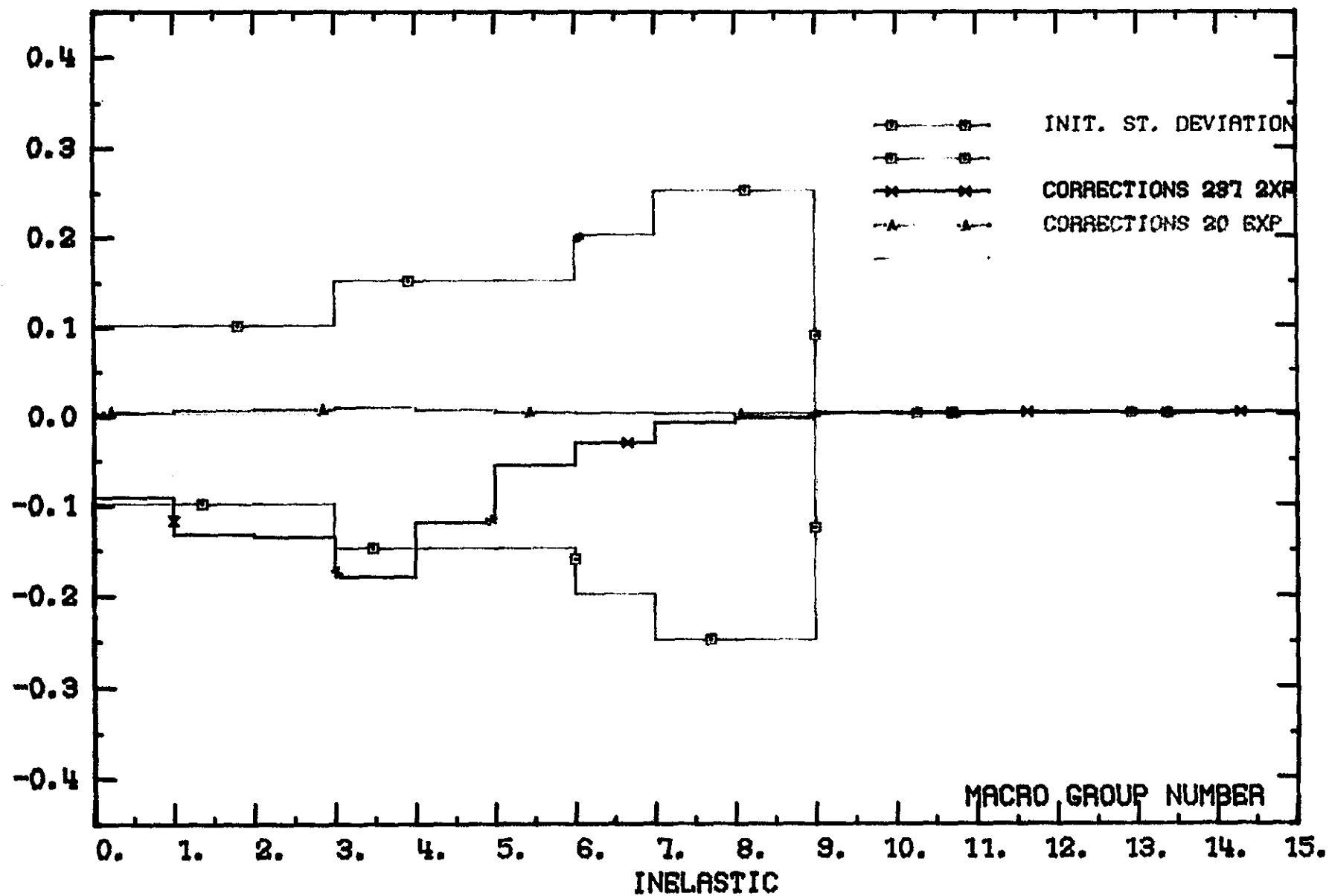
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NI 58



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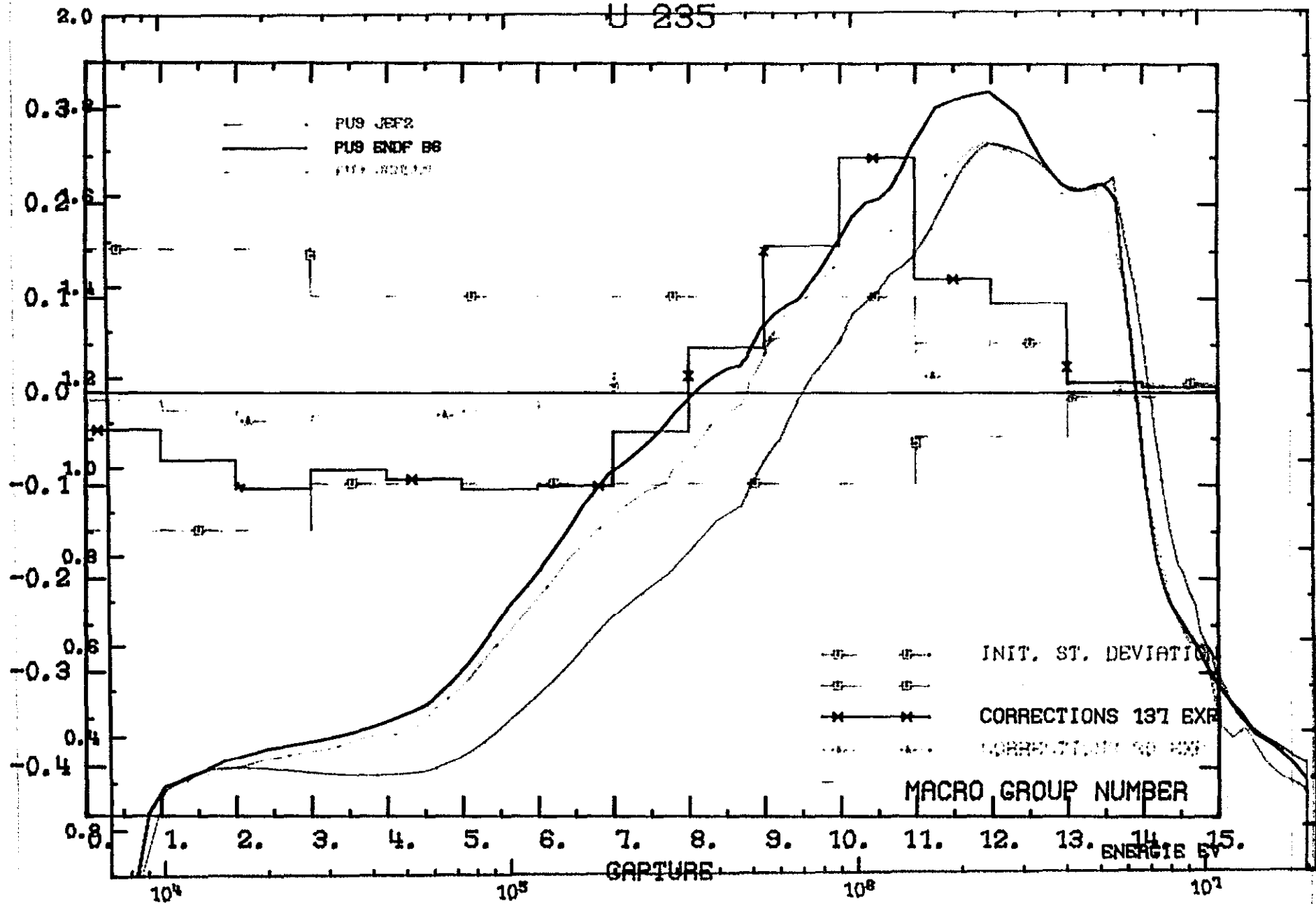
PU 239



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PU9J2 PU9B6 PU9JENDL3

U 235



CAPTURE

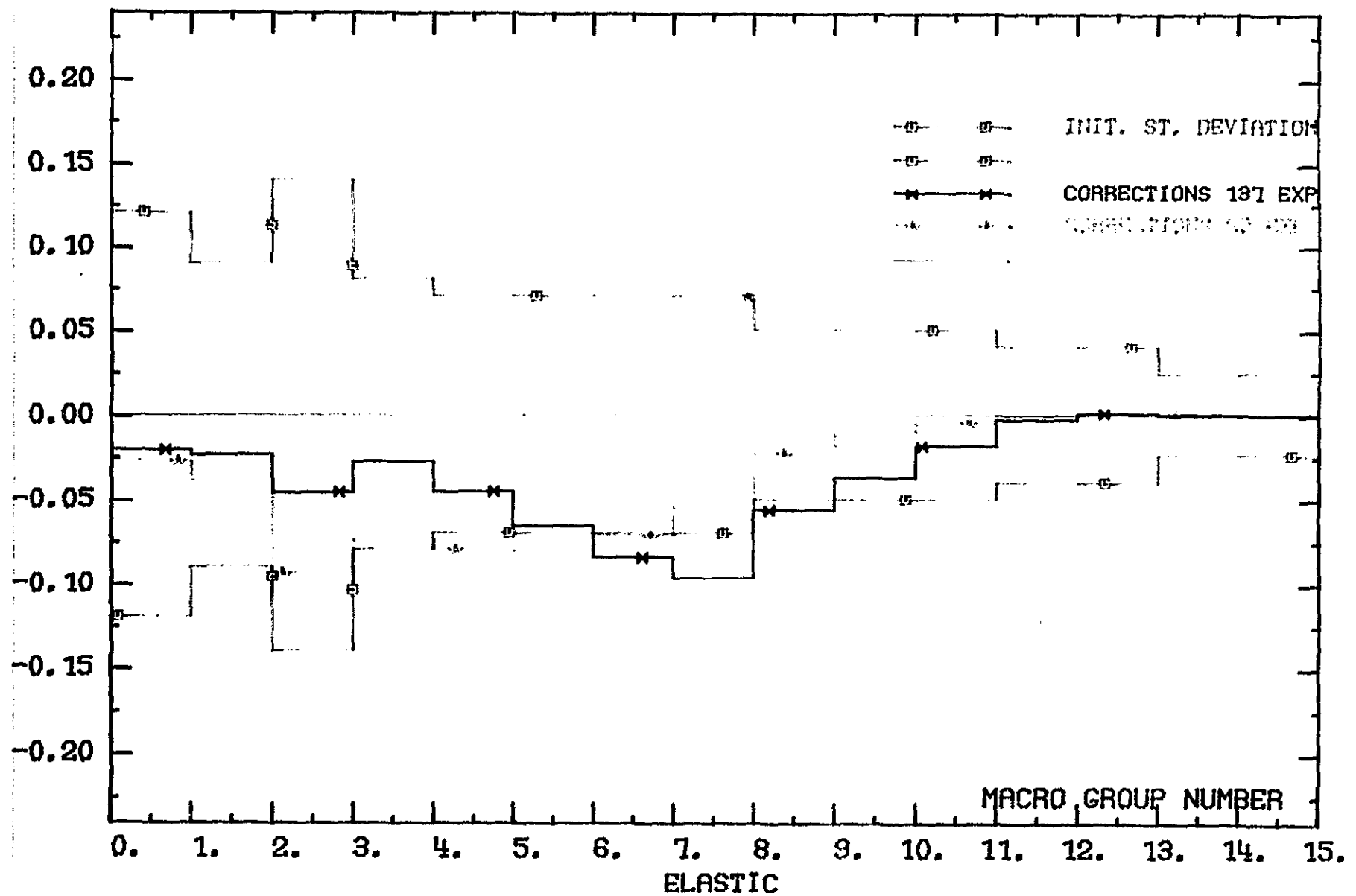
ENERGY eV

MACRO GROUP NUMBER

NT4 1968 G IWT=2

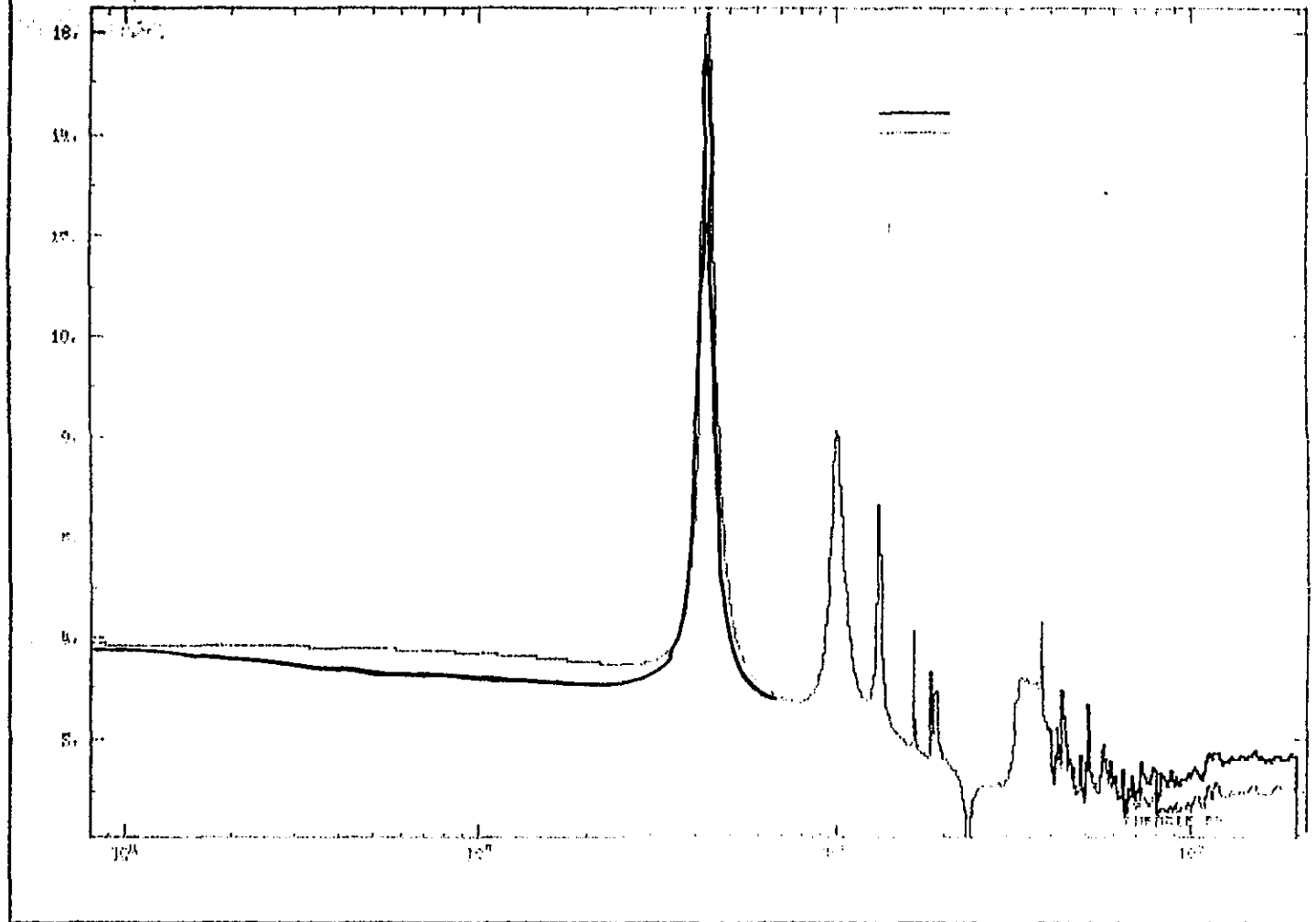
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0 16



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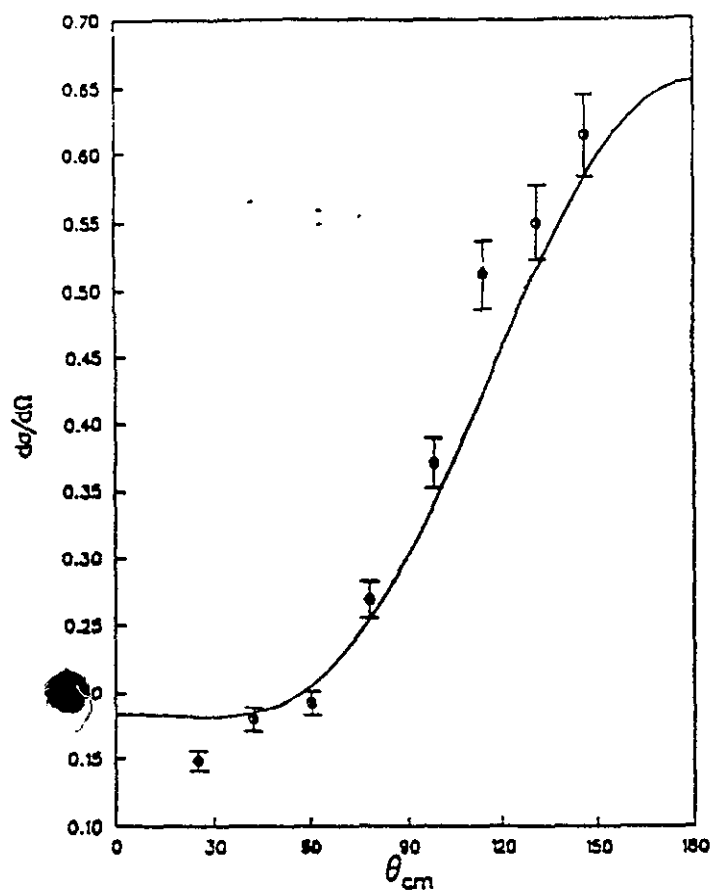
05 JER2.1



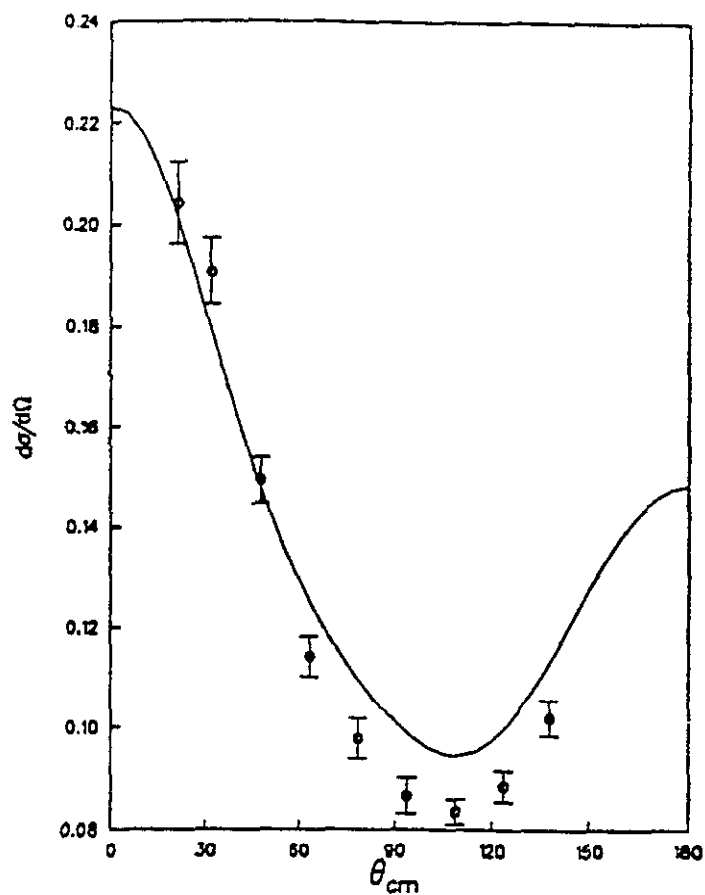
PF3=FIN/PF10=PROCESSOR/HUM+PF11=ADHGE THUTH 10-THIPEXSTOT

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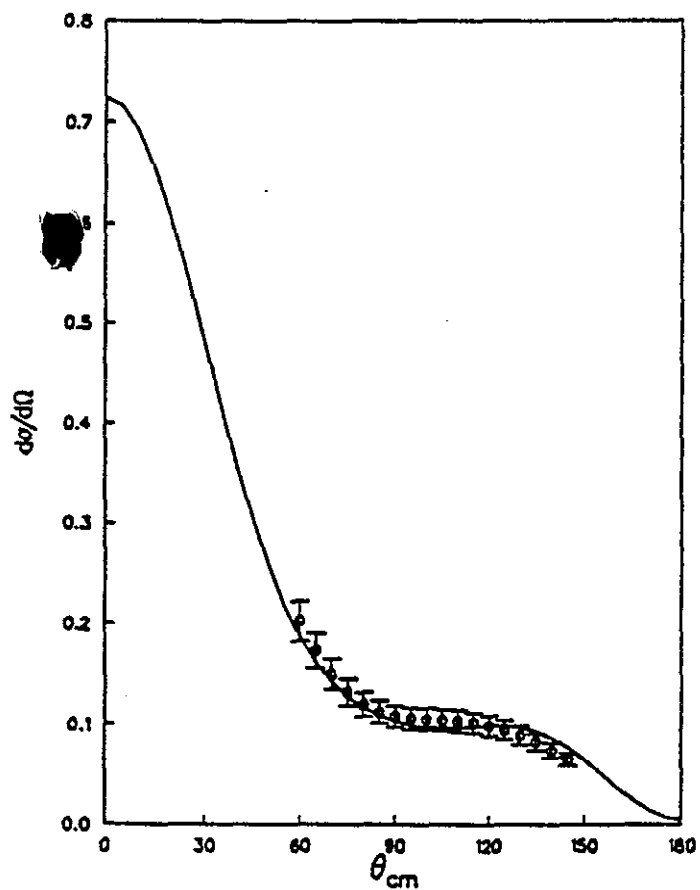
$^{16}\text{O}(n,n)^{16}\text{O}$.37 MeV



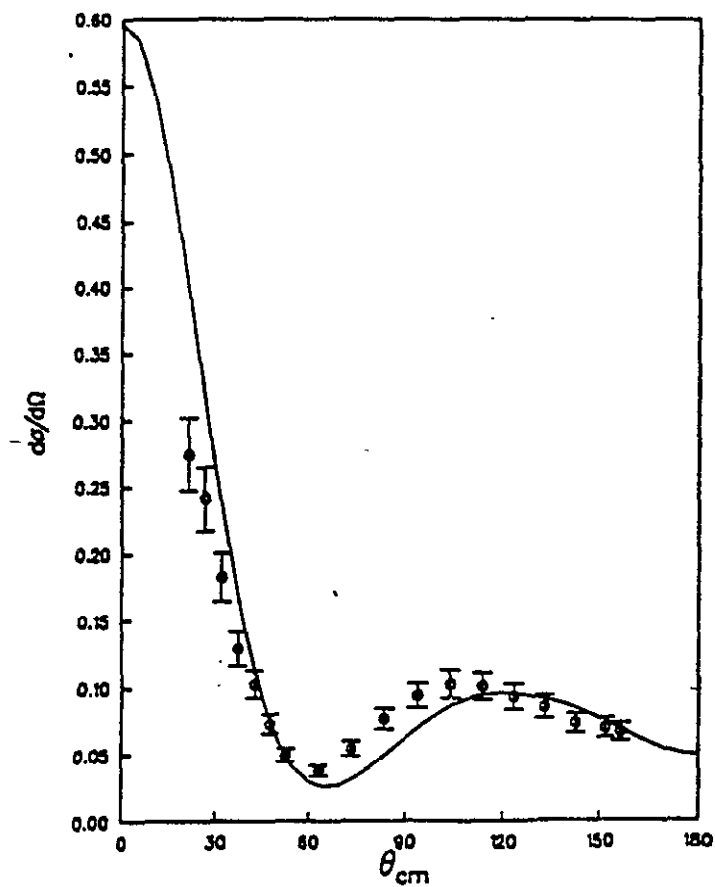
$^{16}\text{O}(n,n)^{16}\text{O}$ 2.03 MeV



$^{16}\text{O}(n,n)^{16}\text{O}$ 3.95 MeV

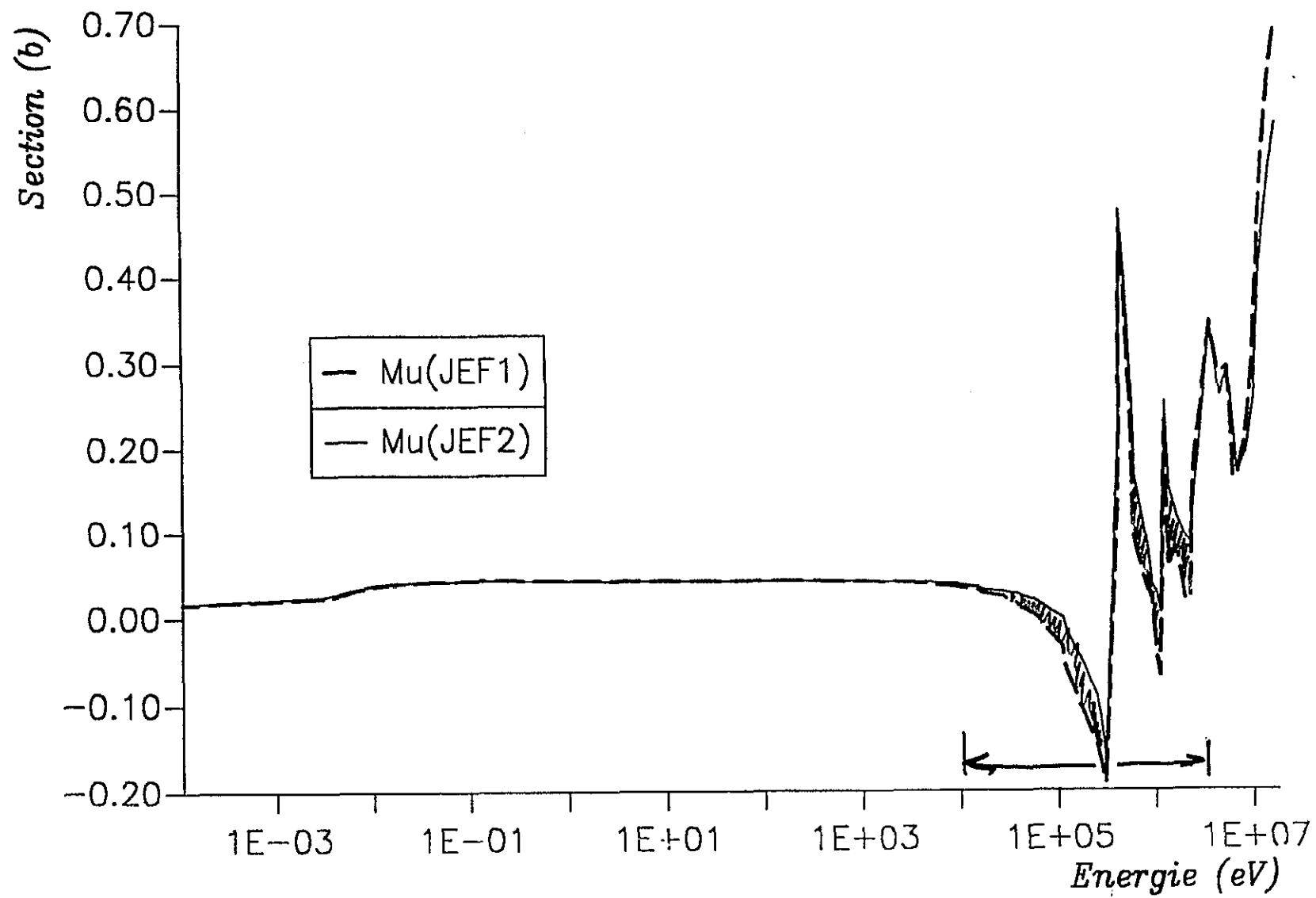


$^{16}\text{O}(n,n)^{16}\text{O}$ 6.01 MeV



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Mu de l'Oxygène 16



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