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Lawrence Radiation Laboratory
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LIVERMORE

UCRL-50174 Sec. III

COMPIRATION OF X-RAY CROSS SECTIONS
SECTION III

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COMPILED X-RAY CROSS SECTIONS

SECTION III

Abstract

This section contains graphs and tables of x-ray cross sections used to obtain the cross section tables of Section II (cross sections in the range of 1 keV to 1 MeV).

Incoherent Cross Sections (Figs. 1-25)

The results of the sliding polynomial fit used to obtain the incoherent cross sections for those elements not calculated by Cromer and Mann* are shown in Figs. 1-25. The points on the curve represent the 35 elements used for the fit.

The interpolated points were obtained by making a log-log fit of order n over m points over the range Z_j to Z_{j+m-1} using the corresponding Cromer's cross section values σ_j . After each interpolation the j value was increased by one. If p represents the number of interpolated values of each unknown element, then the final interpolated value obtained by this method is given by

$$\sigma = \sum_{i=1}^p \sigma_i. \quad (1)$$

The values of n and m used for this sliding fit were:

$$\begin{aligned} 1-8 \text{ keV} & \quad n = 2, m = 3 \\ 10-1000 \text{ keV} & \quad n = 3, m = 10. \end{aligned}$$

K-Edge Photoeffect (Figs. 26-28)

The points on the curves in Figs. 26-28 represent the values in the compilation of Section II. Here again an iterative interpolation was used to obtain a somewhat smooth curve, recognizing that due to structure at the edges one cannot expect a perfectly smooth fit.

*D. T. Cromer and J. B. Mann, Compton Scattering Factors for Spherically Free Atoms, Los Alamos Scientific Laboratory, New Mexico, Rept. LA-DC-8819 (1967).

Reference 90 Cross Z Fits (Figs. 29-81)

The points on the curves in Figs. 29-81 show the final compilation photoelectric cross sections and their corresponding cross Z fits. The fitted values were used in each element's data file.

Element Data Files

The data points used to obtain the compilation are listed in Appendix A. This listing will enable the reader to draw his own conclusions concerning the status of experimental measurements over any energy range of interest. The total cross sections are presented in both barns/atom and cm^2/g for easy reference along with the conversion constant relating the two. The source number refers to the data source reference number as listed in Section I and the weights are those of Table III in Section I.

The DIFF column gives the percentage difference of the data points when compared to the interpolated compilation value for the same energy according to the formula

$$\text{DIFF} = \frac{D - C}{C} \times 100,$$

where C is the interpolated compilation cross section and D is the data point. To obtain the maximum accuracy, each component of the cross section was interpolated separately and summed to find C.

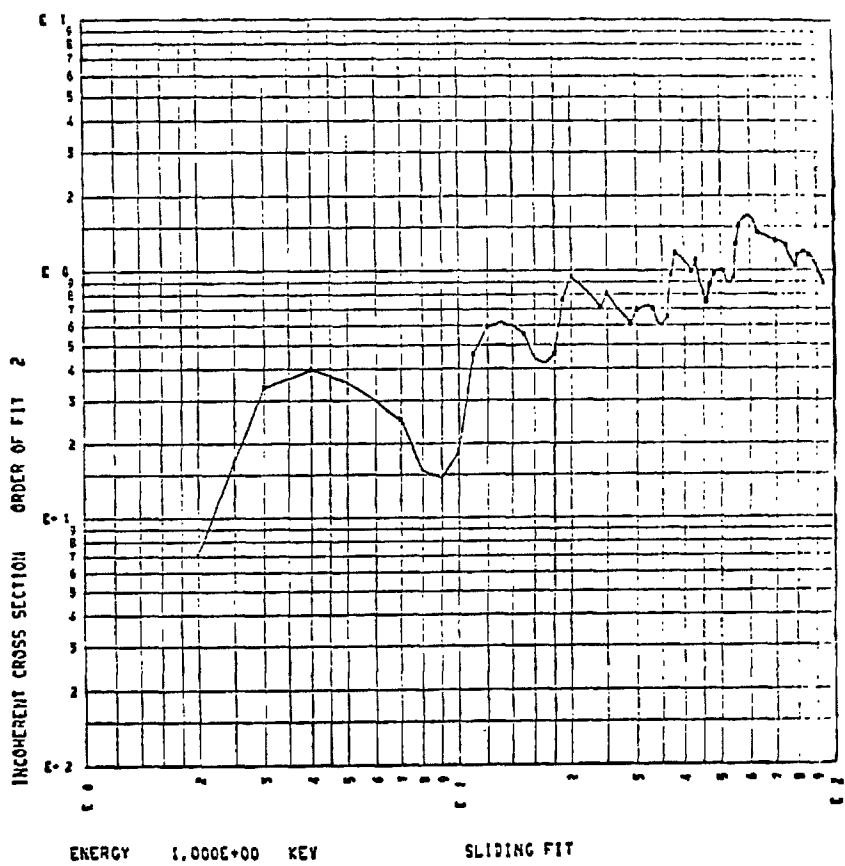


Fig. 1

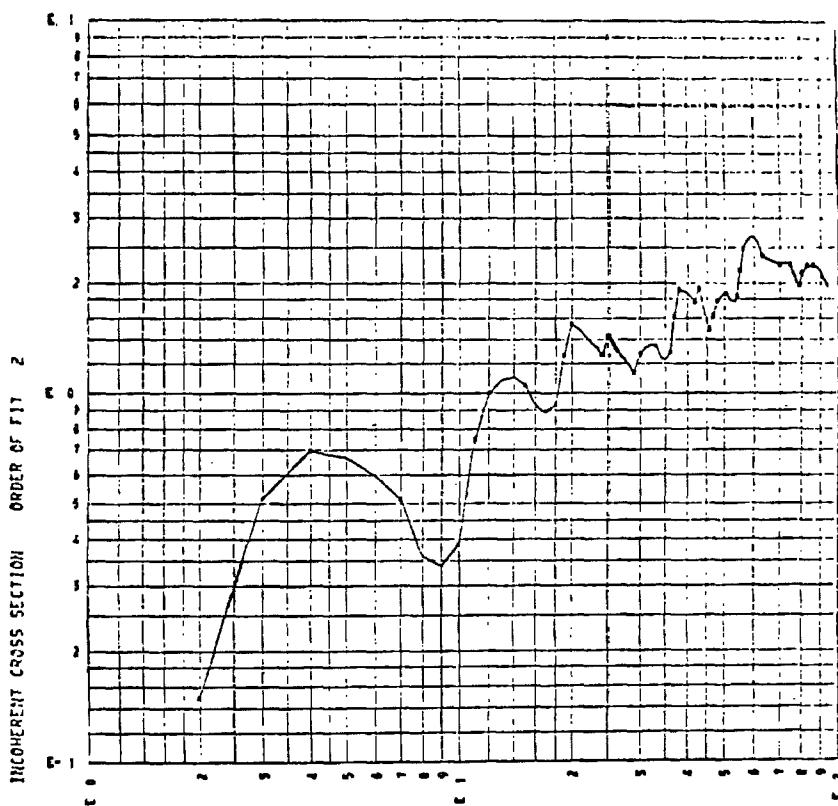
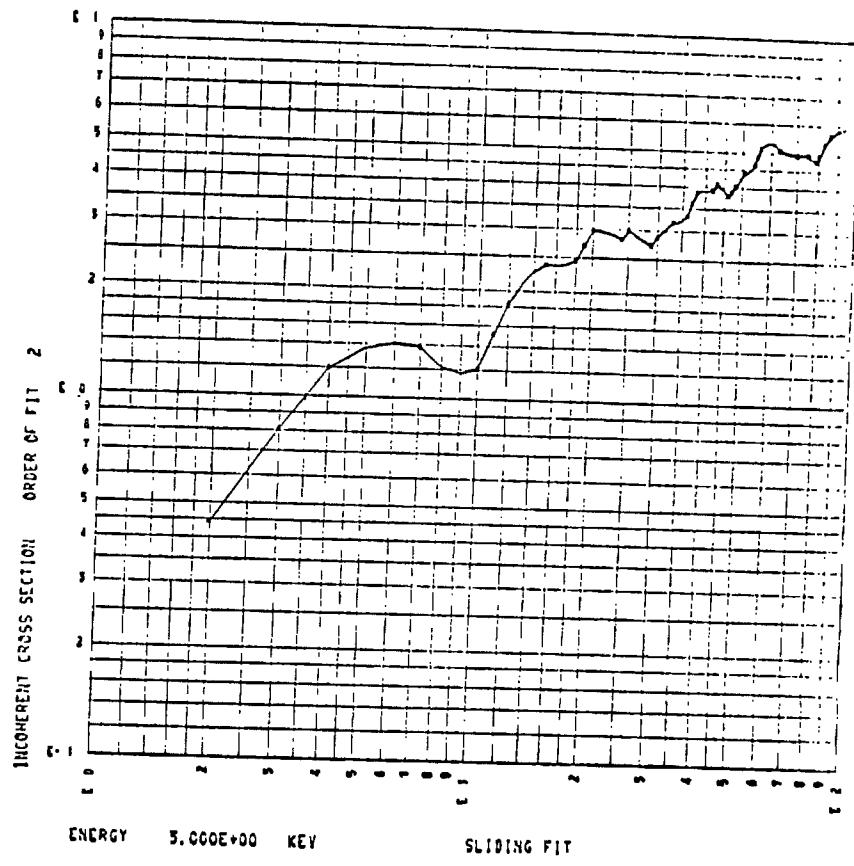
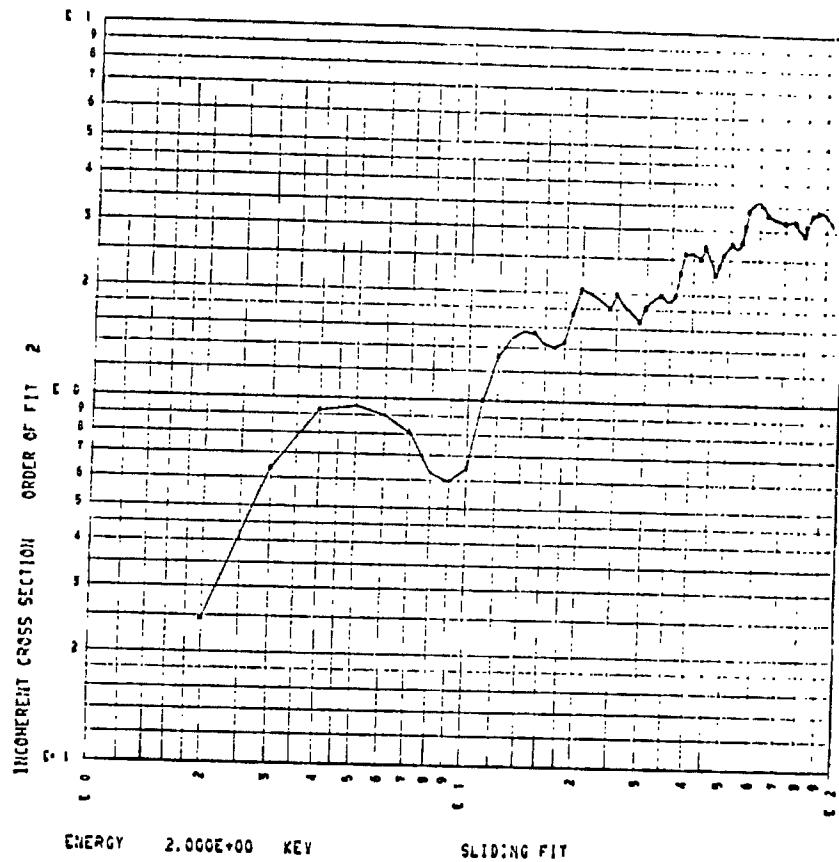


Fig. 2

ENERGY 1.500E+00 KEY SLIDING FIT



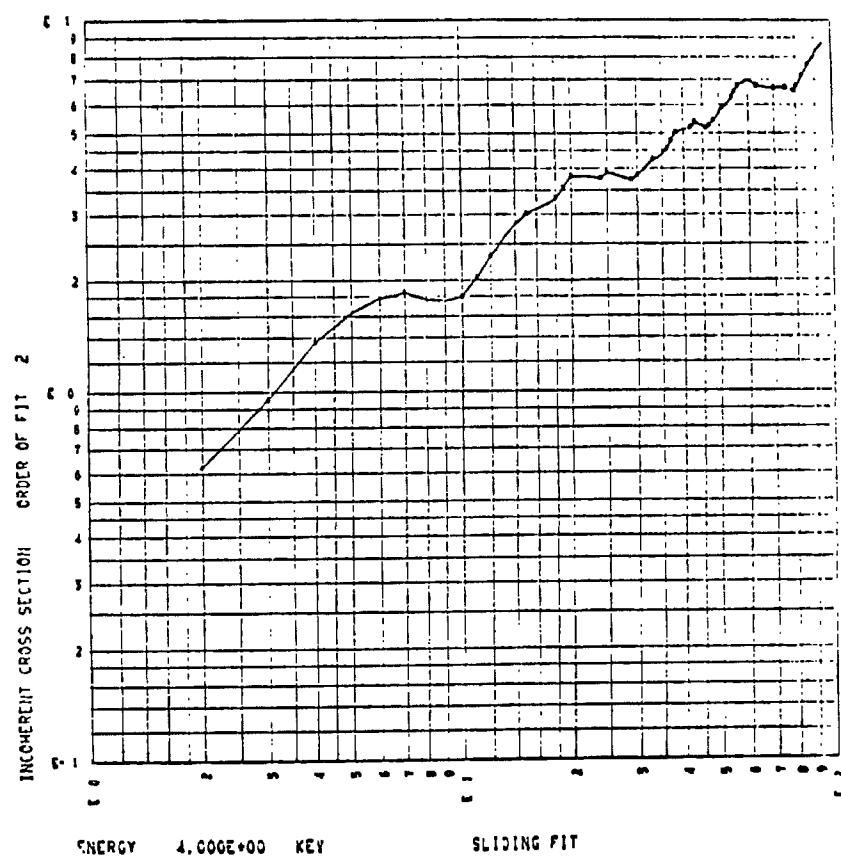


Fig. 5

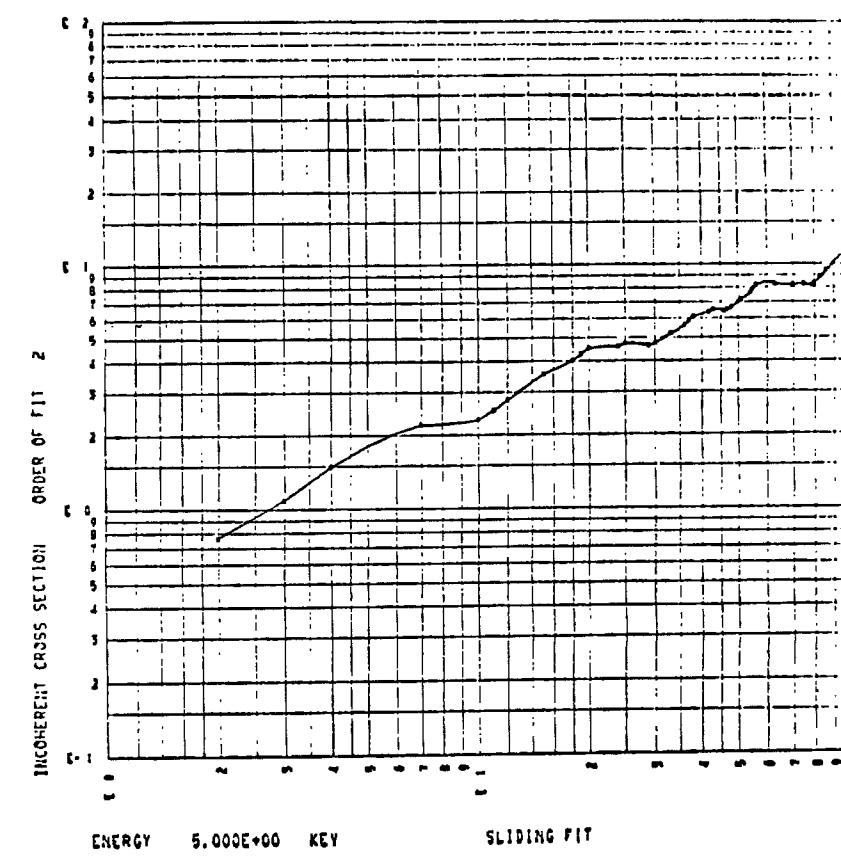


Fig. 6

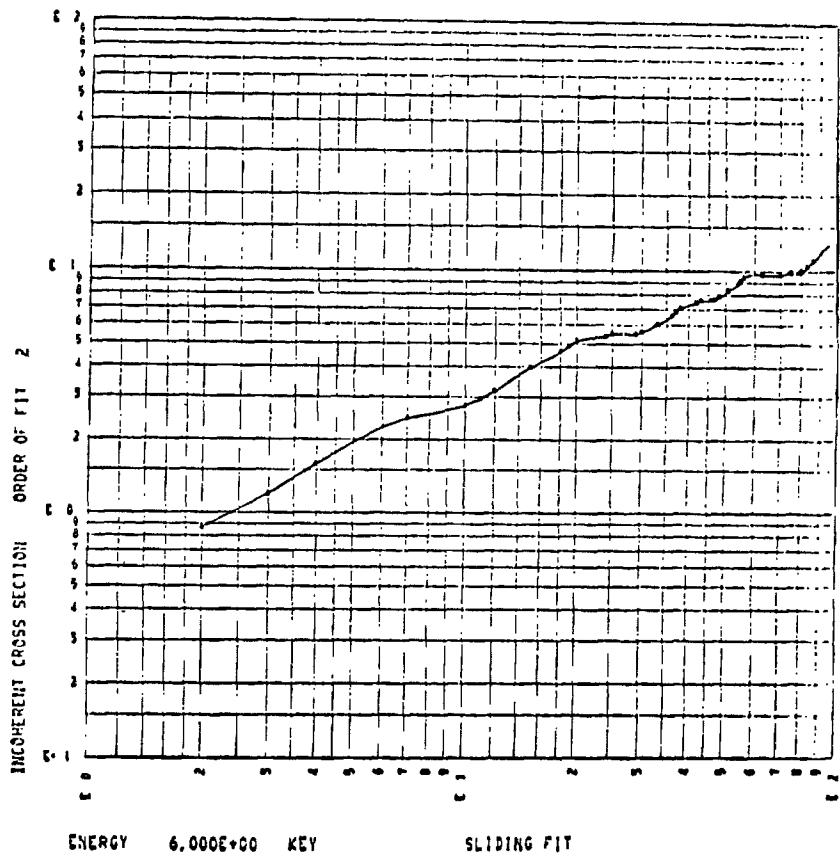


Fig. 7

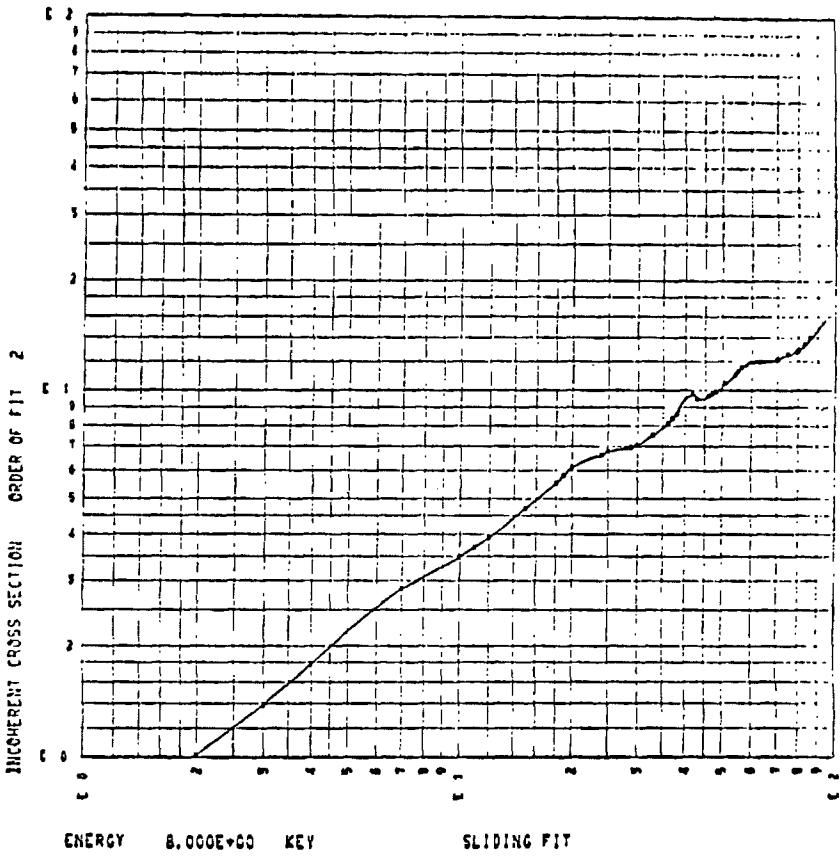


Fig. 8

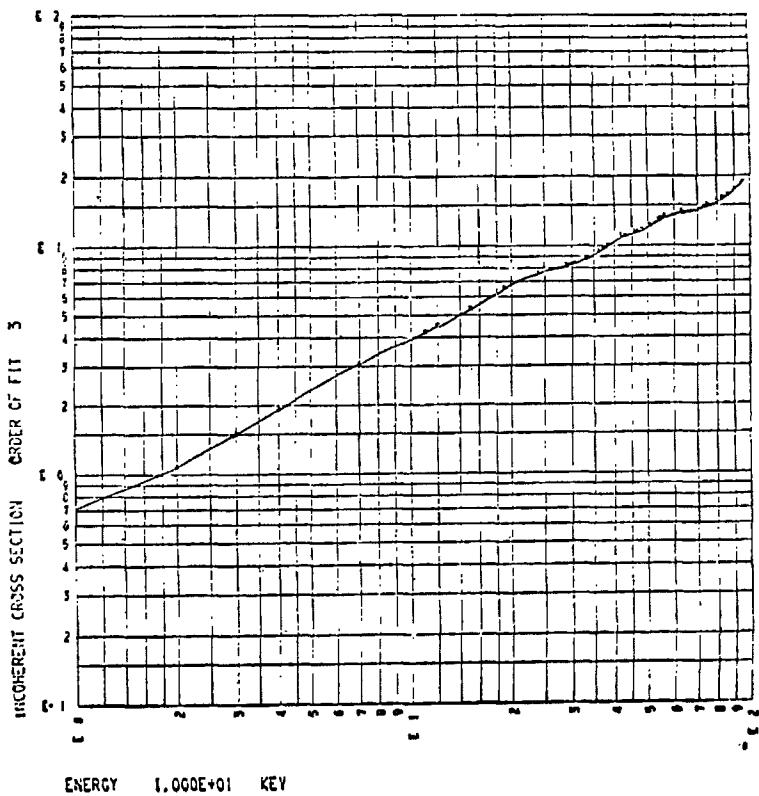


Fig. 9

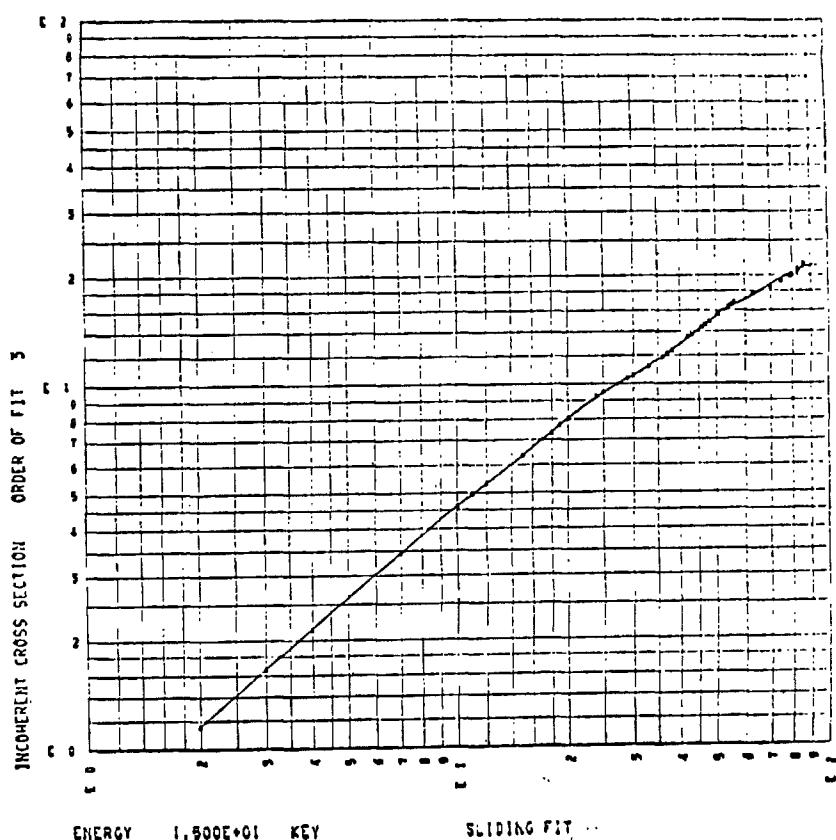
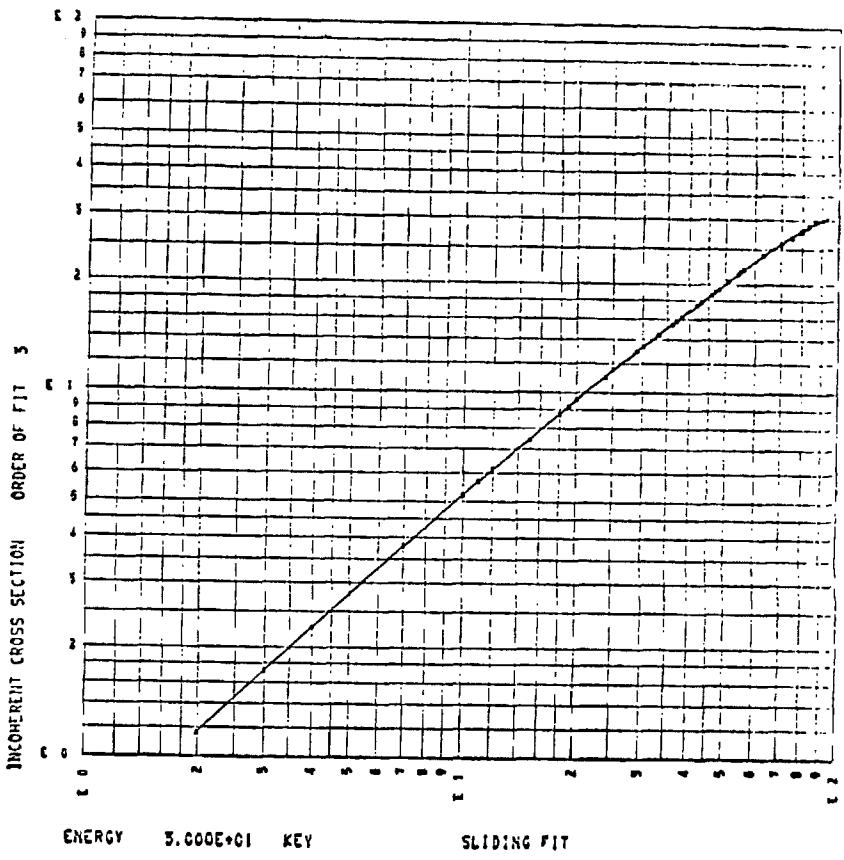
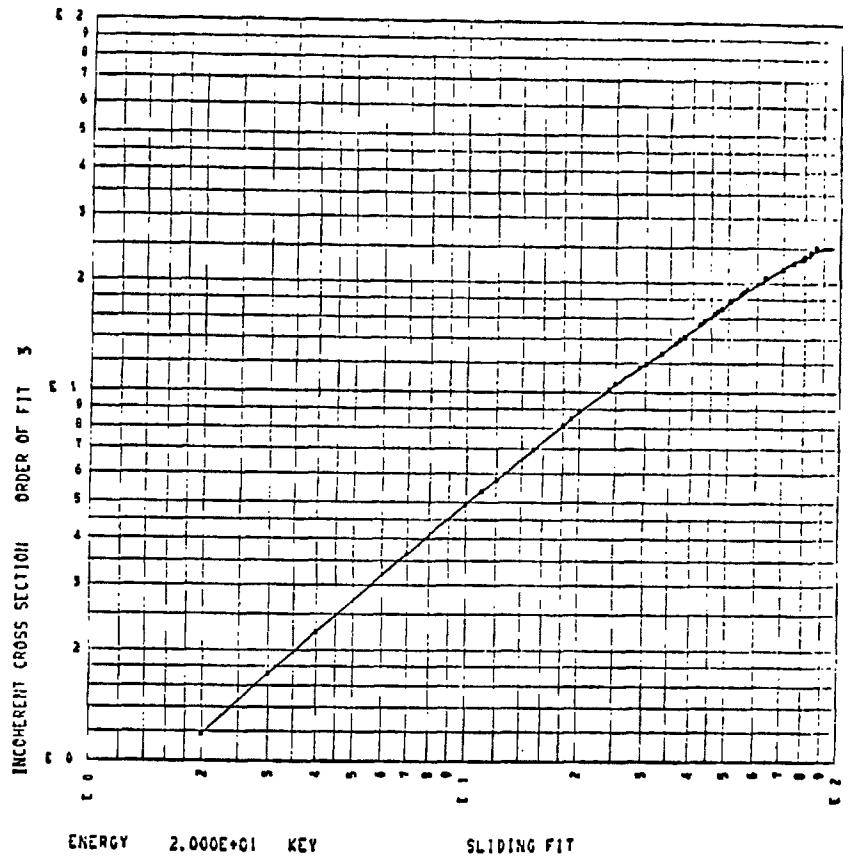


Fig. 10



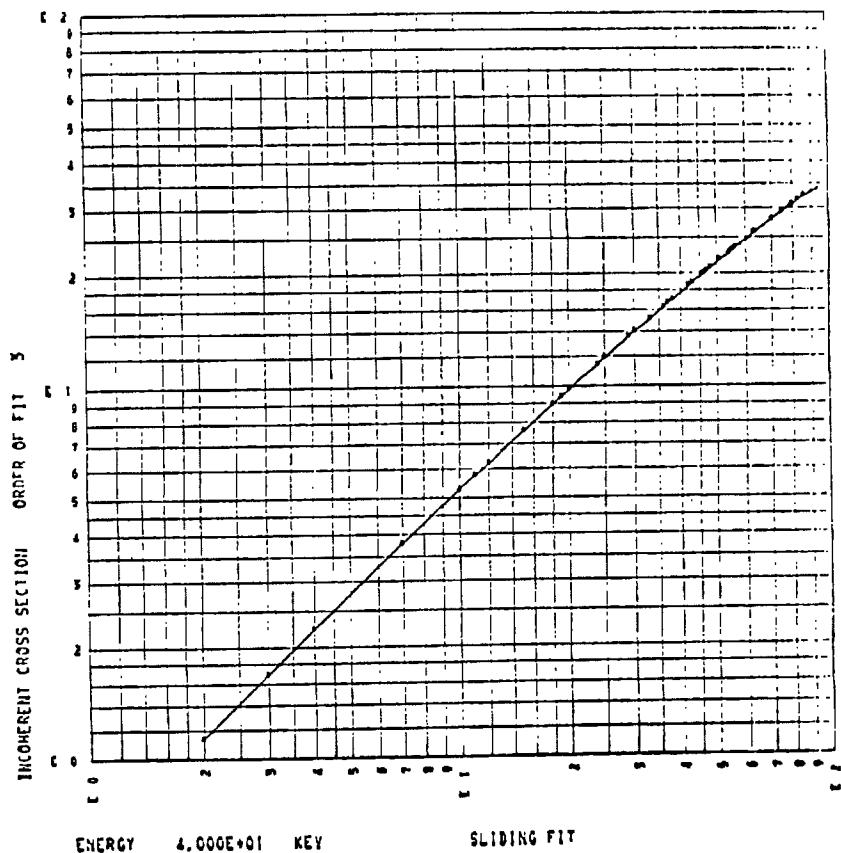


Fig. 13

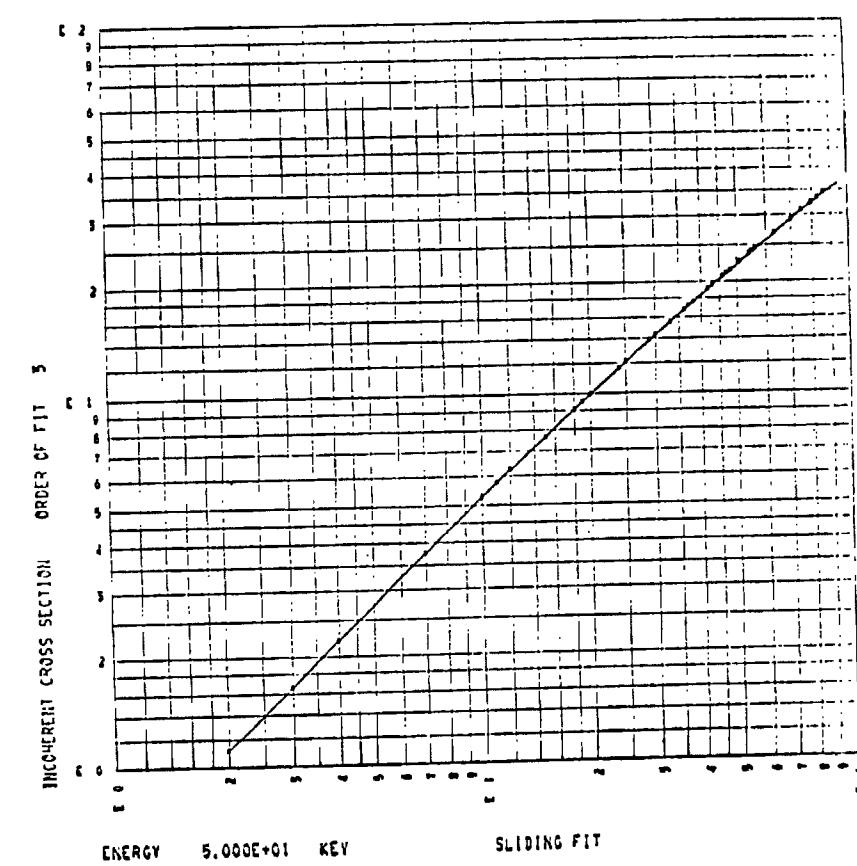


Fig. 14

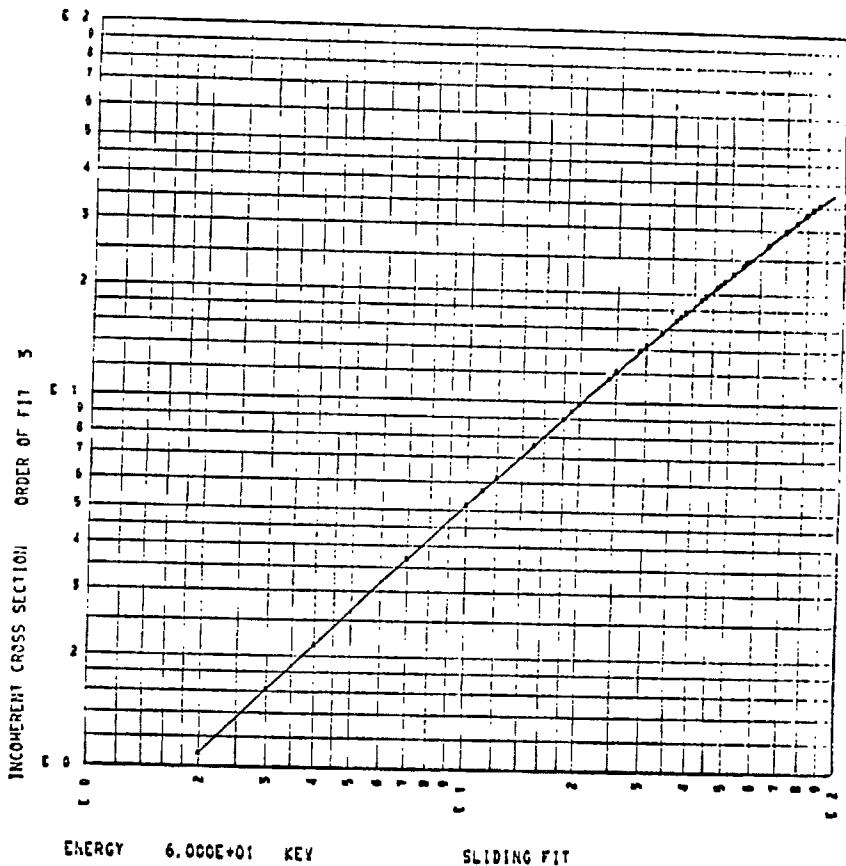


Fig. 15

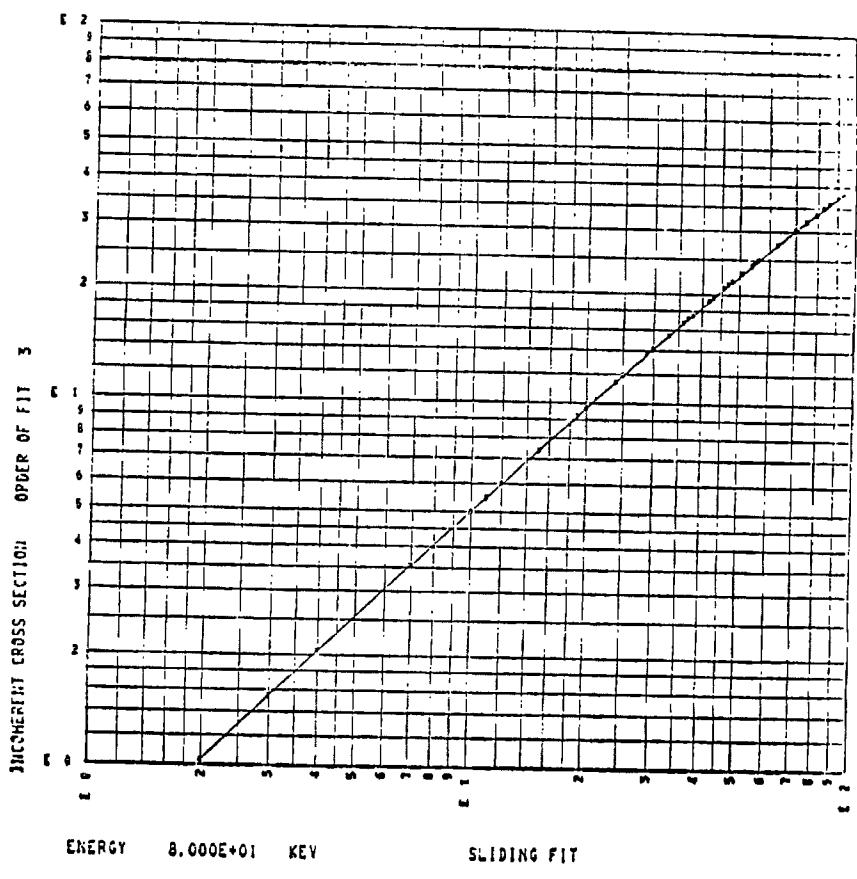


Fig. 16

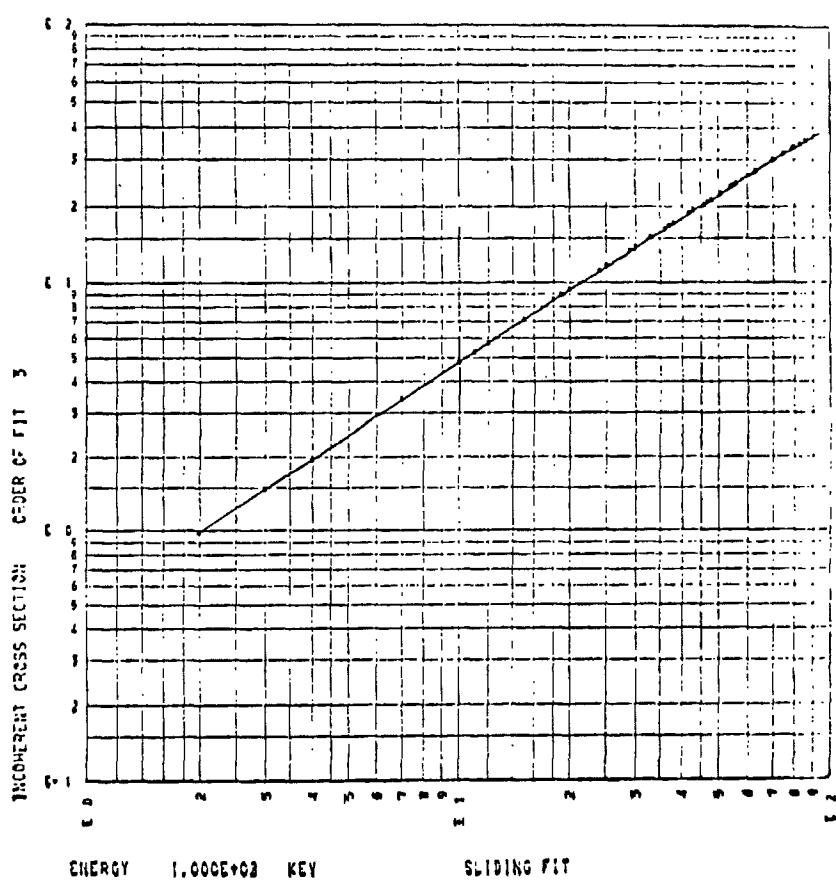


Fig. 17

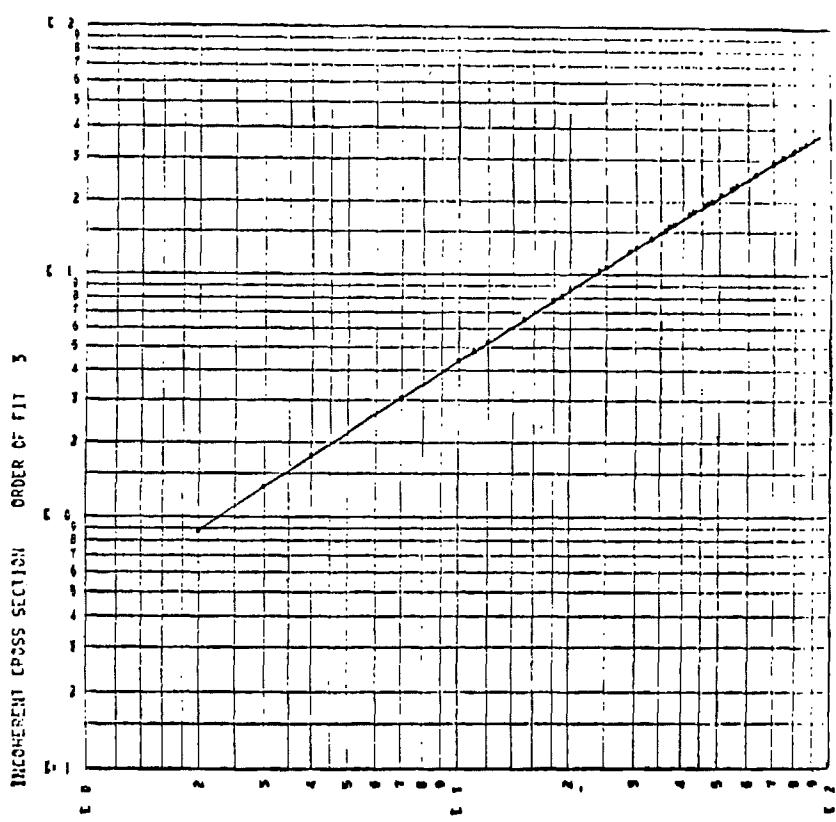


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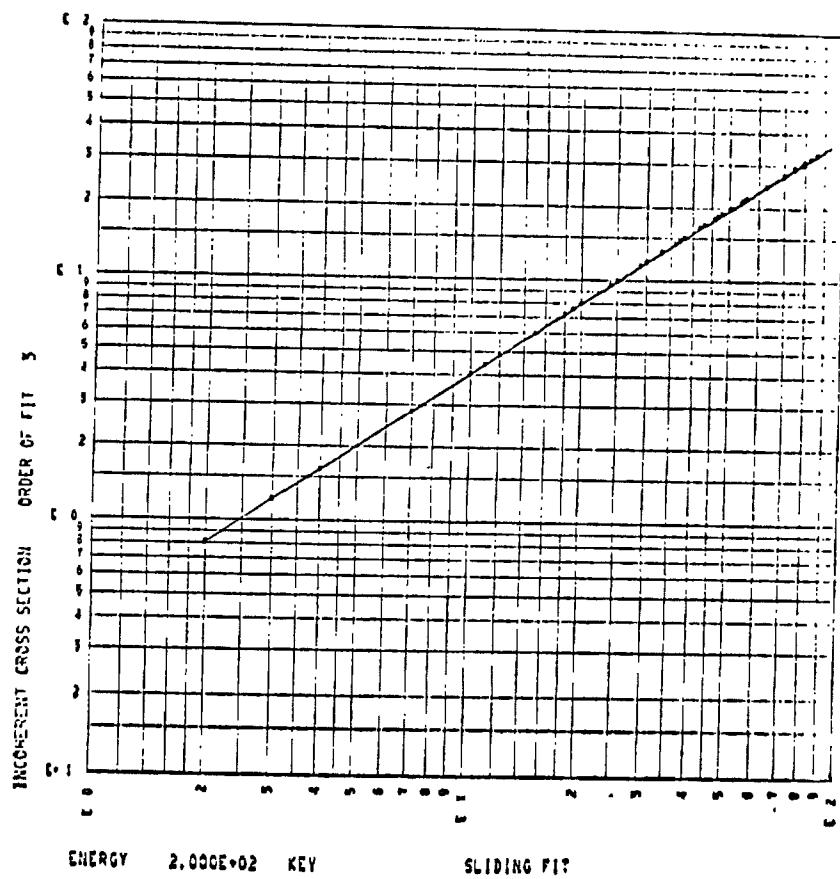


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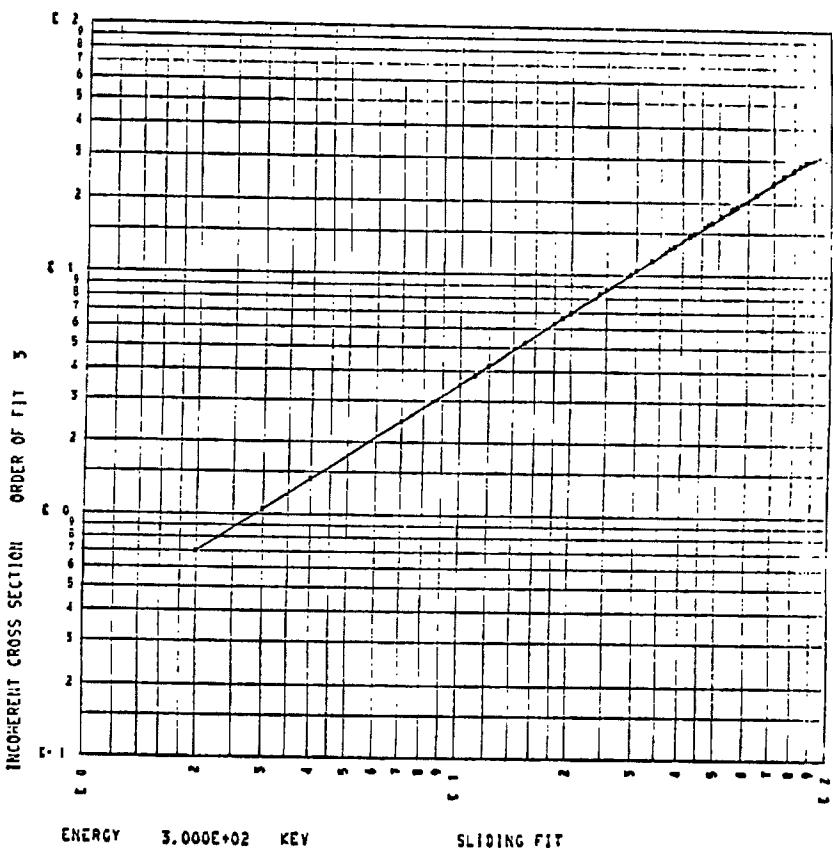


Fig. 20

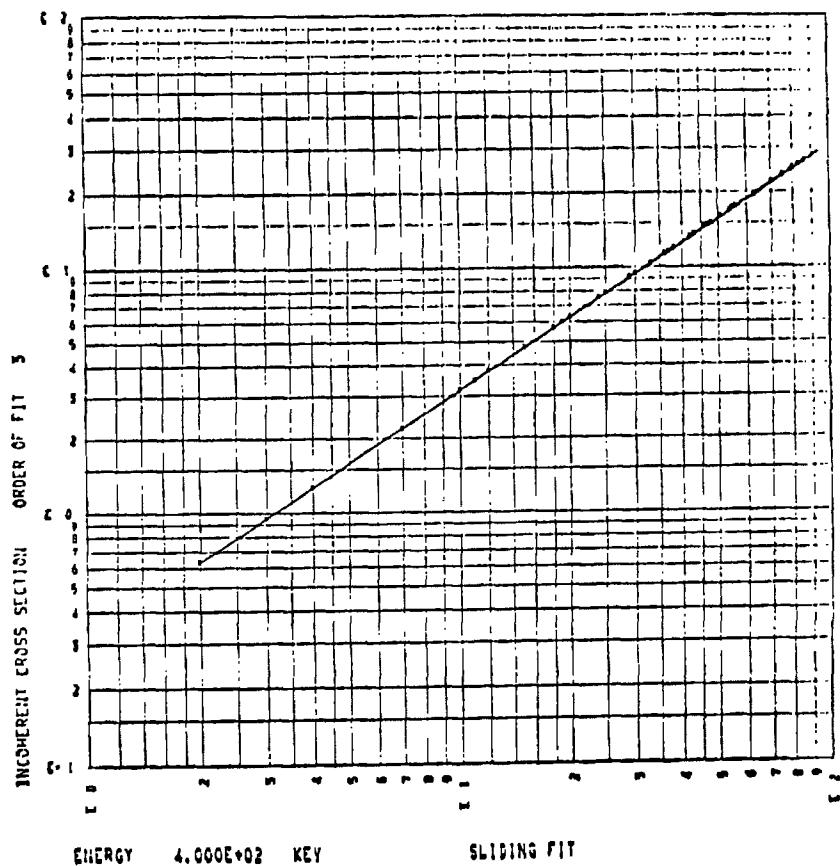


Fig. 21

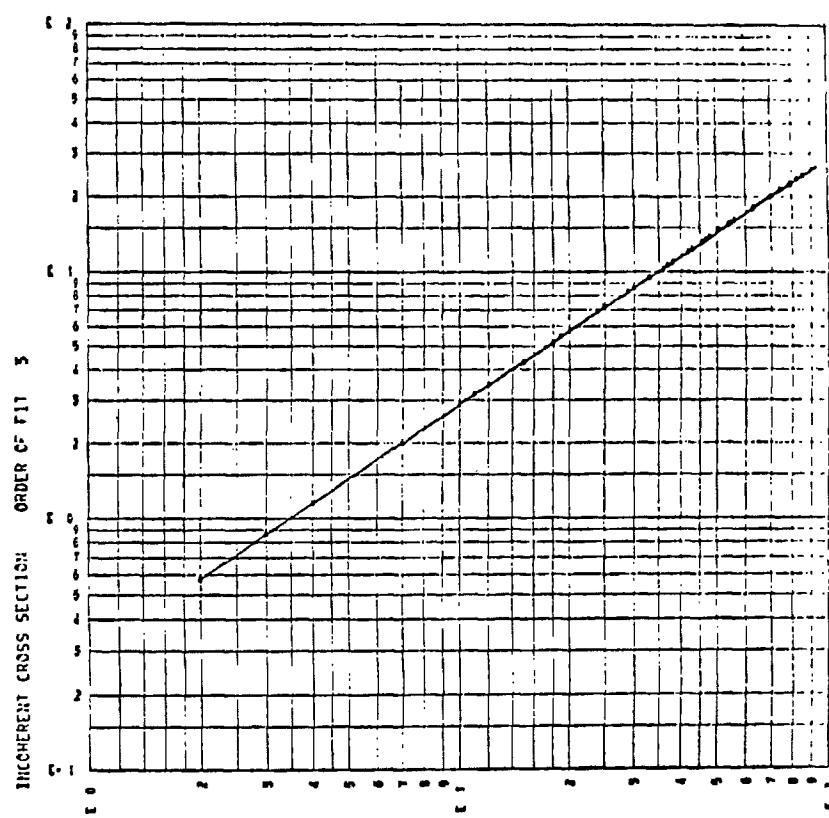


Fig. 22

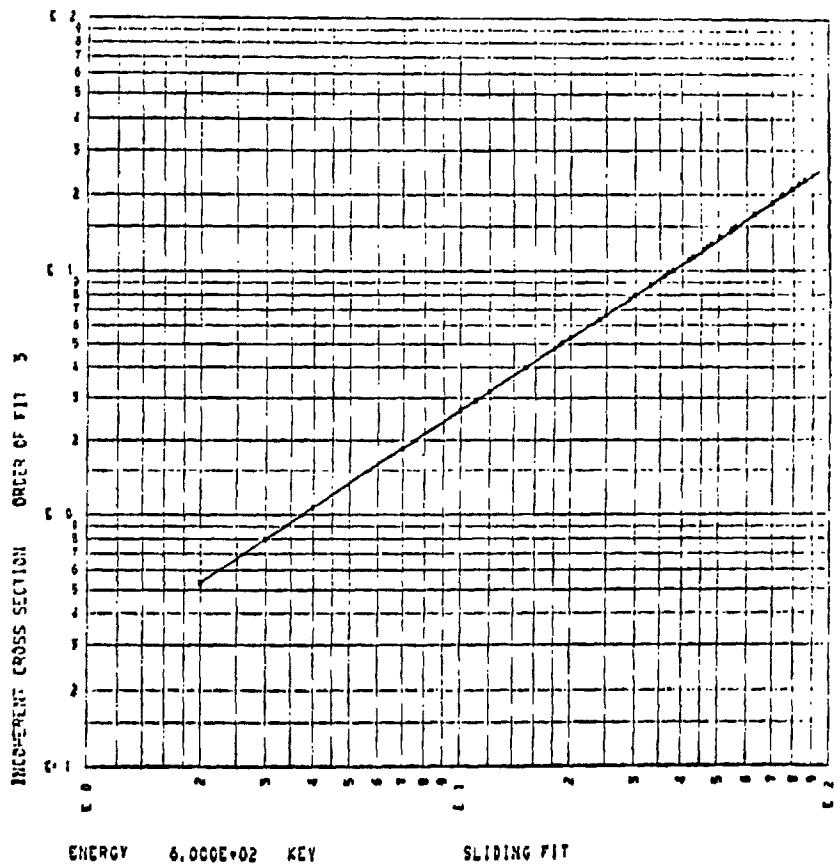


Fig. 23

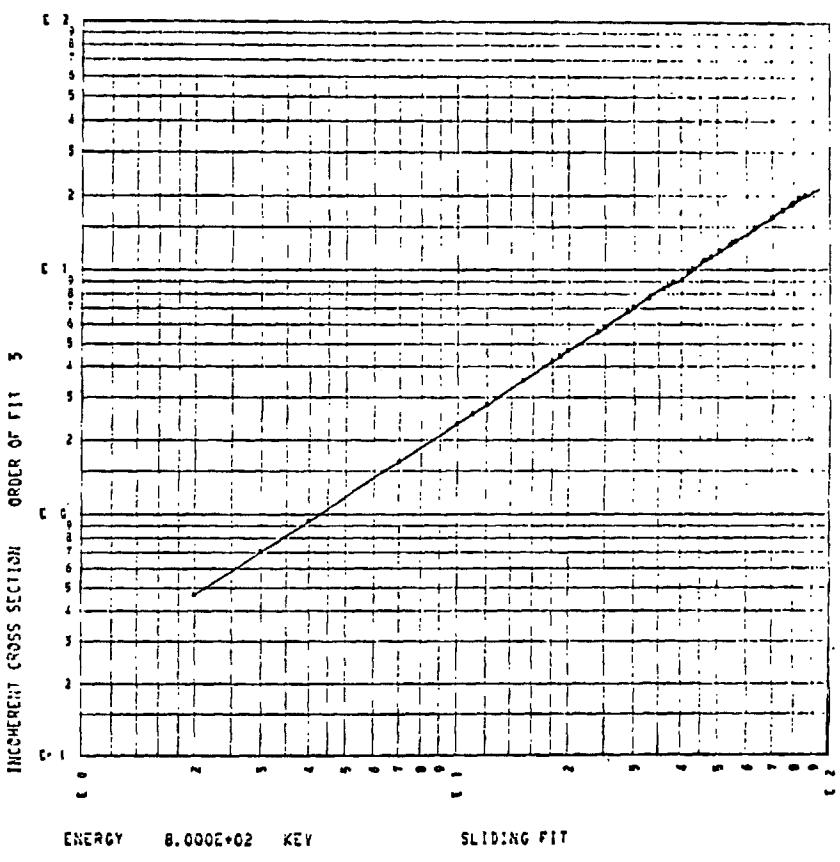


Fig. 24

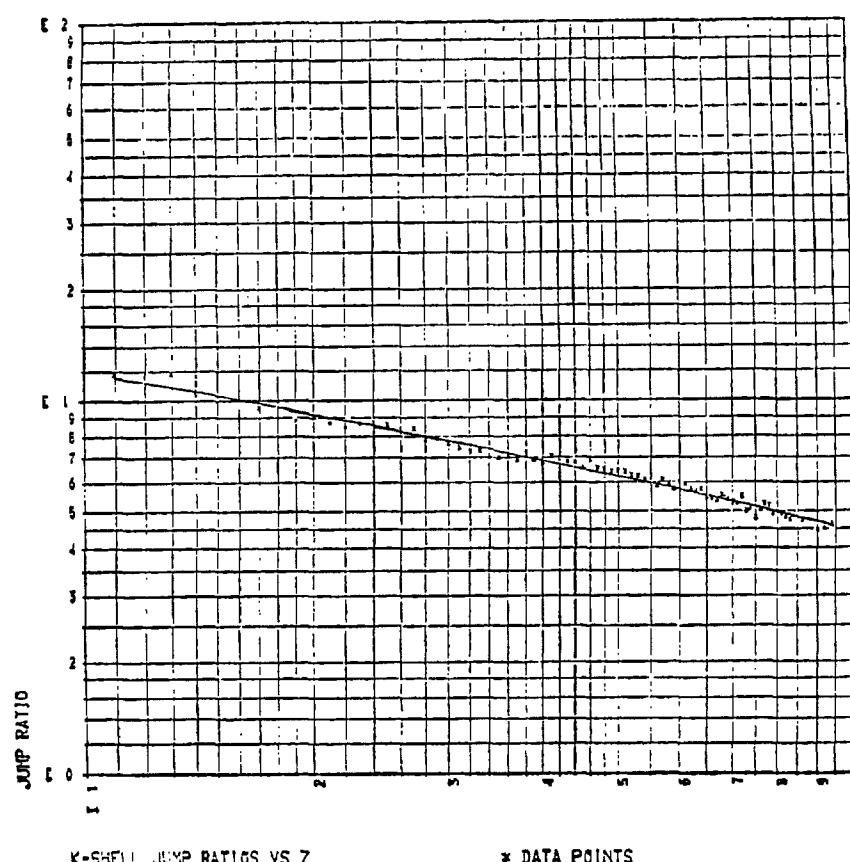
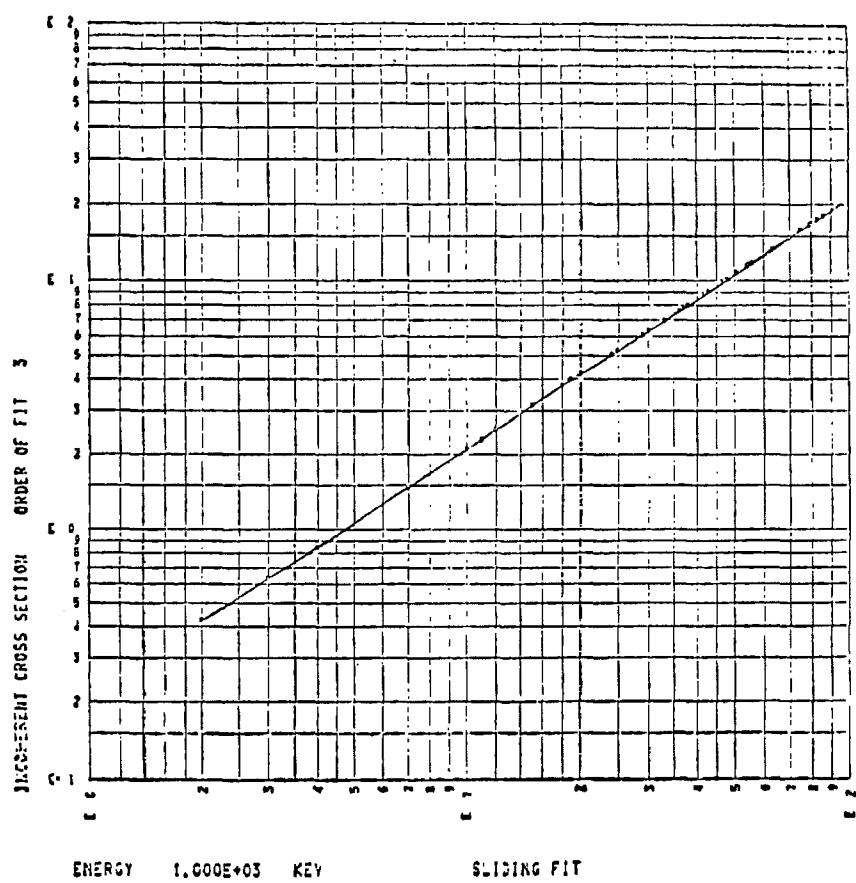


Fig. 26

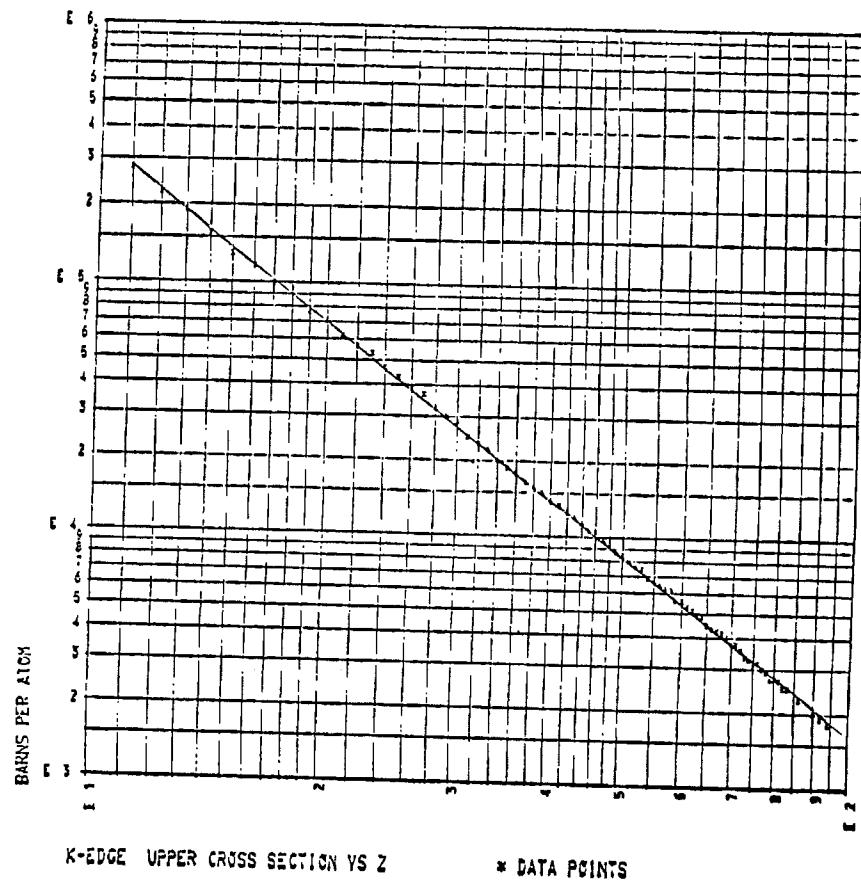


Fig. 27

K-EDGE UPPER CROSS SECTION VS Z * DATA POINTS

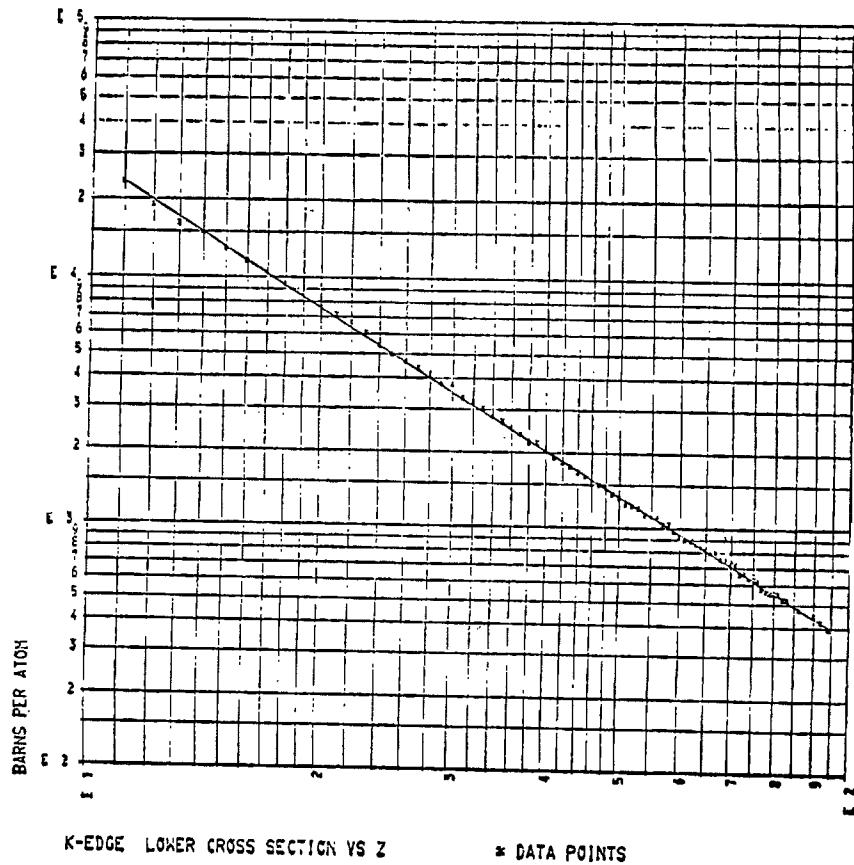


Fig. 28

K-EDGE LOWER CROSS SECTION VS Z * DATA POINTS

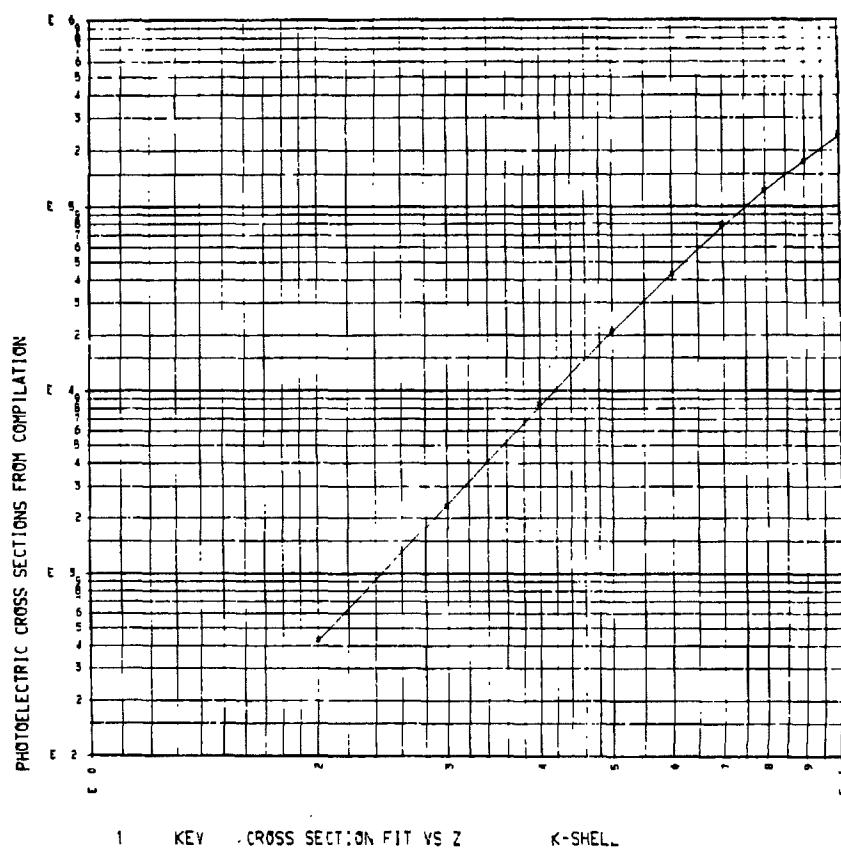


Fig. 29

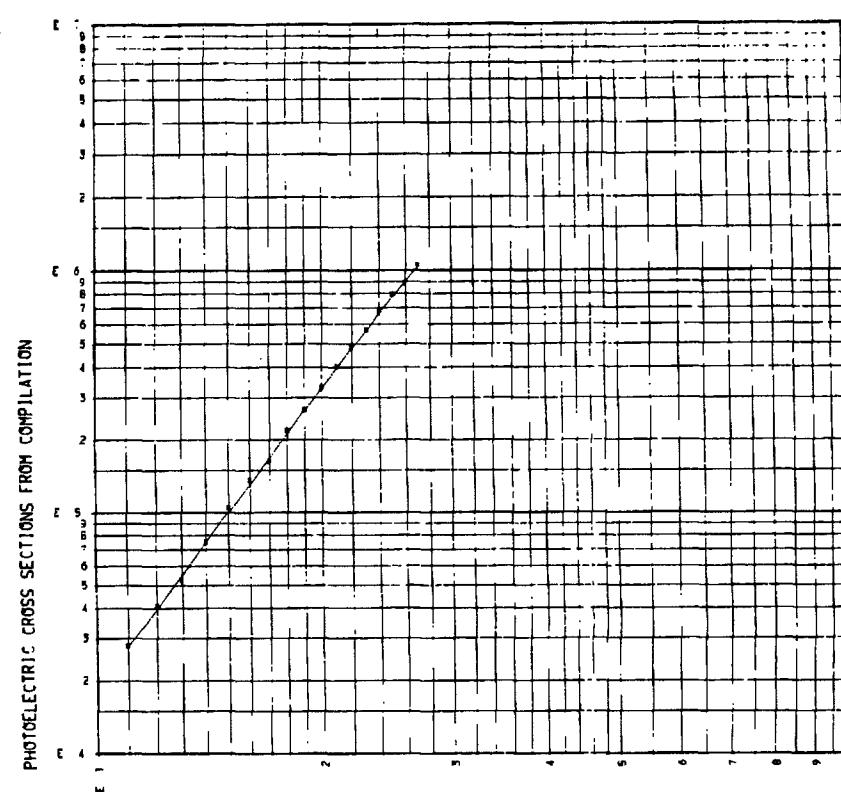


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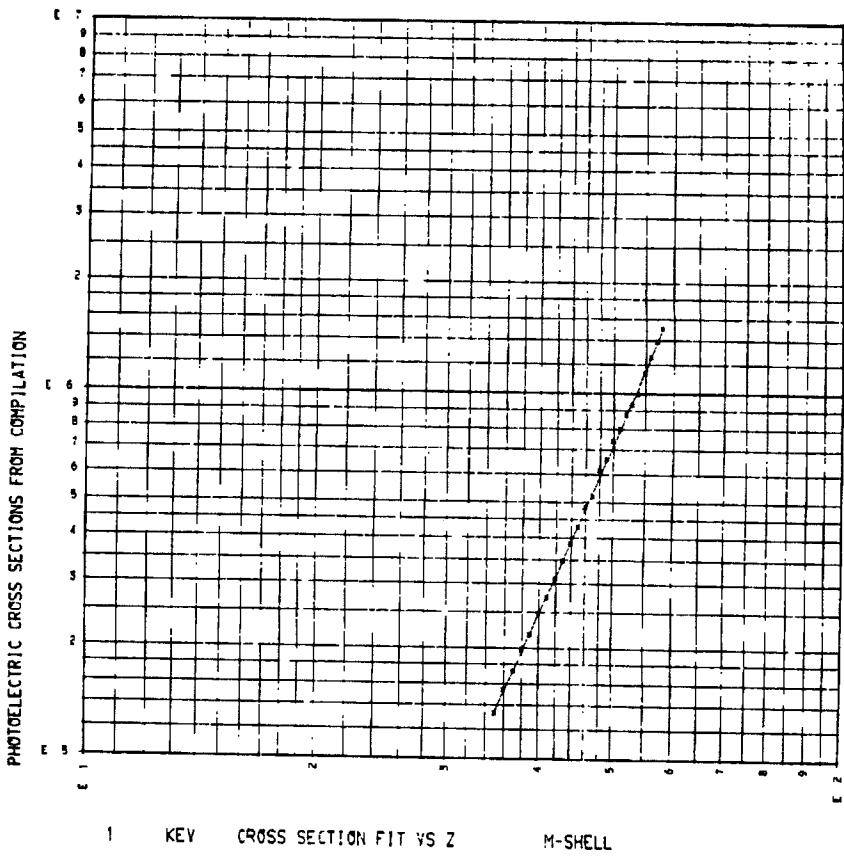


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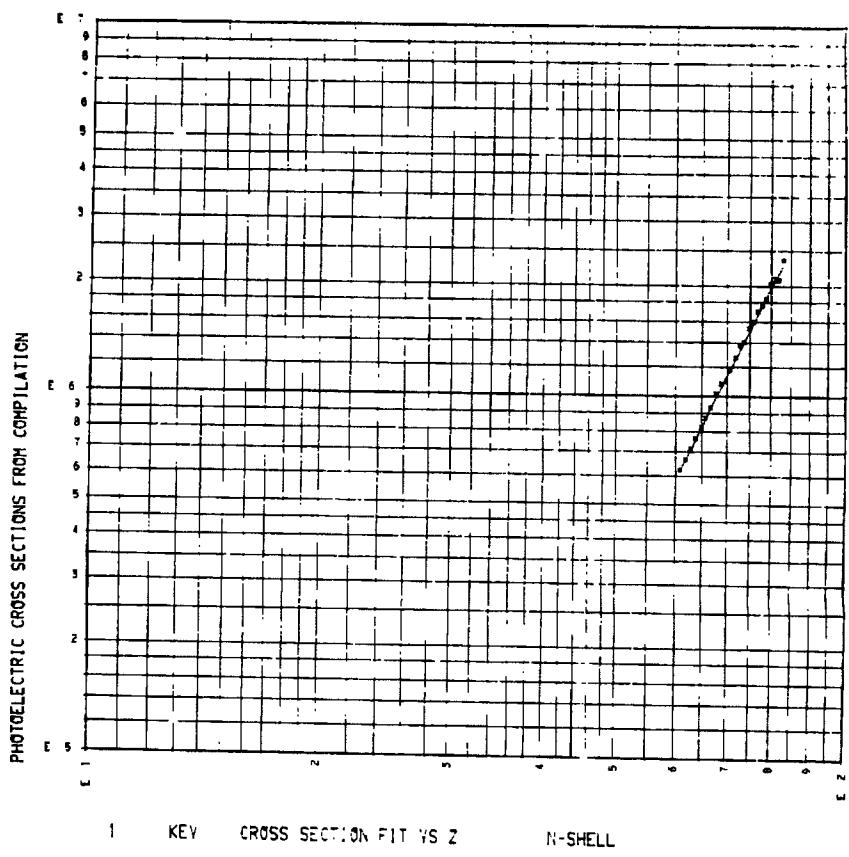


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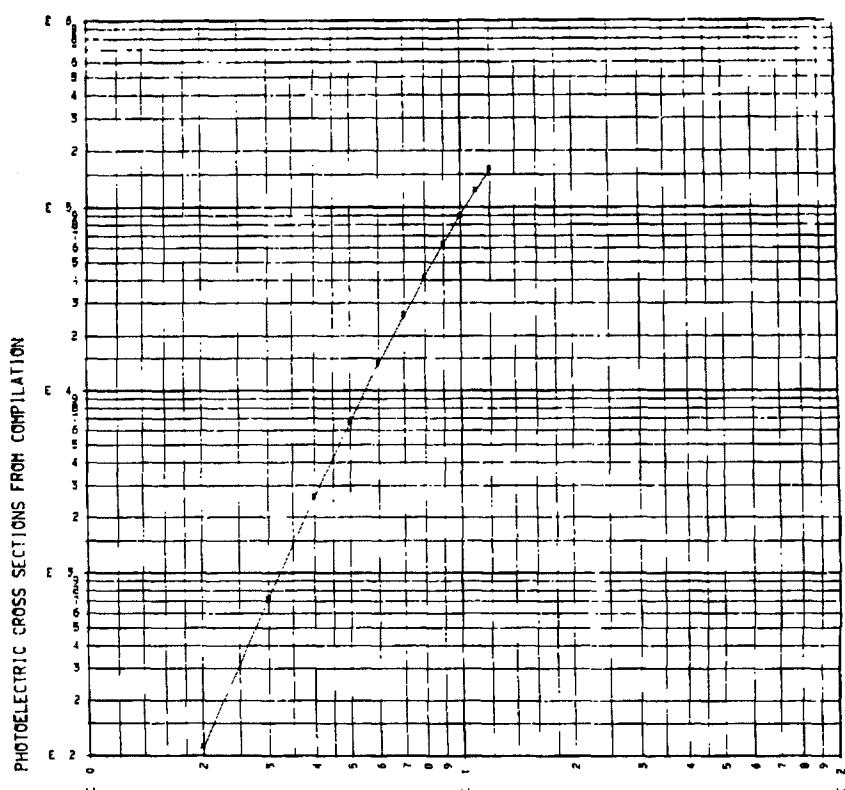


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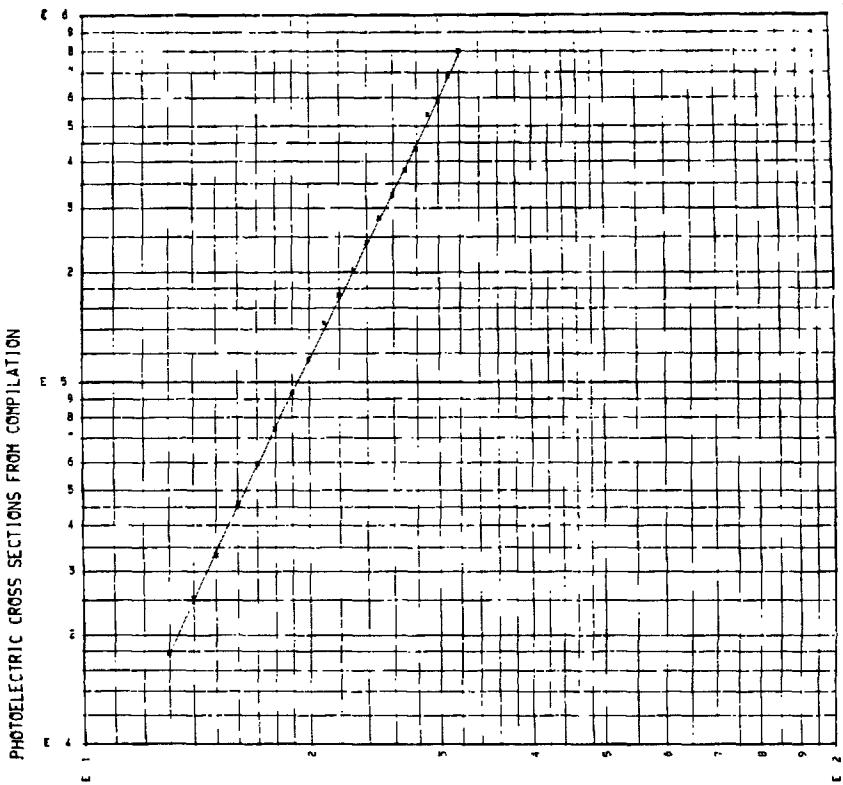


Fig. 34

1.5 KEY CROSS SECTION FIT VS Z L-SHELL

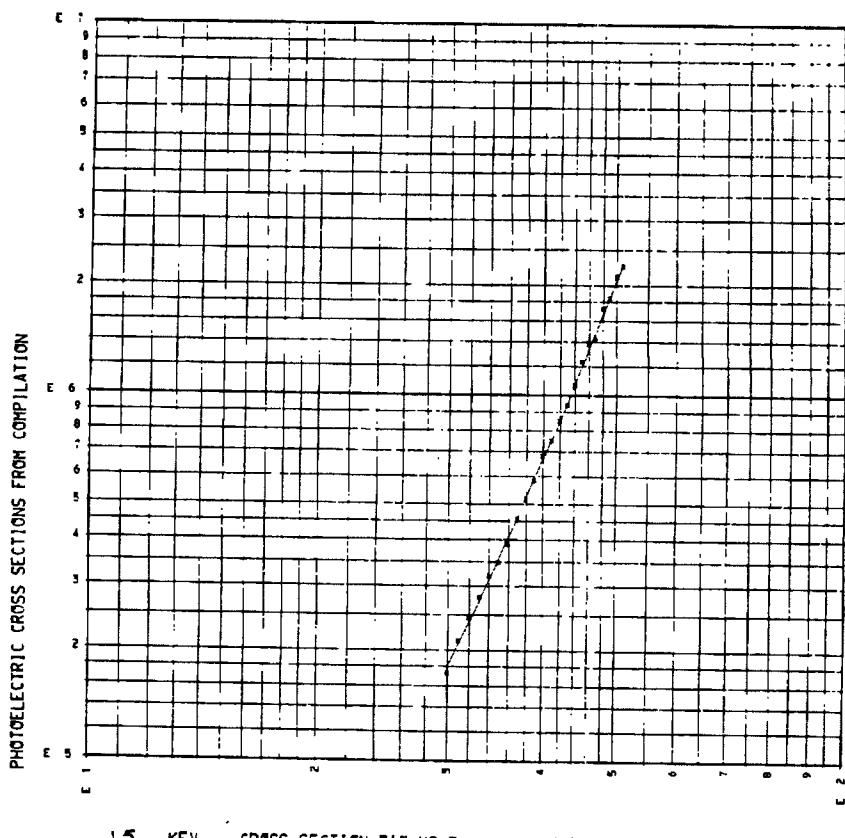


Fig. 35

1.5 KEY CROSS SECTION FIT VS Z M-SHELL

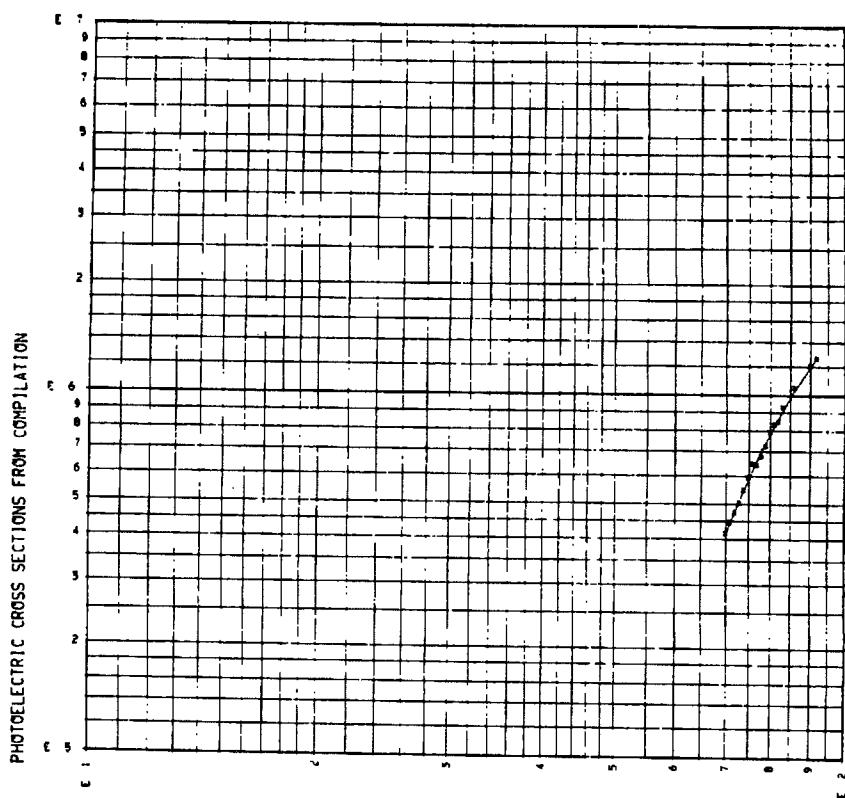


Fig. 36

1.5 KEY CROSS SECTION FIT VS Z N-SHELL

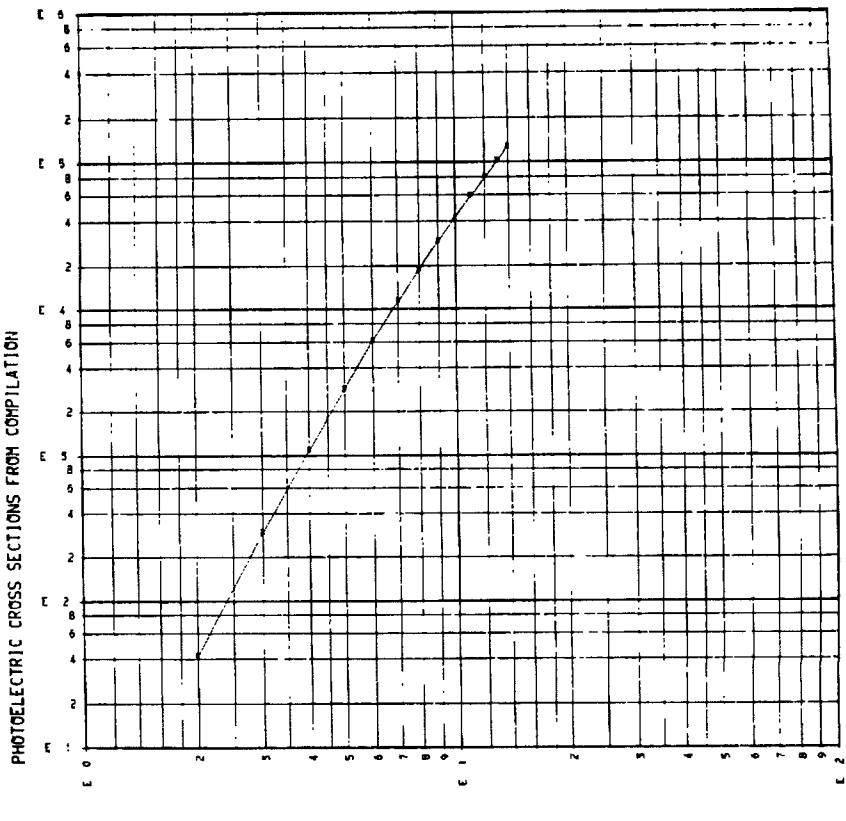


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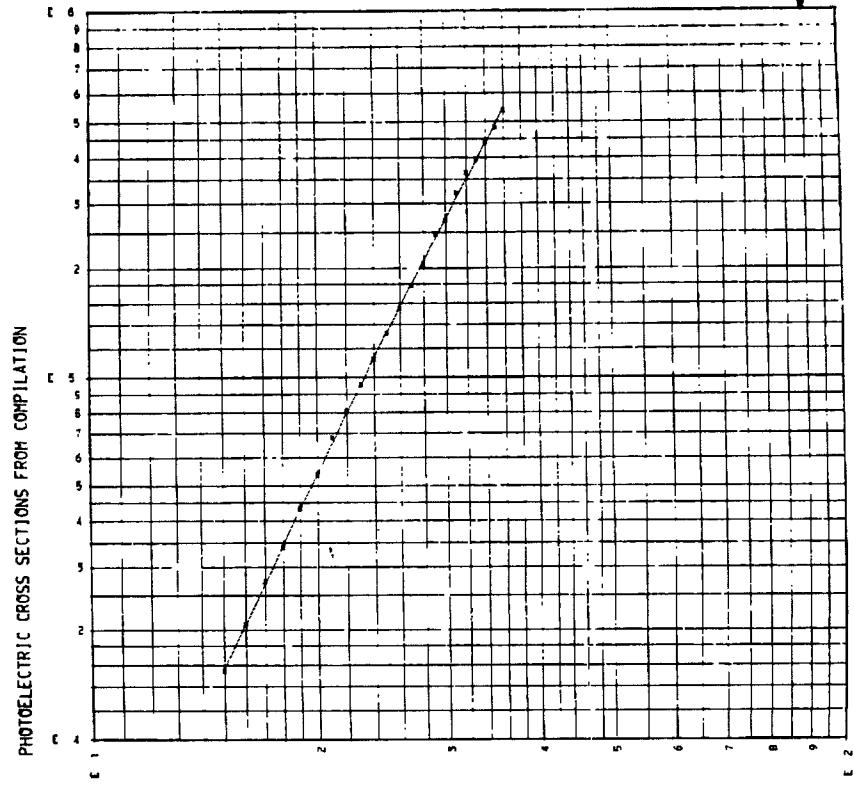


Fig. 38

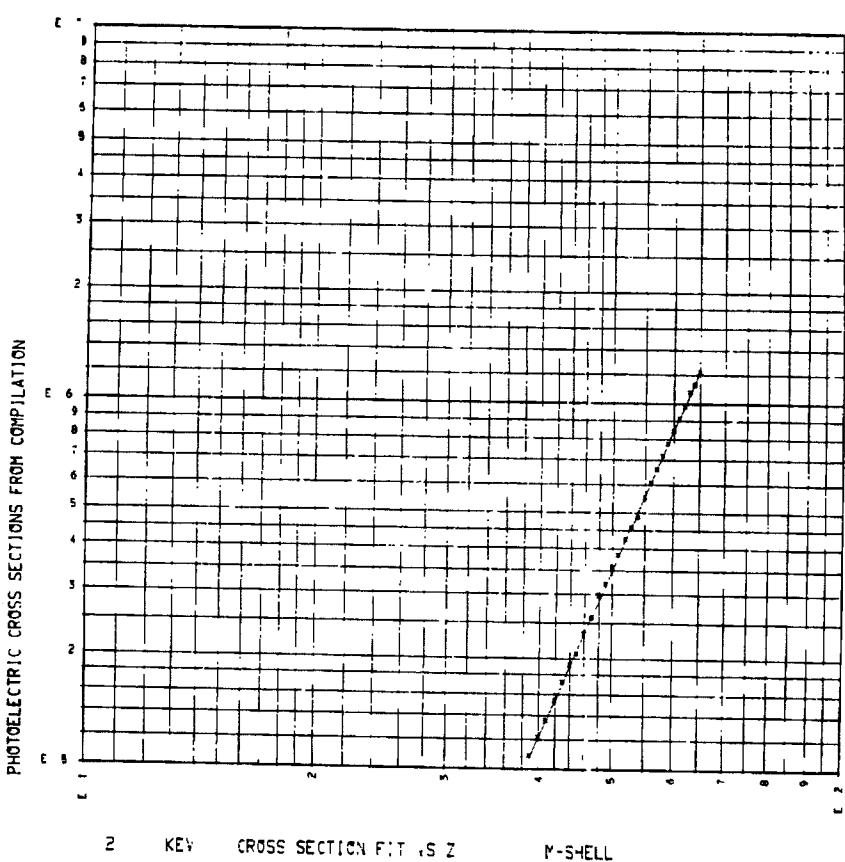


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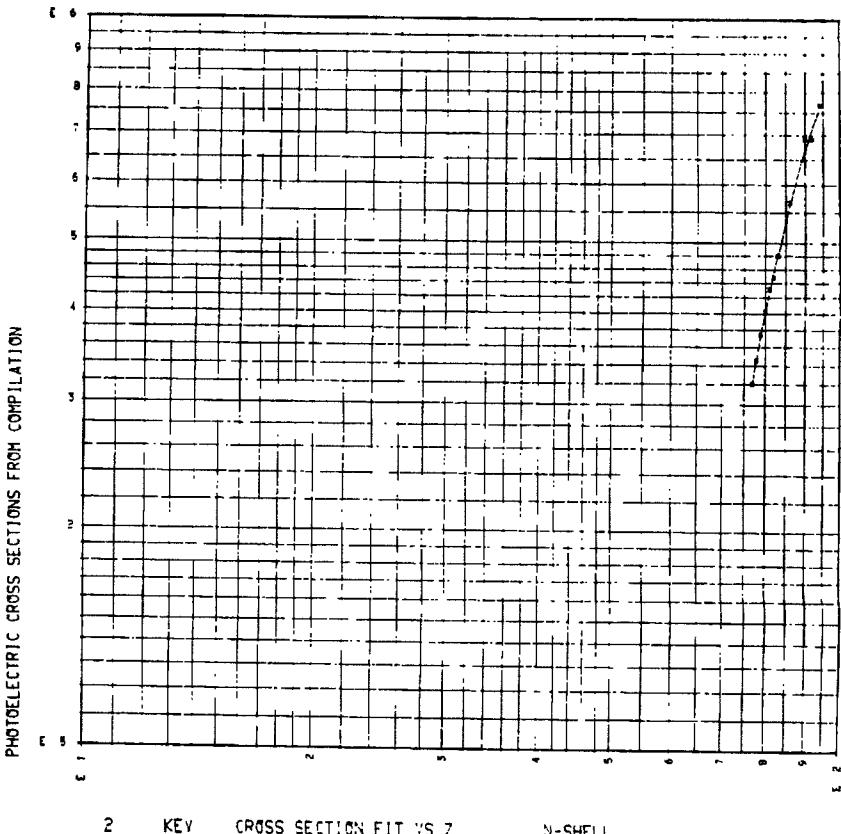


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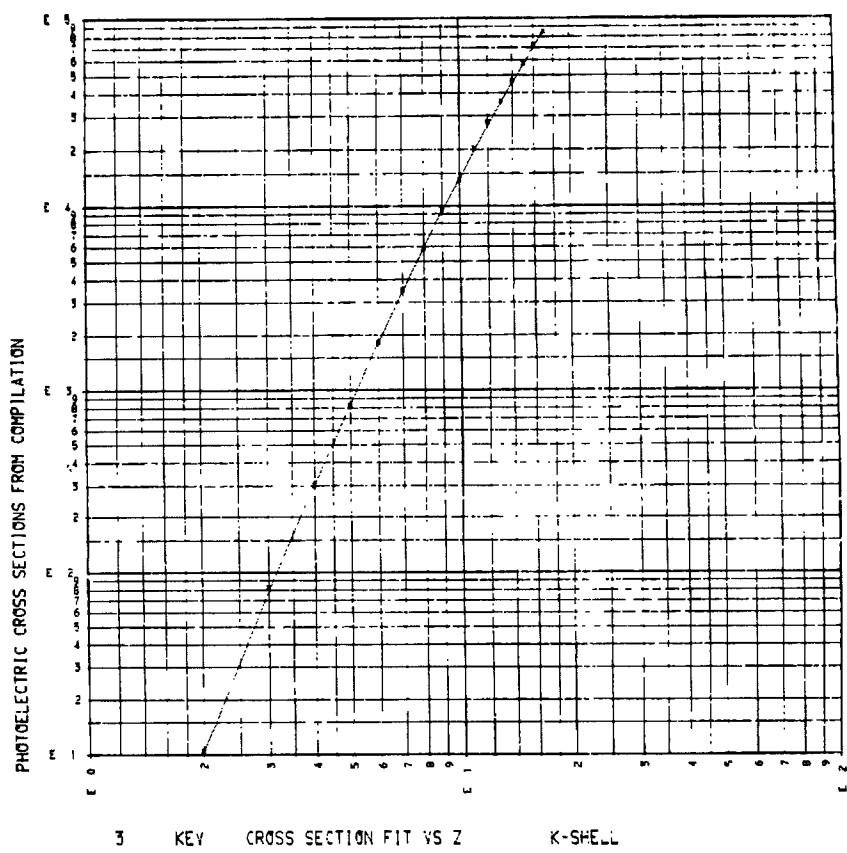


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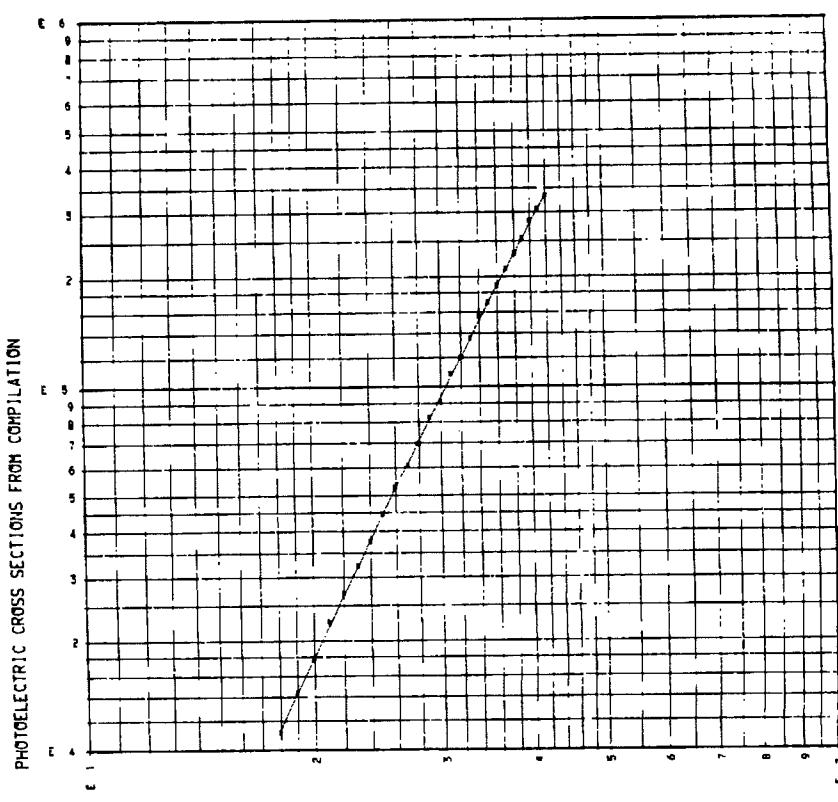


Fig. 42

3 KEY CROSS SECTION FIT VS Z L-SHELL

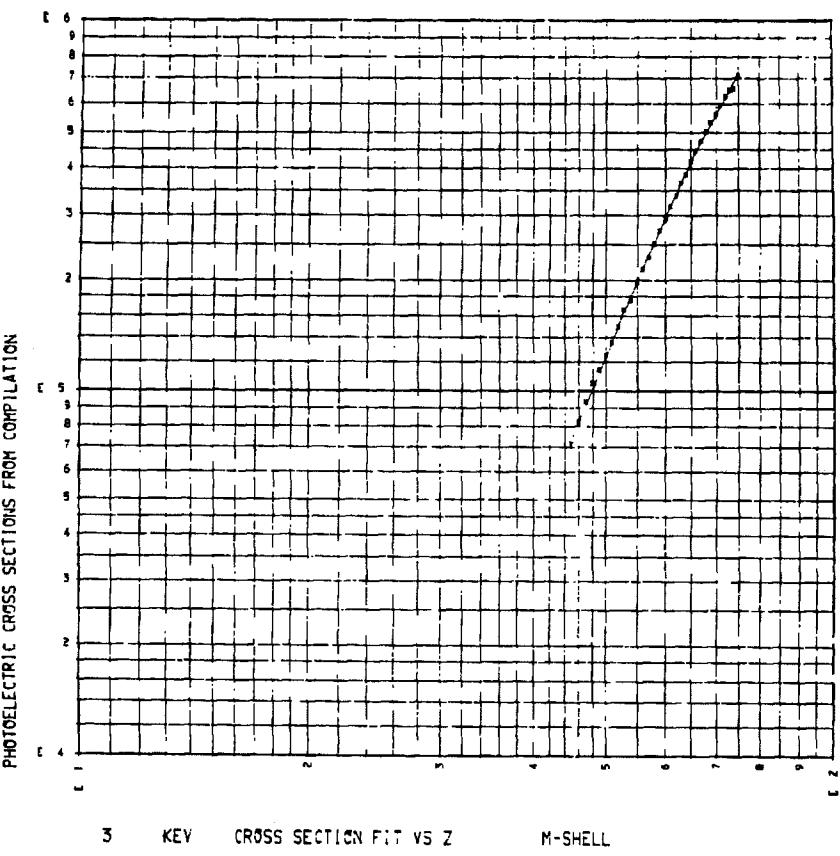


Fig. 43

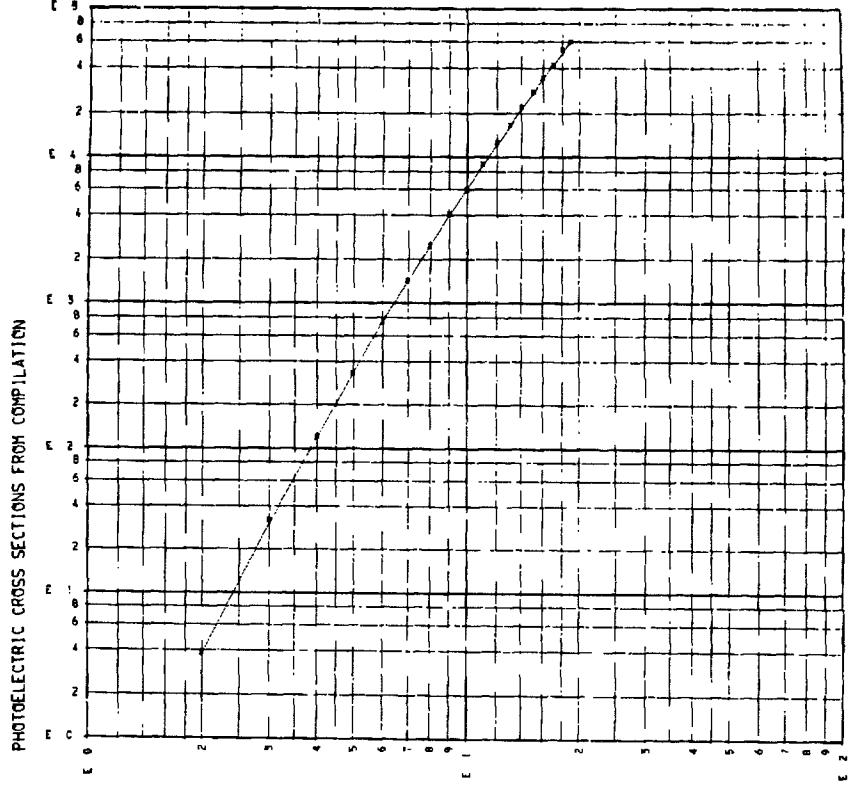


Fig. 44

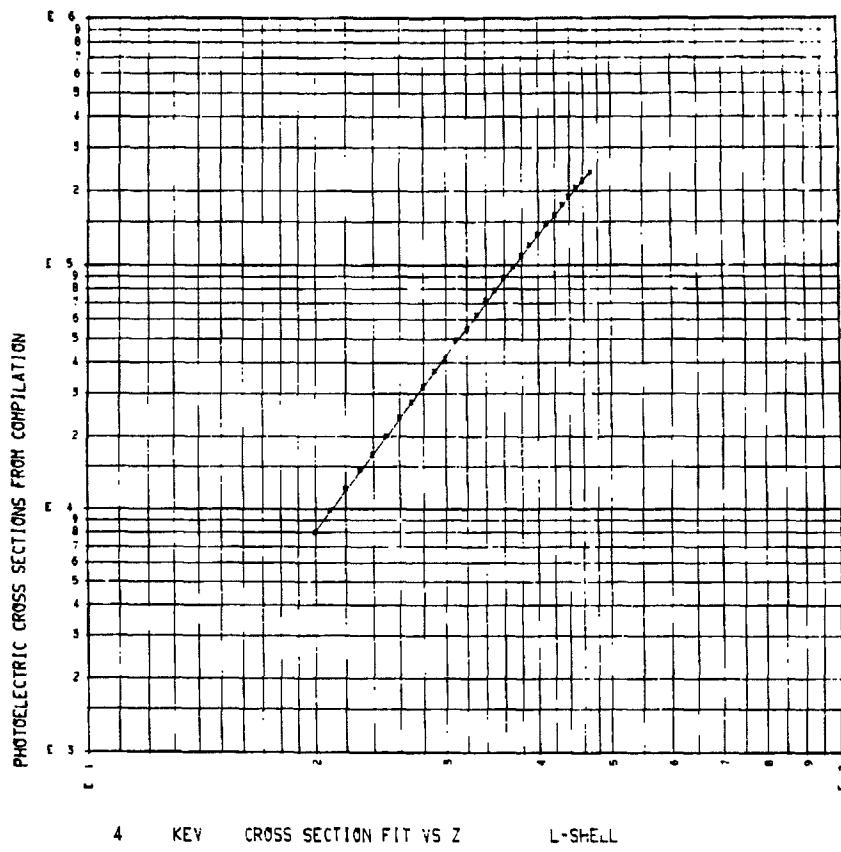


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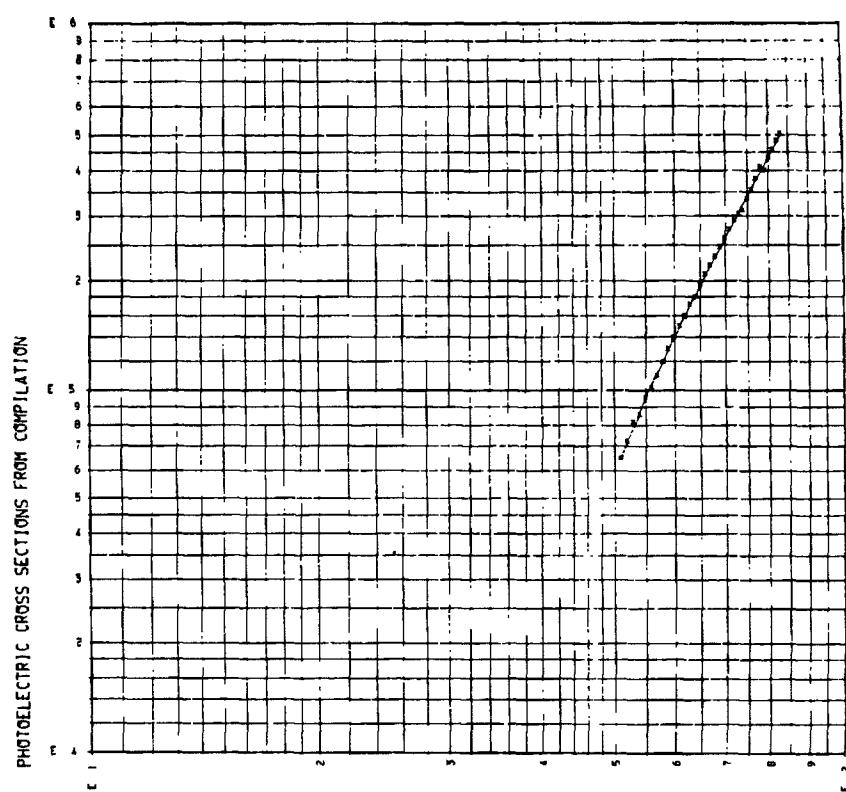


Fig. 46

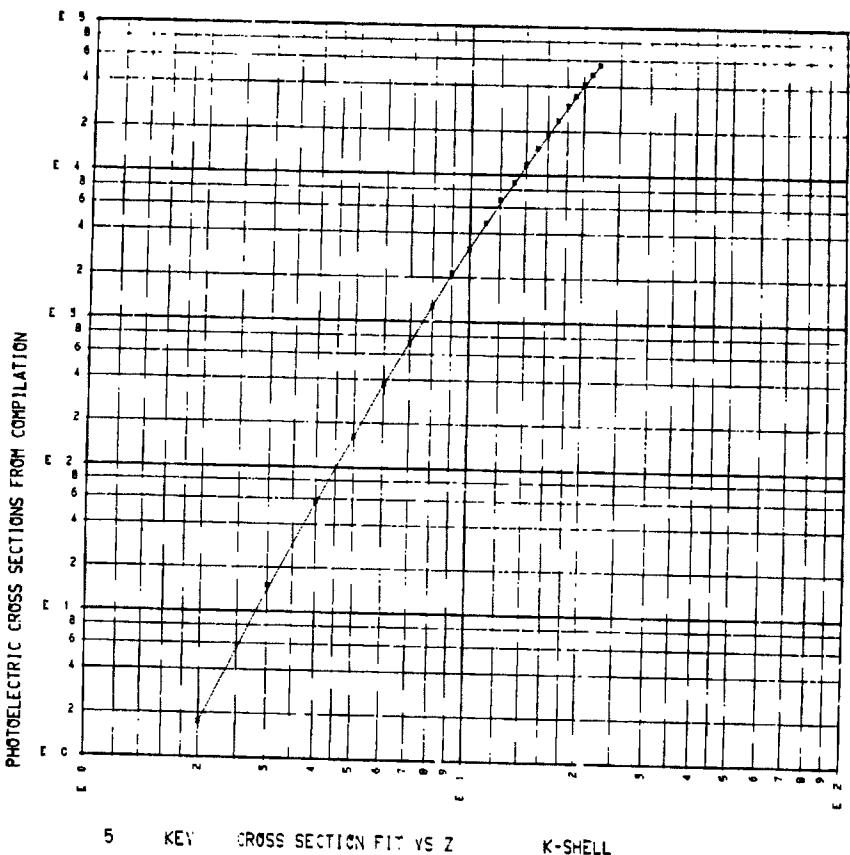


Fig. 47

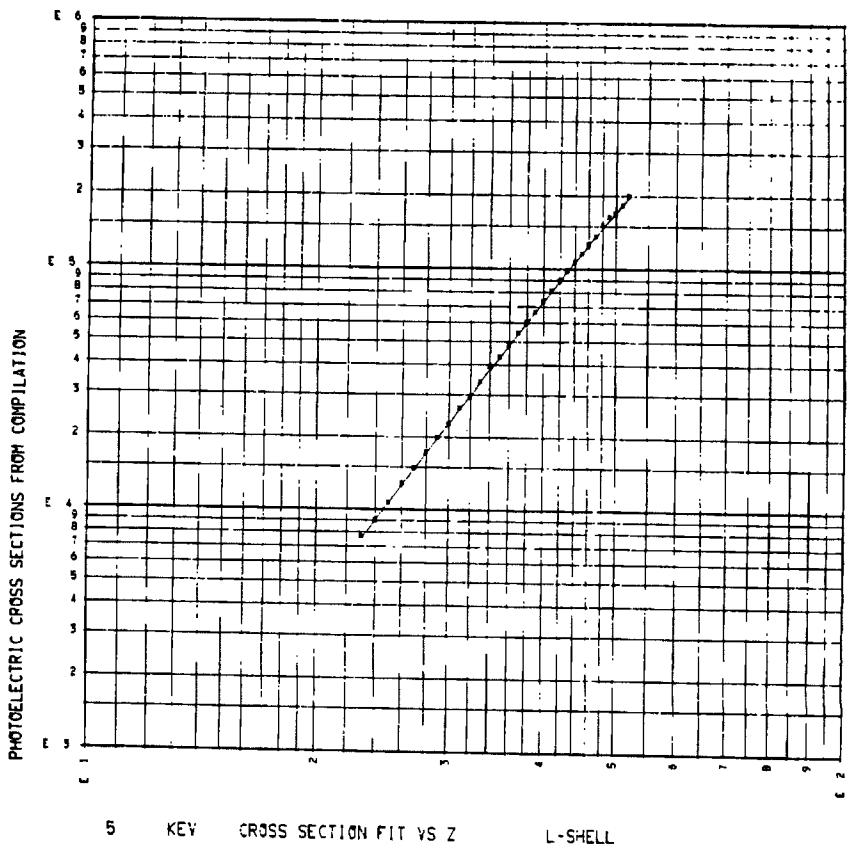


Fig. 48

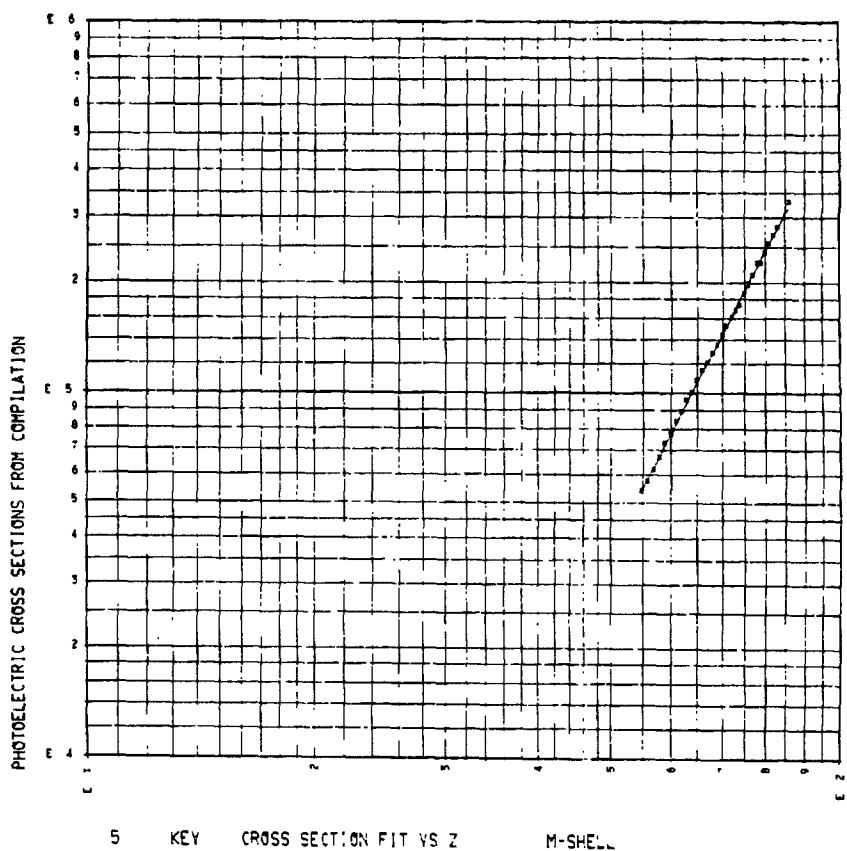


Fig. 49

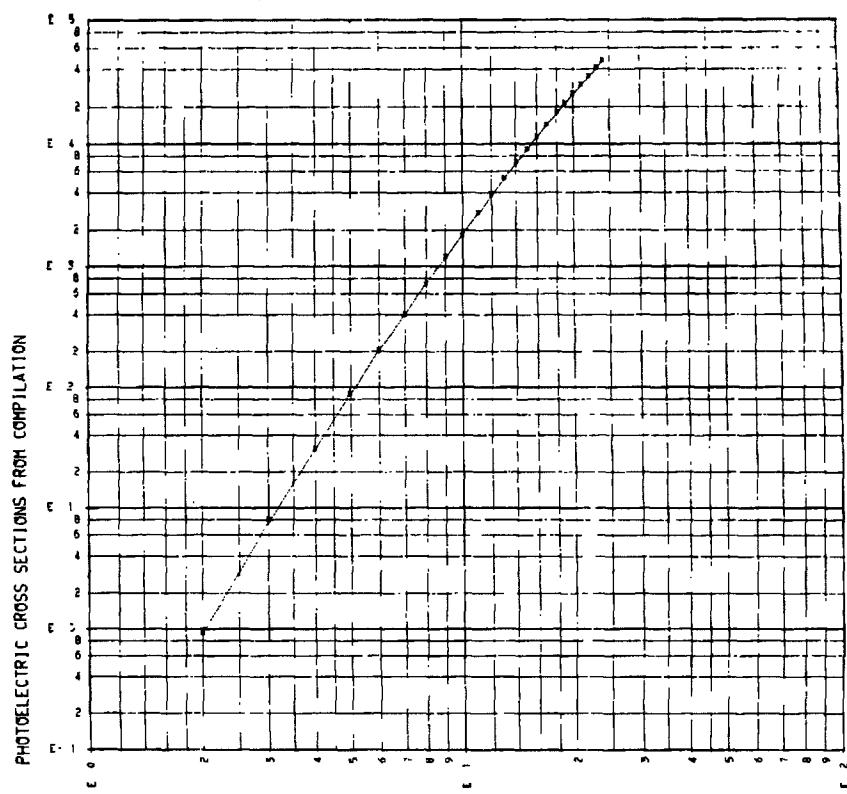


Fig. 50

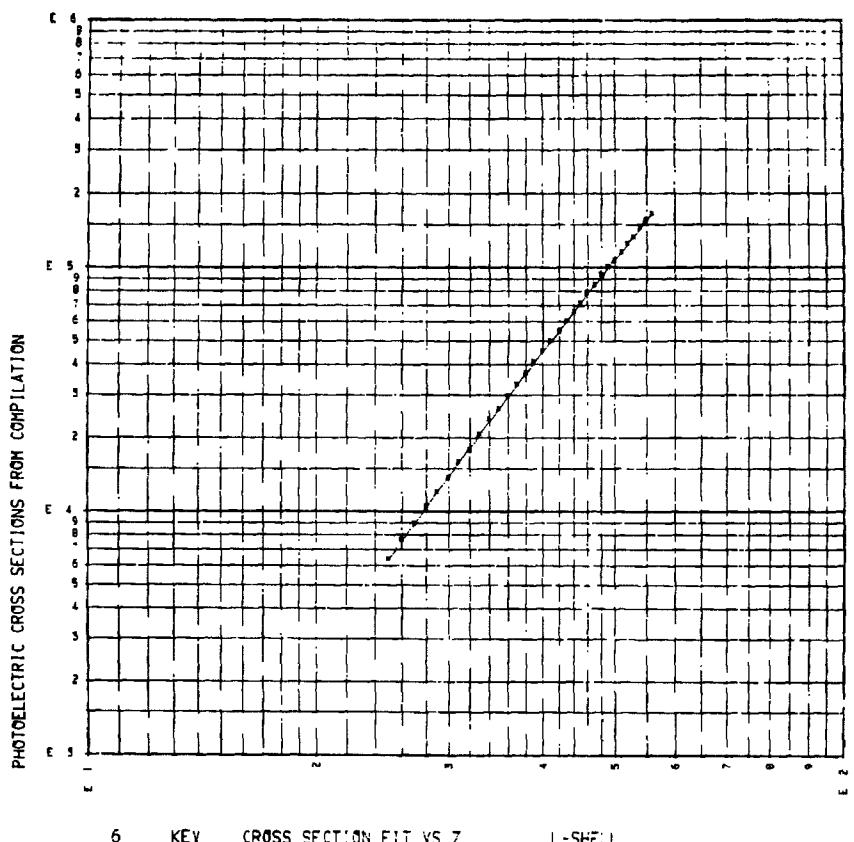


Fig. 51

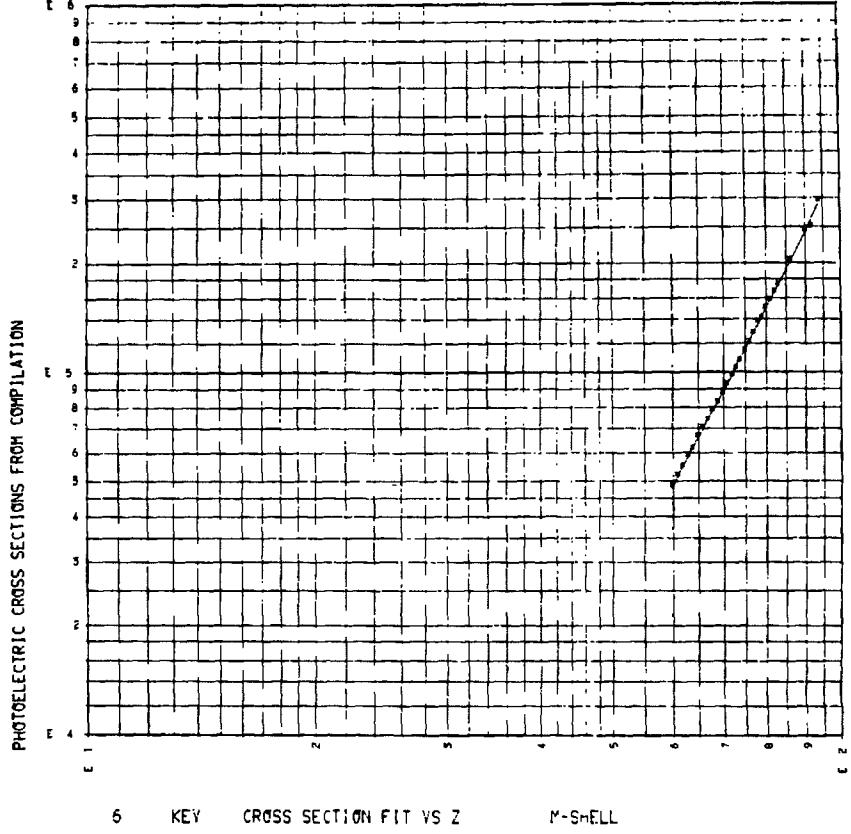


Fig. 52

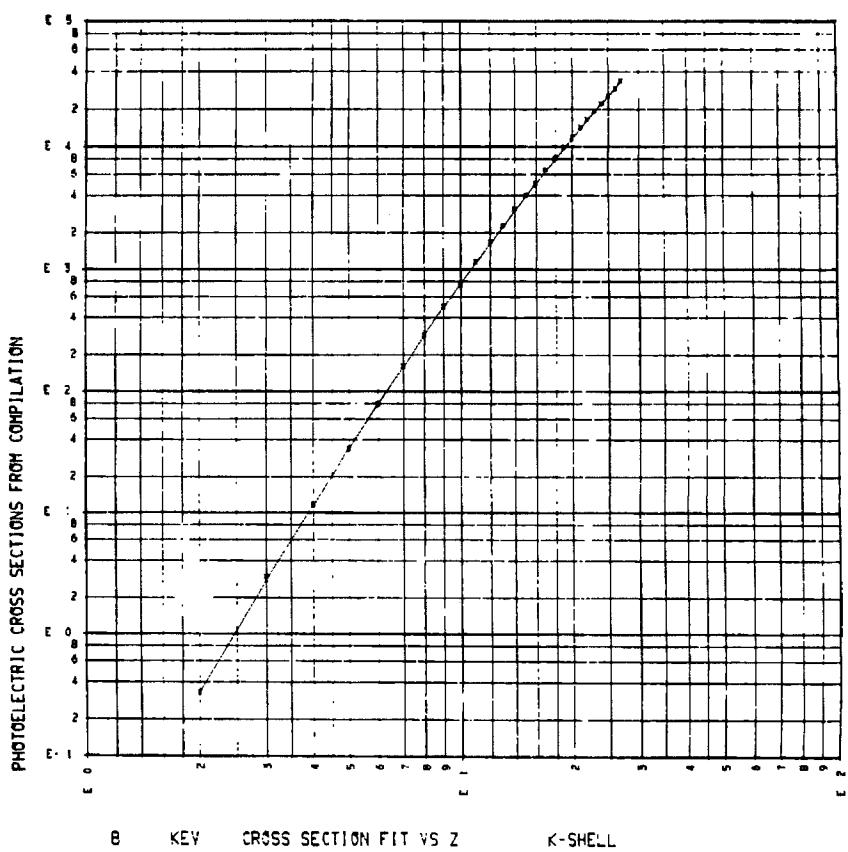


Fig. 53

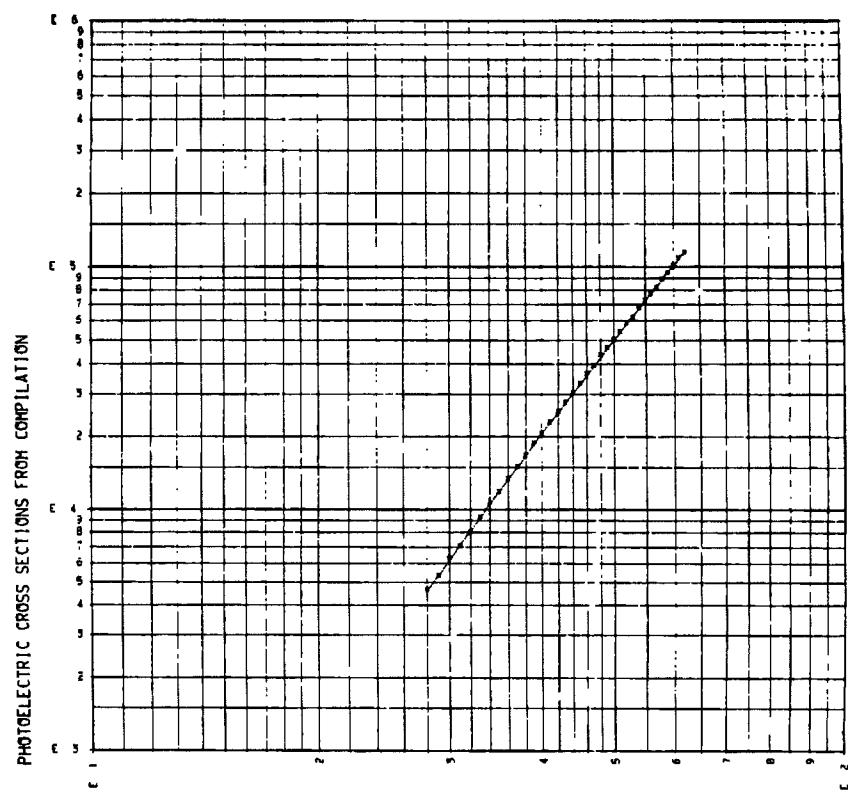


Fig. 54

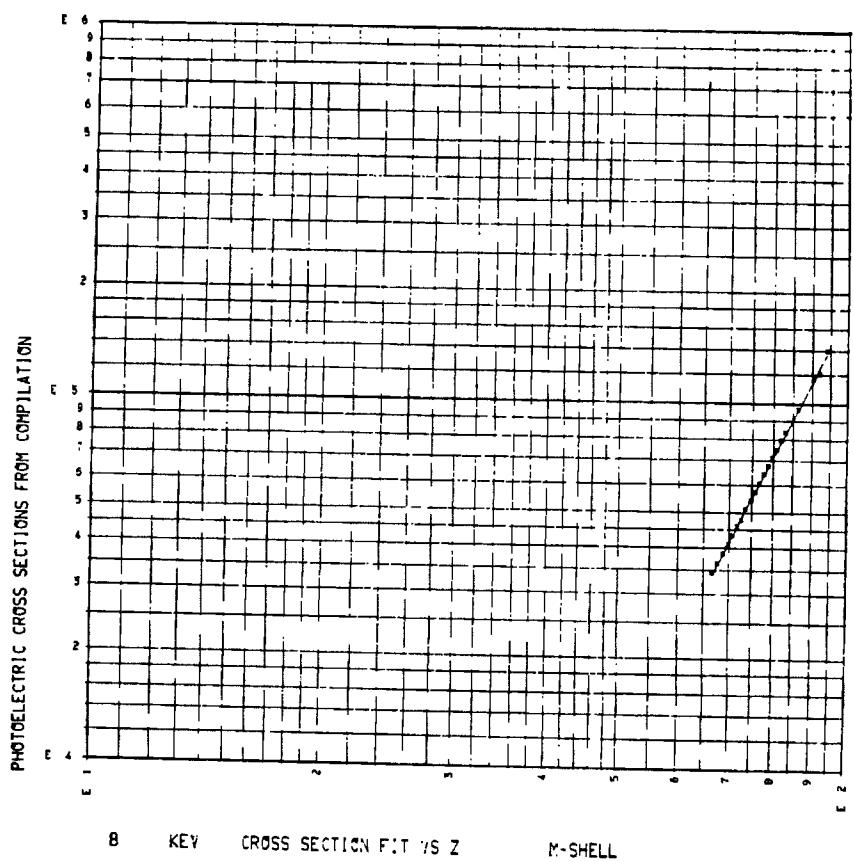


Fig. 55

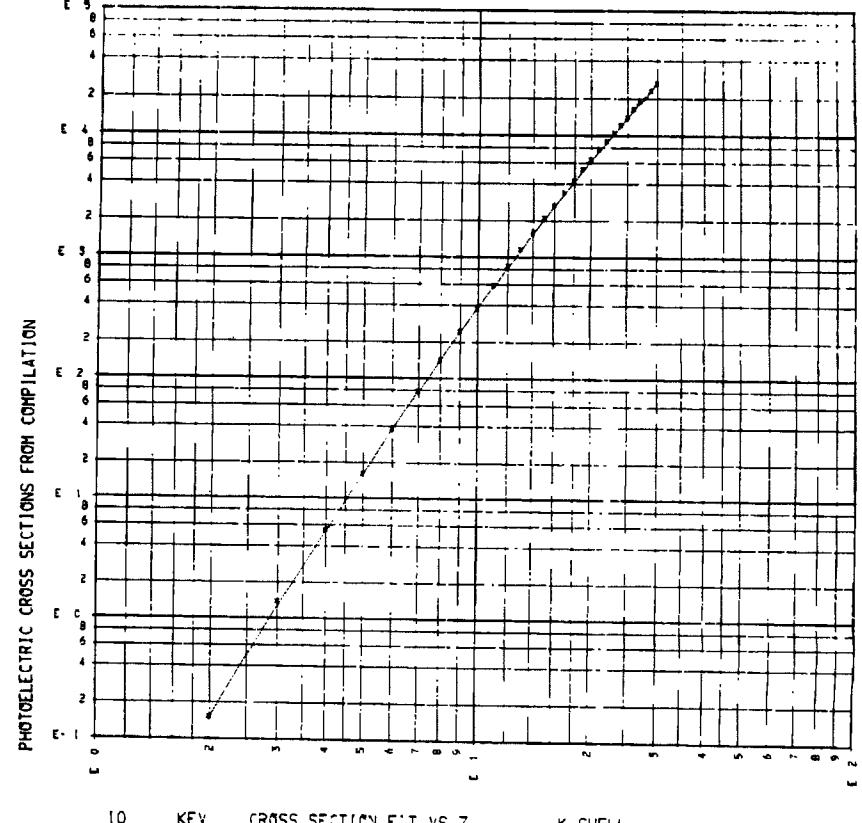


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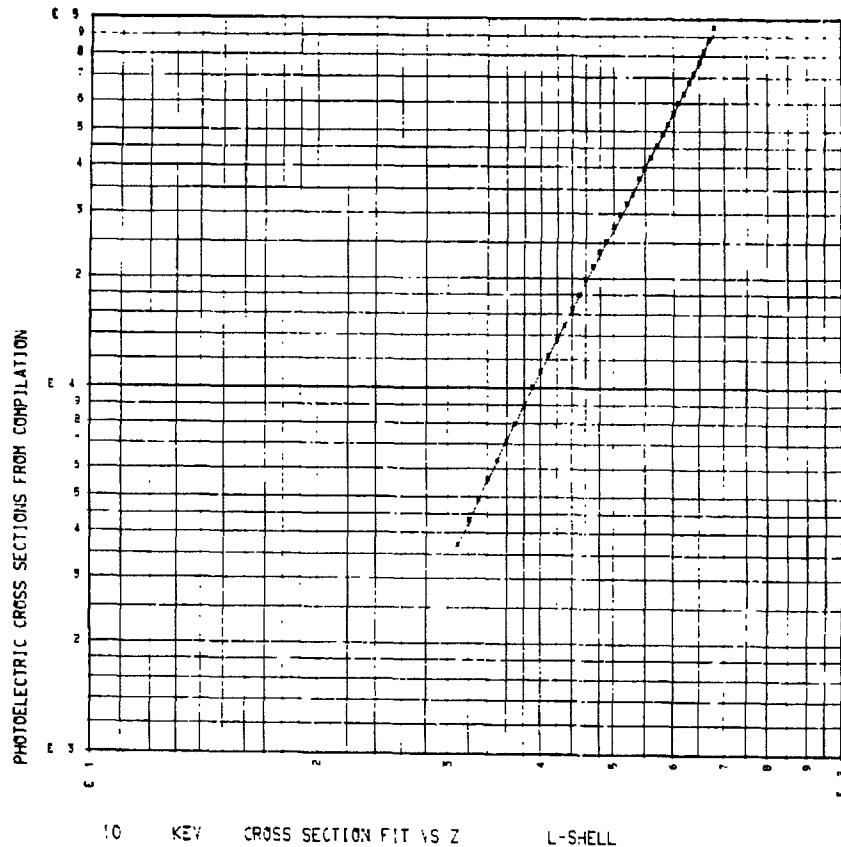


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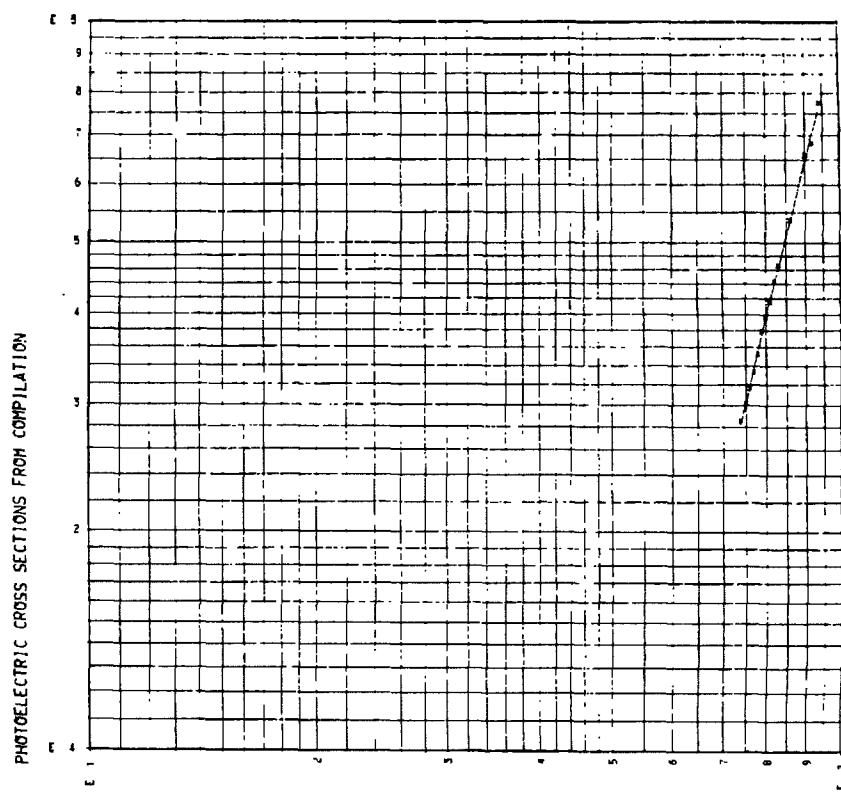


Fig. 58

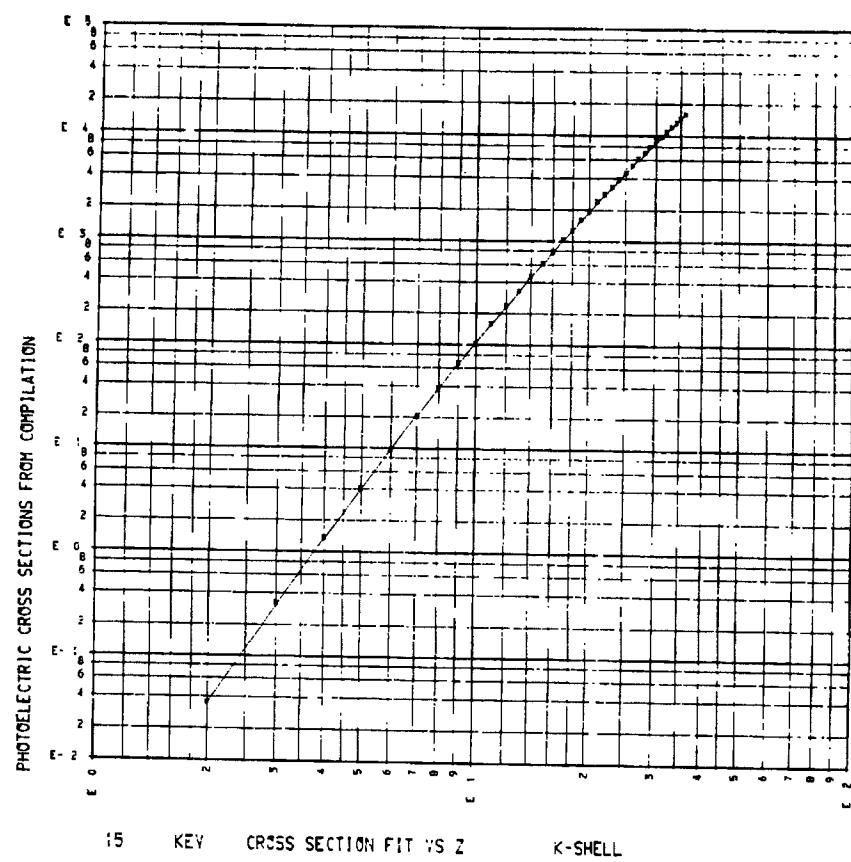


Fig. 59

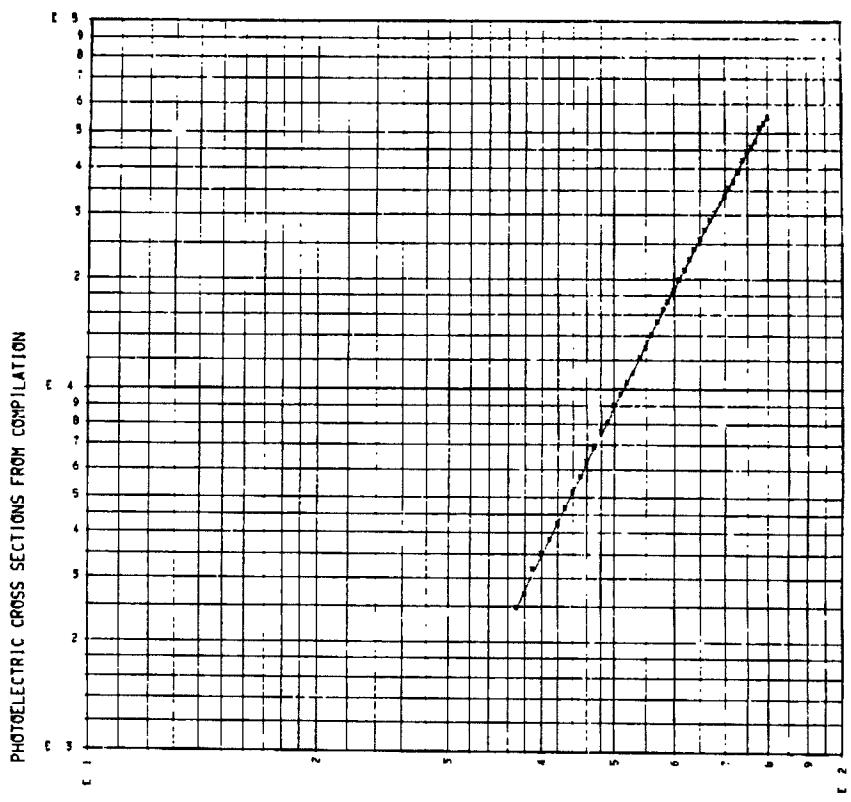


Fig. 60

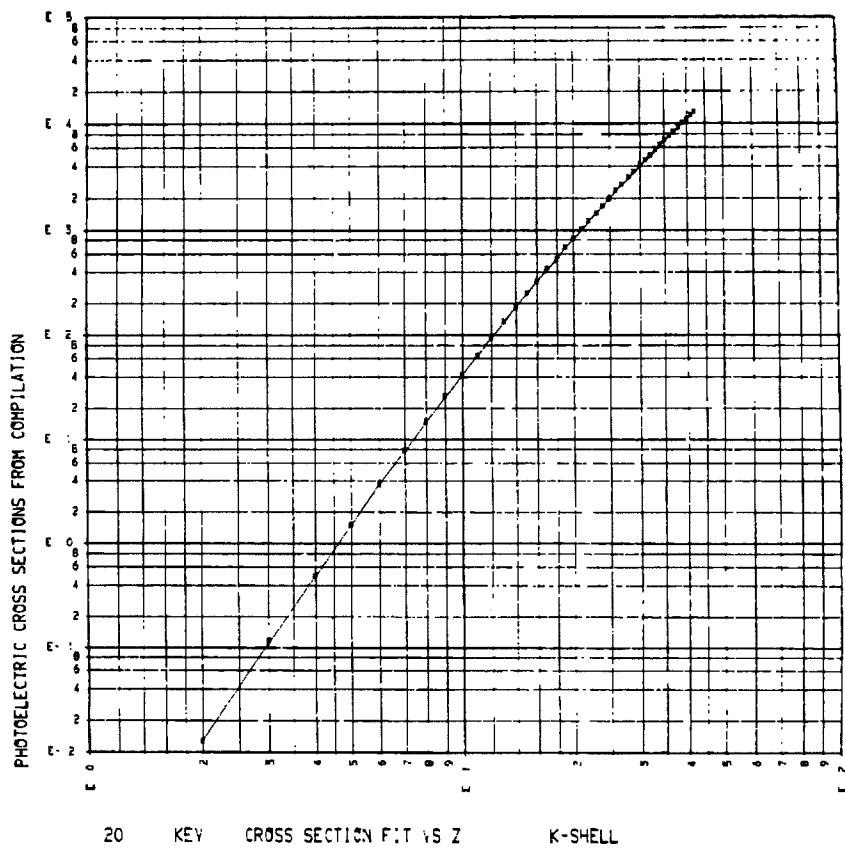


Fig. 61

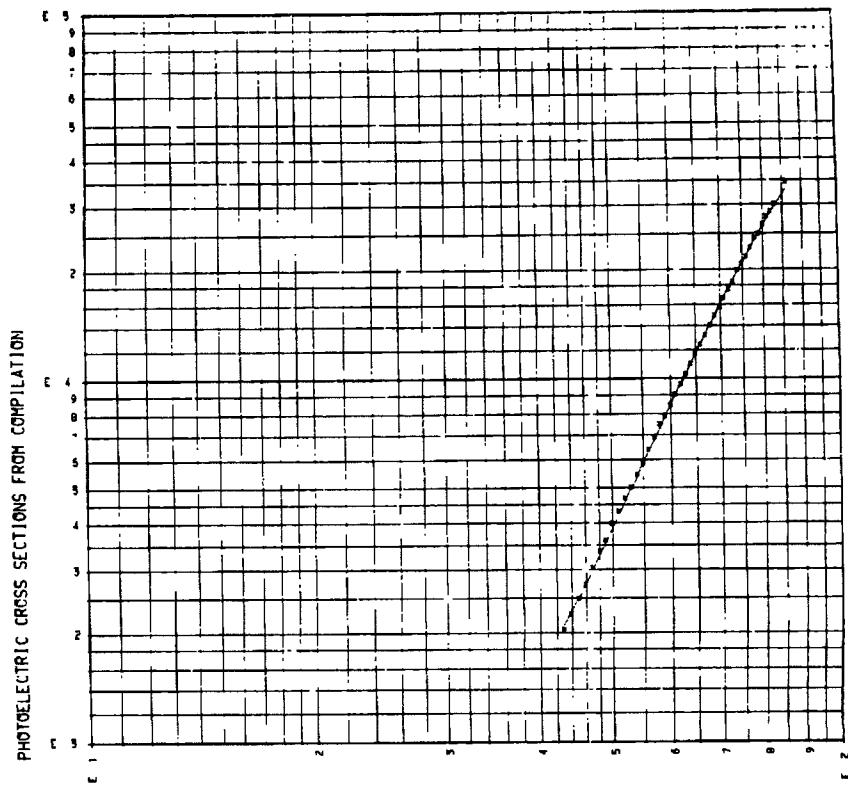


Fig. 62

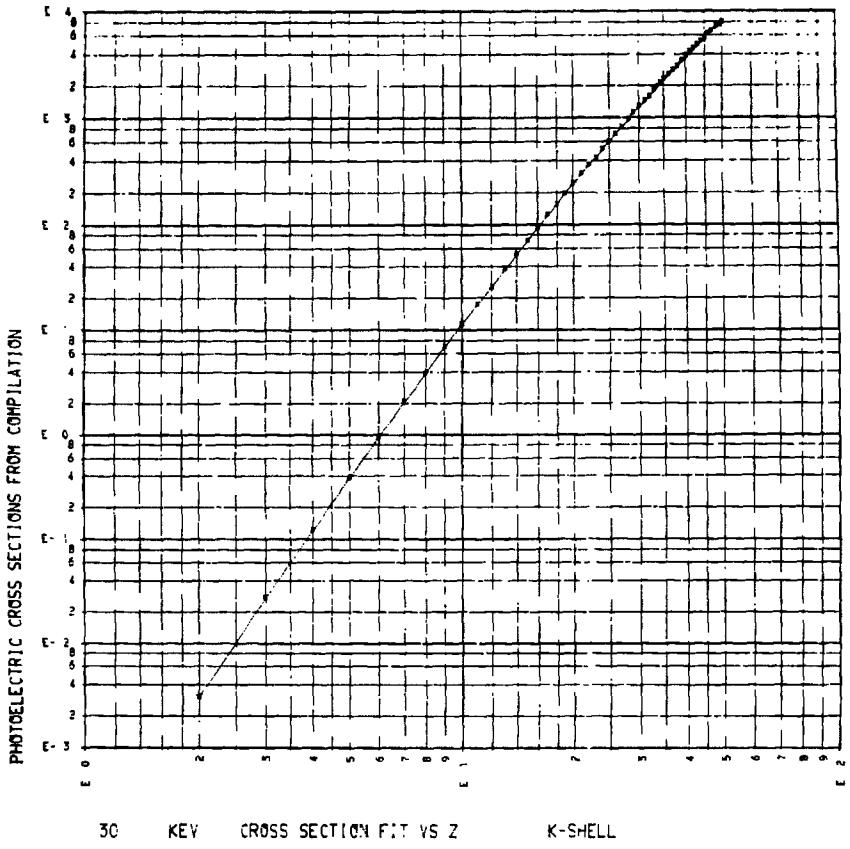


Fig. 63

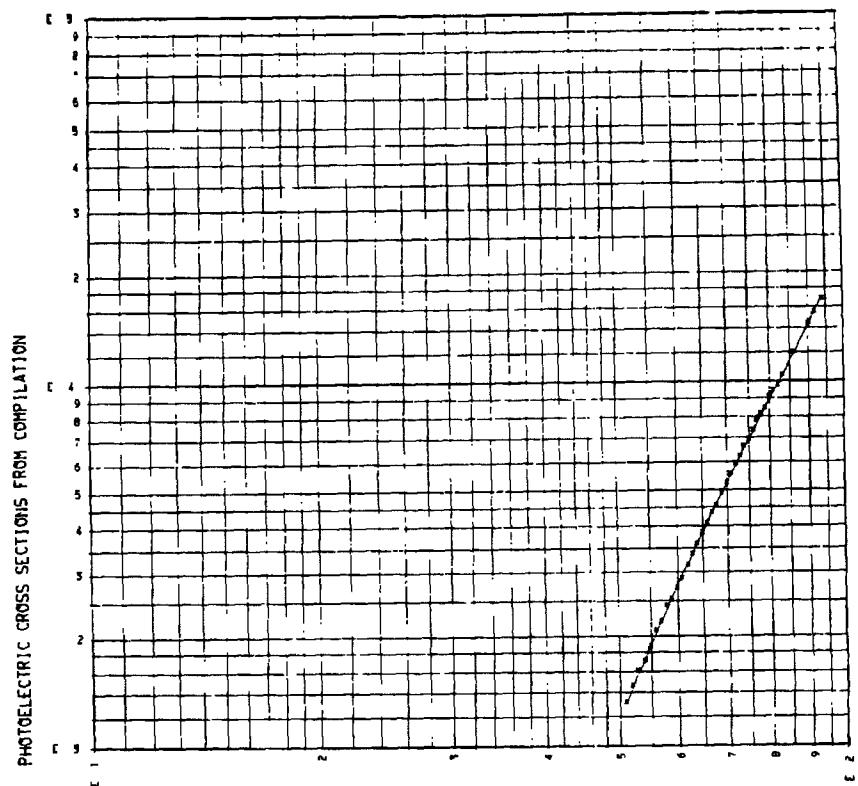


Fig. 64

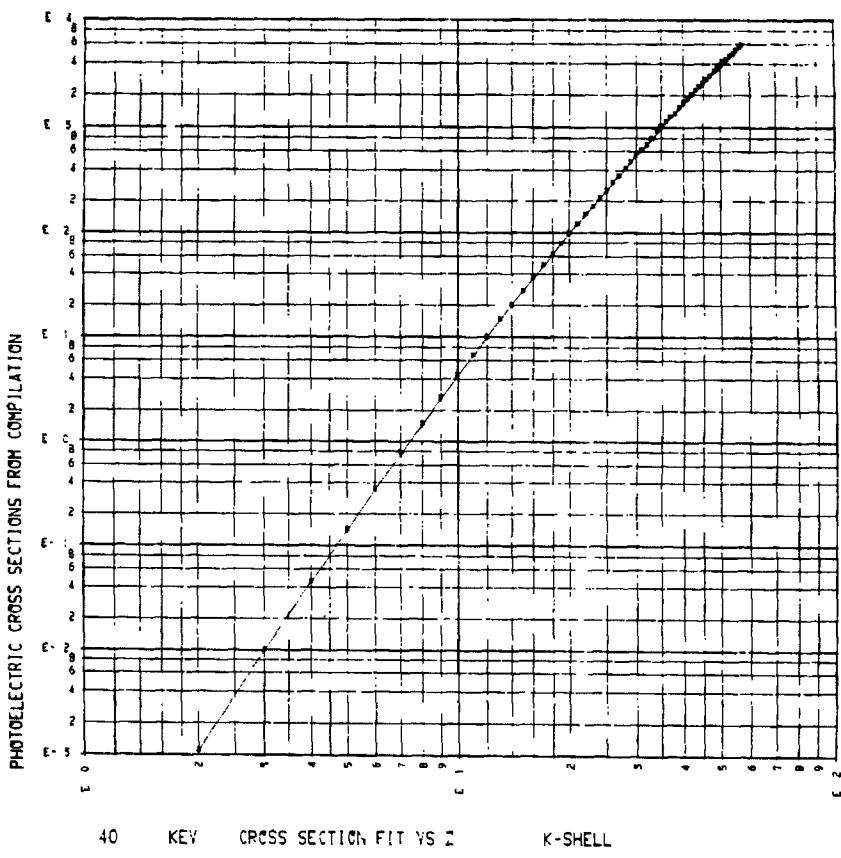


Fig. 65

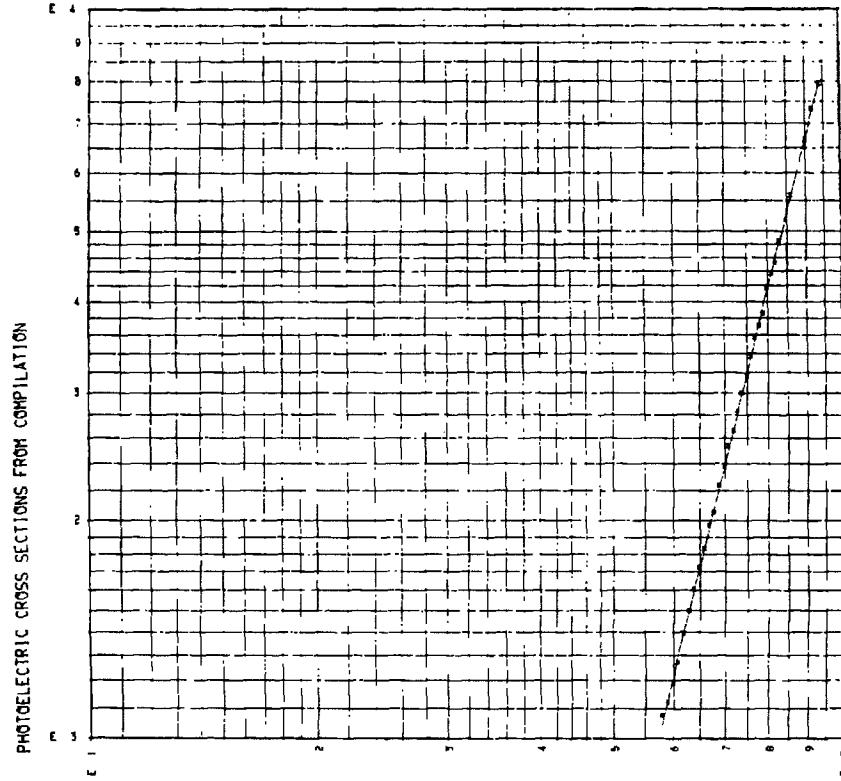


Fig. 66

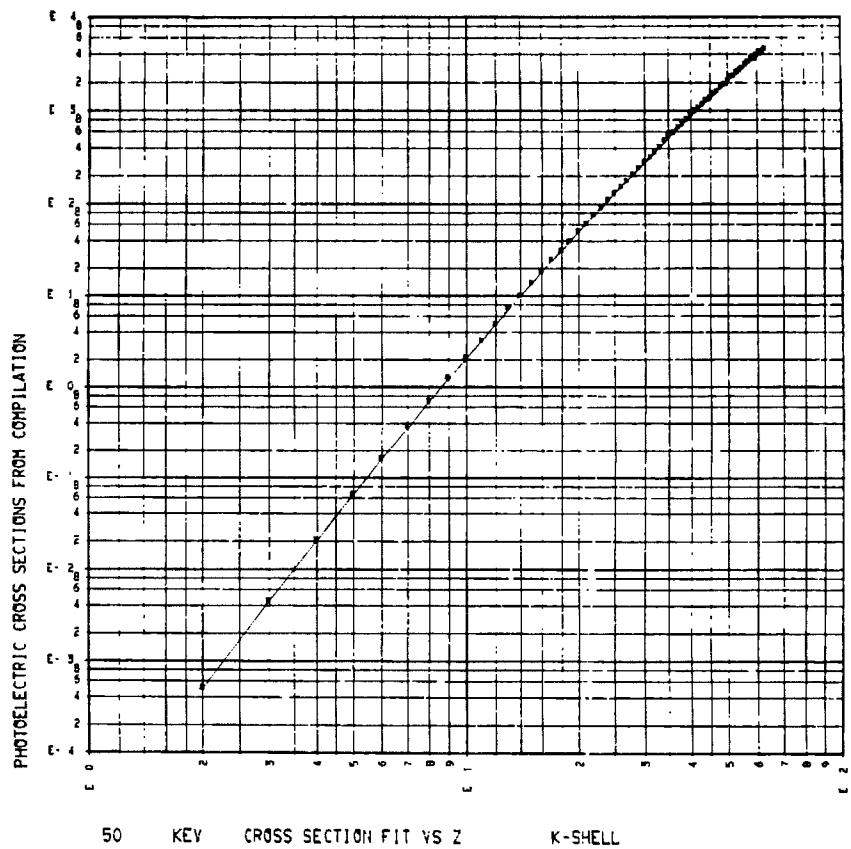


Fig. 67

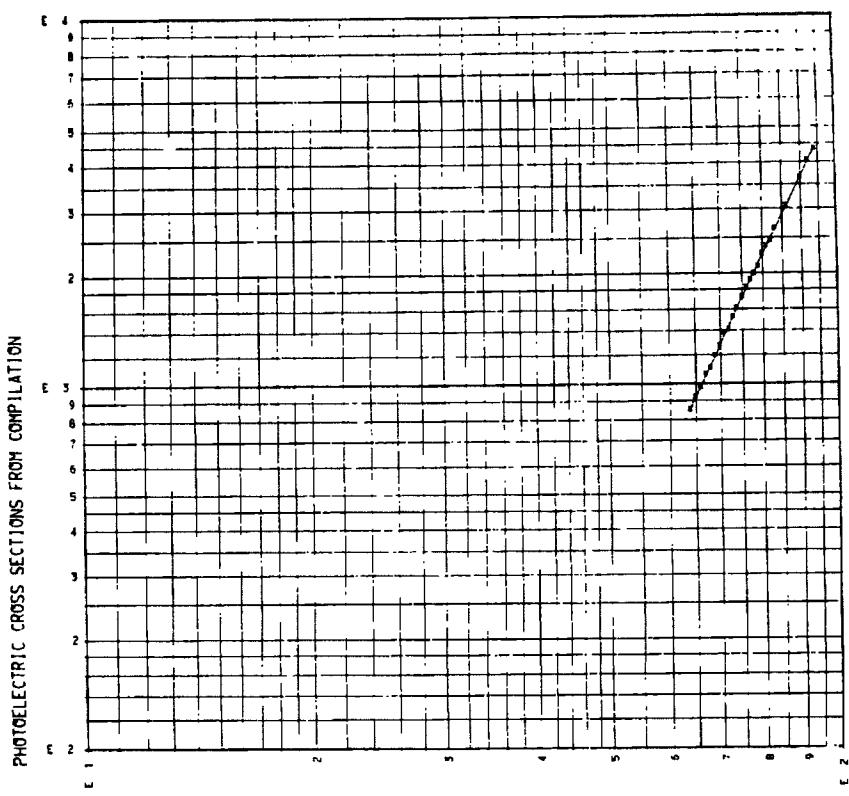


Fig. 68

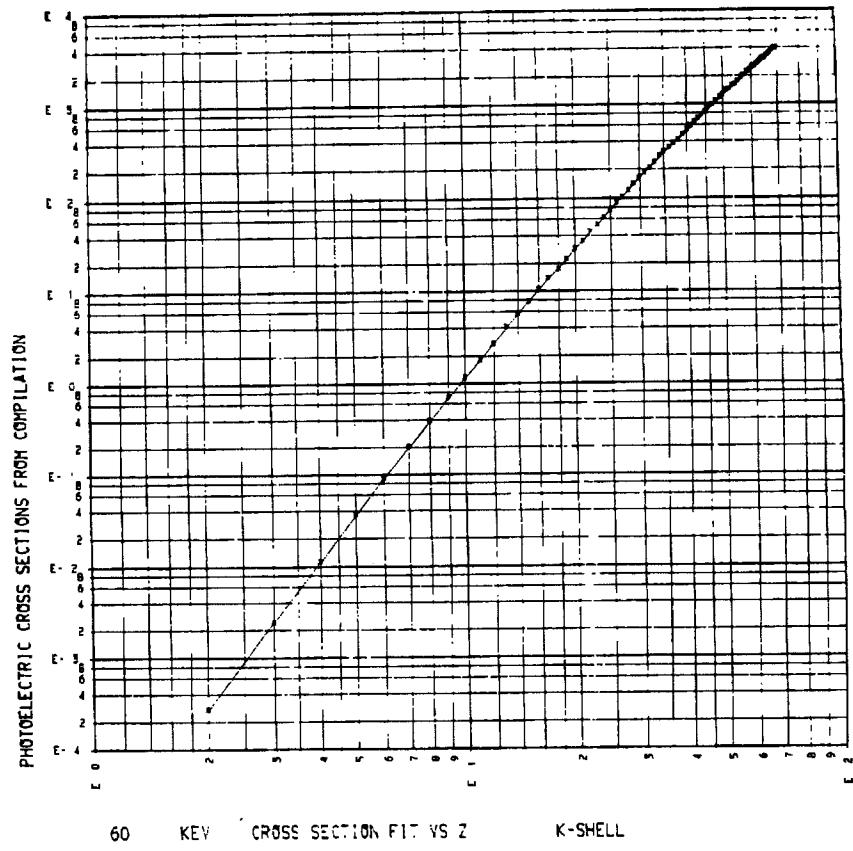


Fig. 69

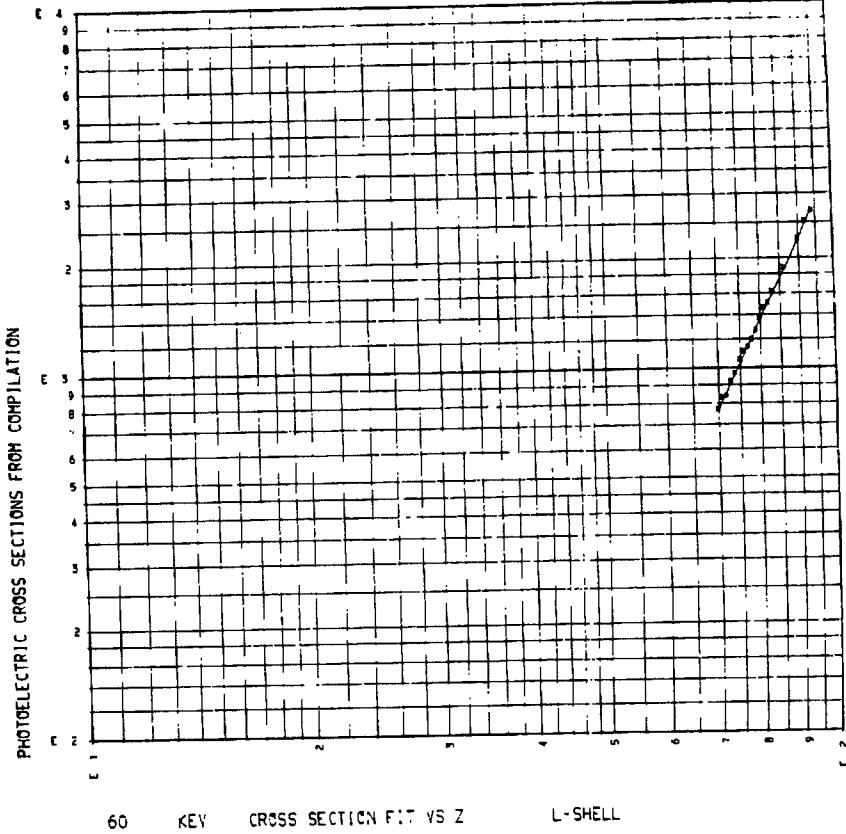


Fig. 70

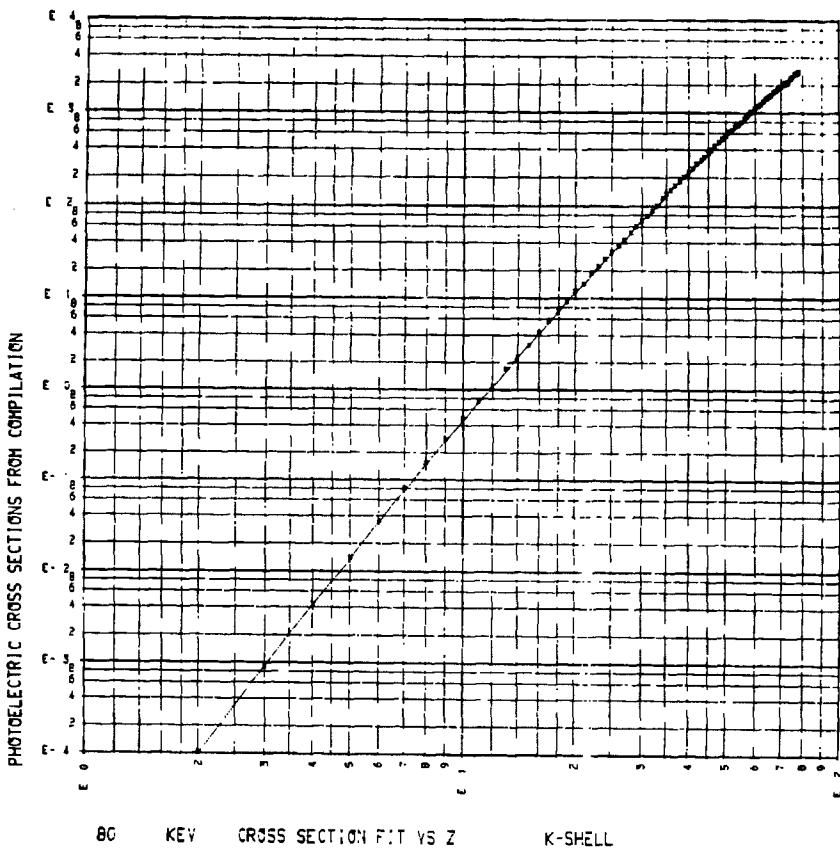


Fig. 71

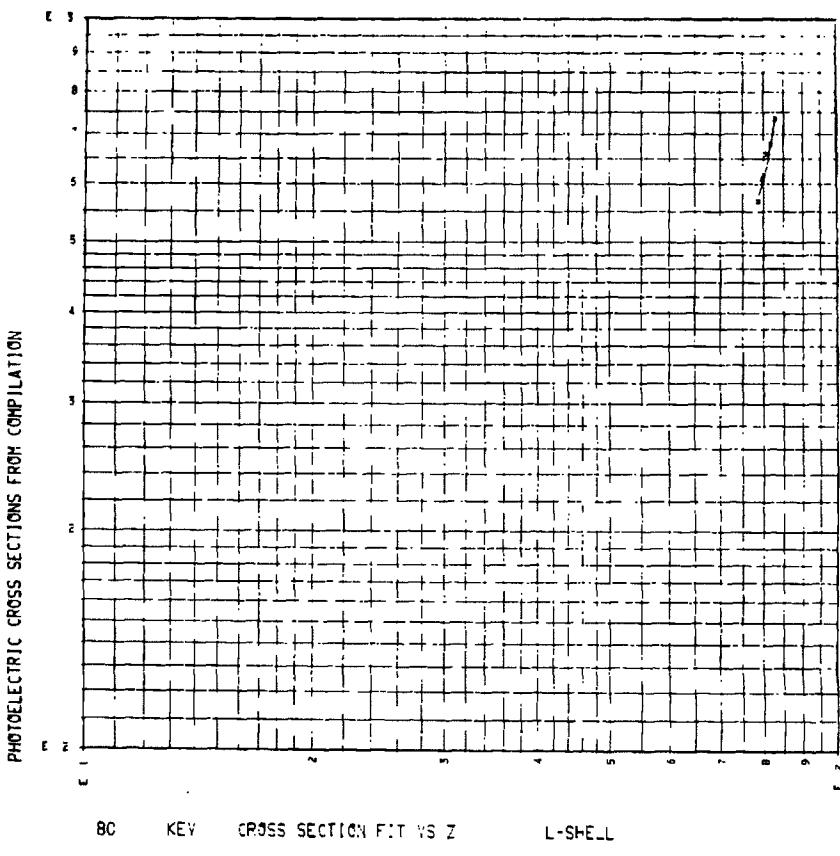


Fig. 72

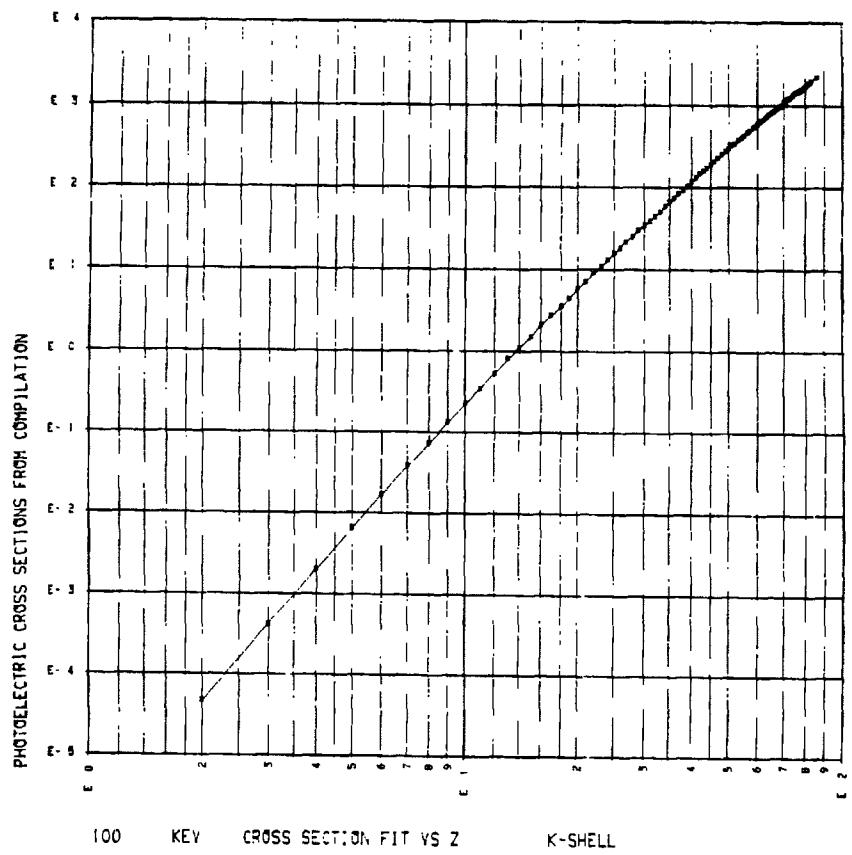


Fig. 73

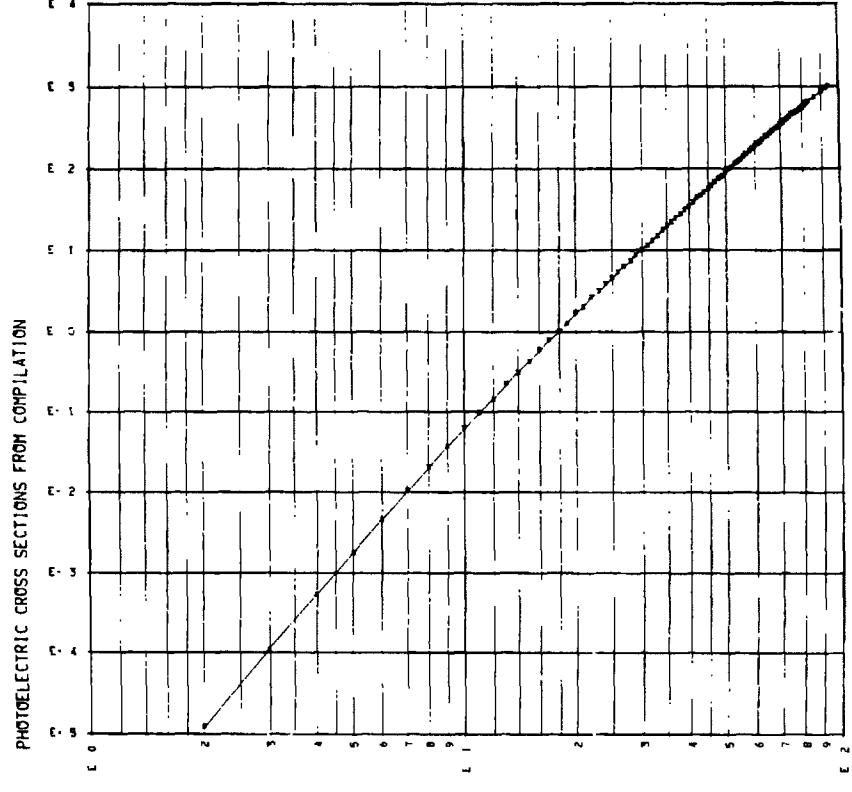


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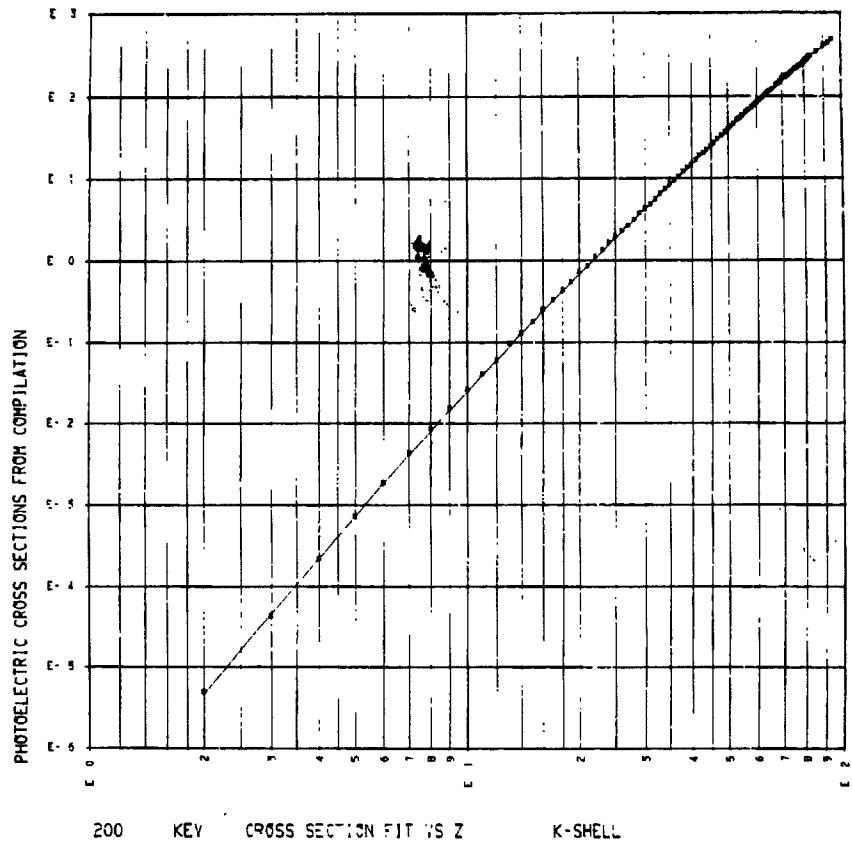


Fig. 75

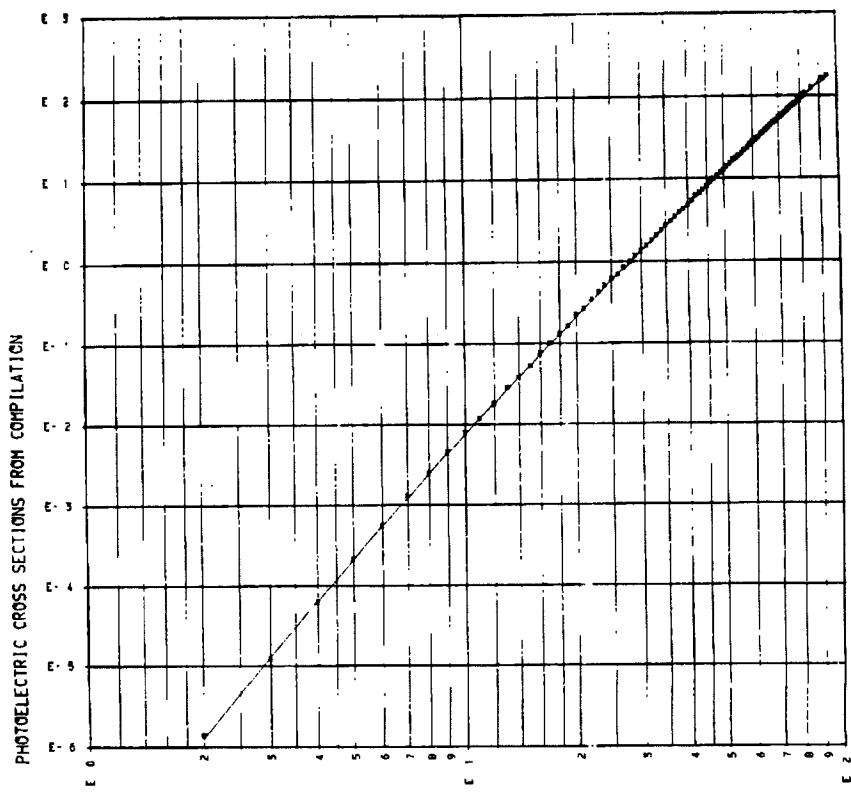


Fig. 76

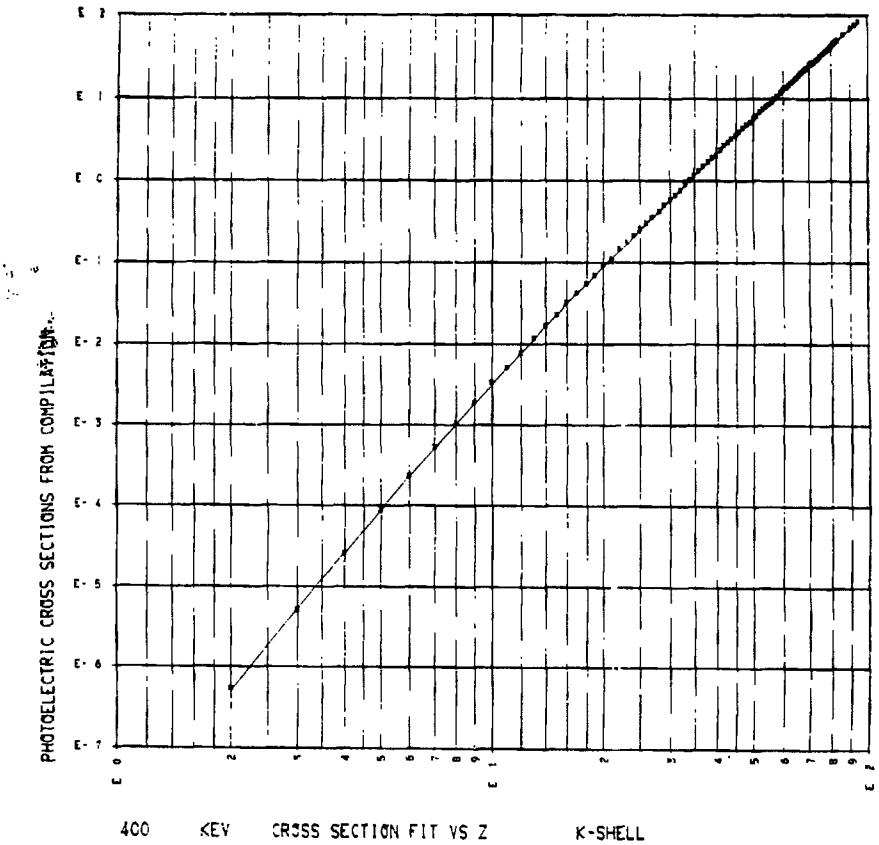


Fig. 77

400 KEY CROSS SECTION FIT VS Z K-SHELL

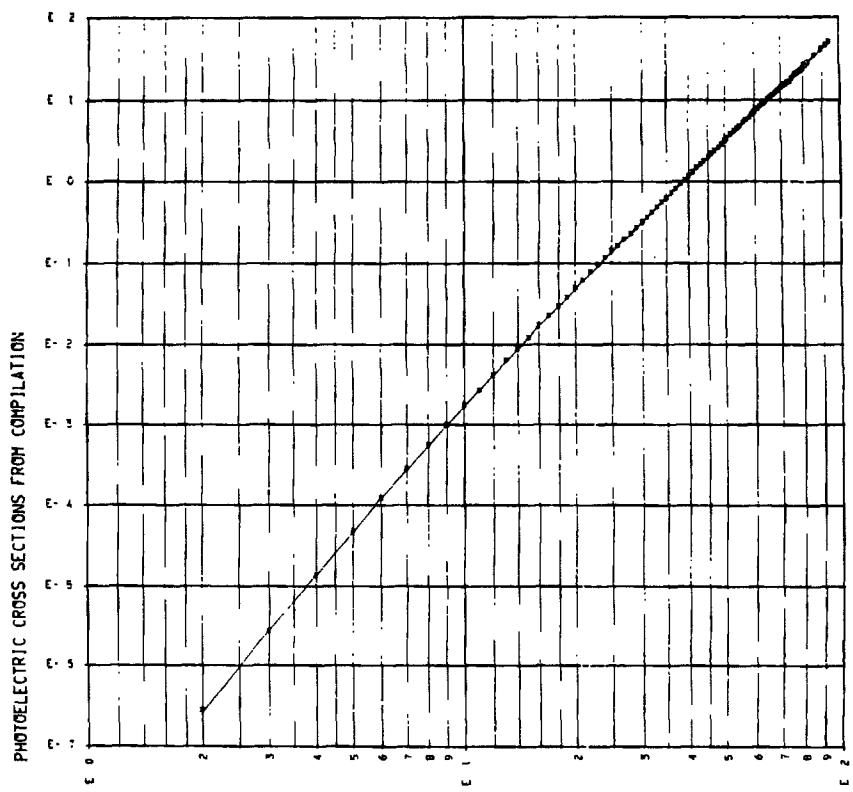


Fig. 78

500 KEY CROSS SECTION FIT VS Z K-SHELL

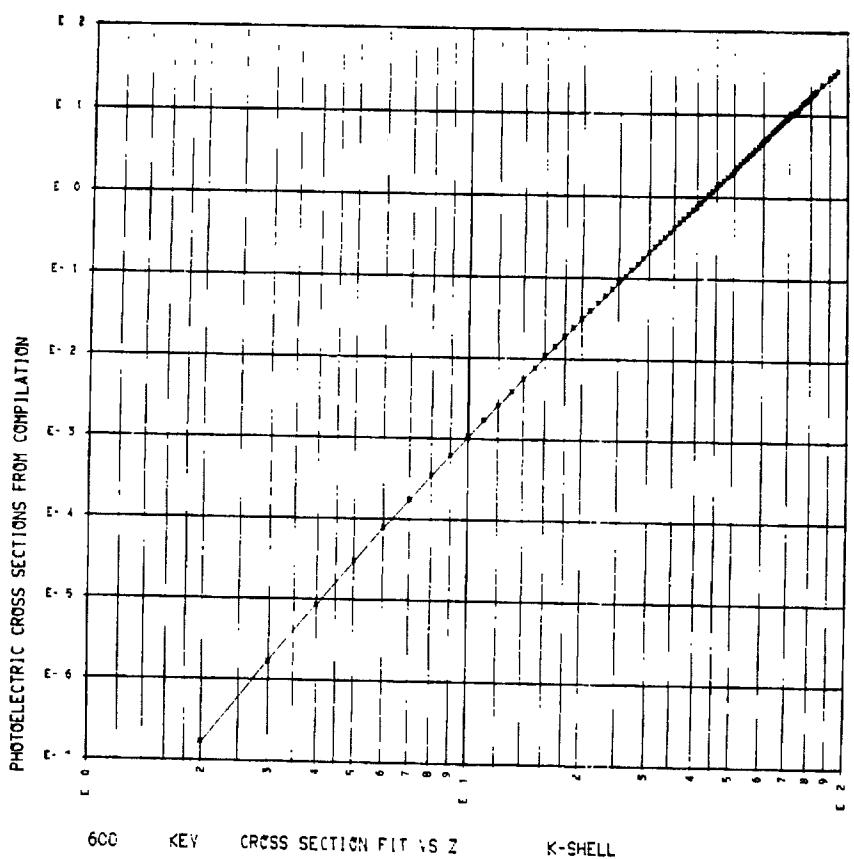


Fig. 79

600 KEY CROSS SECTION FIT VS Z K-SHELL

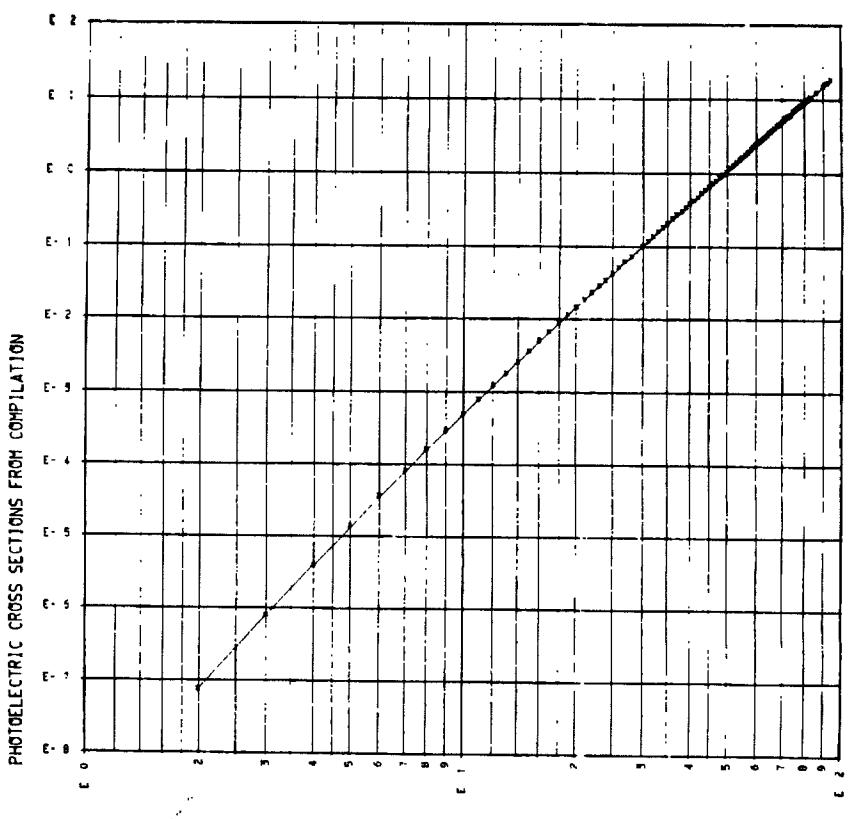


Fig. 80

800 KEY CROSS SECTION FIT VS Z K-SHELL

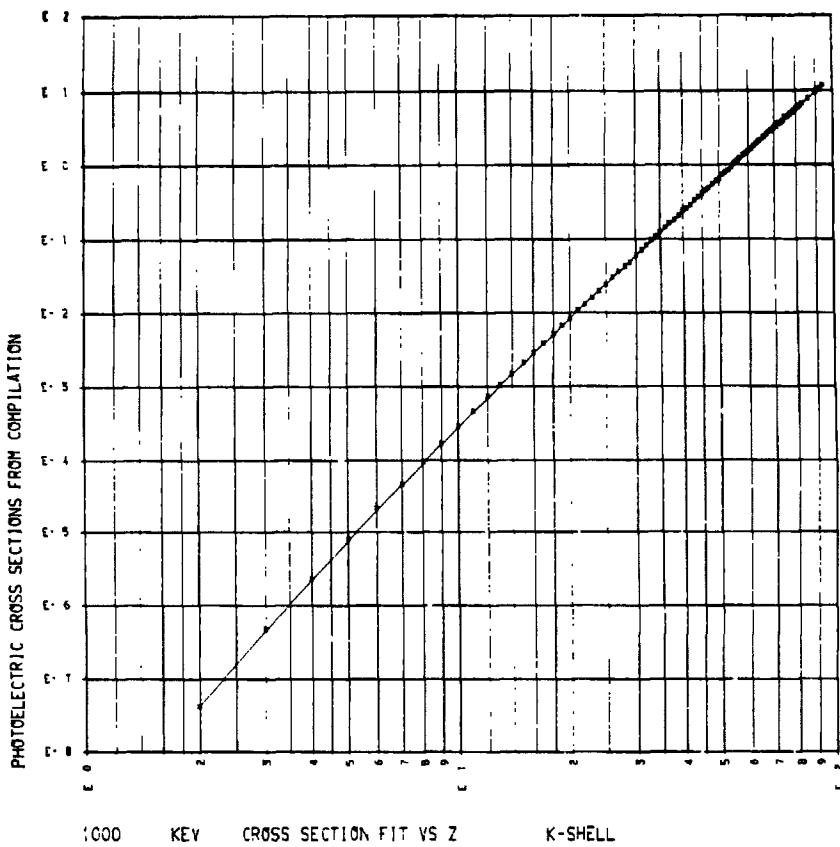


Fig. 81

~~Leanne Frank~~

Appendix A
Source Data for Elements with Experimental Measurements

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EXPERIMENTAL DATA FOR HELIUM

Z = 2

CONVERSION CONSTANT IS 6.647E+00

	K-EDGE 0.025	L-EDGES 0.	M-EDGES 0.	KEV	CM2/GM	BARNs/AT	SOURCE	WEIGHT	DIFF
1	1.0890E-01	5.3000E+04	3.5228E+05	47	5.	-49.34			
2	1.4710E-01	2.1500E+04	1.4290E+05	47	5.	-44.04			
3	1.8270E-01	1.1300E+04	7.5108E+04	47	5.	-39.45			
4	2.7750E-01	5.3200E+03	2.2067E+04	47	5.	-28.43			
5	1.0000E+00	4.9897E+01	3.3165E+02	89	1.	-23.42			
6	1.5000E+00	1.4639E+01	9.7301E+01	89	1.	-14.64			
7	2.0000E+00	6.1383E+00	4.0800E+01	89	1.	-8.06			
8	3.0000E+00	1.9747E+00	1.3125E+01	89	1.	4.60			
9	4.0000E+00	9.1587E-01	6.0875E+00	89	1.	5.31			
10	5.0000E+00	5.6223E-01	3.7370E+00	89	1.	4.91			
11	6.0000E+00	4.1276E-01	2.7435E+00	89	1.	4.52			
12	8.0000E+00	2.9501E-01	1.9609E+00	89	1.	3.63			
13	1.0000E+01	2.4765E-01	1.6461E+00	89	1.	1.53			
14	1.5000E+01	2.0927E-01	1.3910E+00	89	1.	0.19			
15	4.0000E+01	1.7656E-01	1.1735E+00	86	1.	-0.00			
16	5.0000E+01	1.7049E-01	1.1332E+00	86	1.	-0.00			
17	6.0000E+01	1.6523E-01	1.0983E+00	86	1.	-0.00			
18	8.0000E+01	1.5623E-01	1.0384E+00	86	1.	-0.00			
19	1.0000E+02	1.4863E-01	9.8793E-01	90	1.	-2.00			
20	1.0000E+02	1.4863E-01	9.8793E-01	86	1.	-0.00			
21	1.5000E+02	1.3364E-01	8.8825E-01	90	1.	-0.00			
22	1.5000E+02	1.3364E-01	8.8825E-01	96	1.	-0.00			
23	2.0000E+02	1.2239E-01	8.1352E-01	90	1.	-0.00			
24	2.0000E+02	1.2239E-01	8.1352E-01	86	1.	-0.00			
25	3.0000E+02	1.0639E-01	7.0712E-01	90	1.	-0.00			
26	3.0000E+02	1.0639E-01	7.0712E-01	86	1.	-0.00			
27	4.0000E+02	9.5306E-02	6.3347E-01	90	1.	-0.00			
28	4.0000E+02	9.5306E-02	6.3347E-01	86	1.	-0.00			
29	5.0000E+02	8.7017E-02	5.7838E-01	90	1.	-0.00			
30	5.0000E+02	8.7017E-02	5.7838E-01	86	1.	-0.00			
31	6.0000E+02	8.0494E-02	5.3502E-01	90	1.	-0.00			
32	6.0000E+02	8.0494E-02	5.3502E-01	86	1.	0.00			
33	8.0000E+02	7.0700E-02	4.6992E-01	90	1.	0.00			
34	8.0000E+02	7.0700E-02	4.6992E-01	86	1.	0.00			
35	1.0000E+03	6.3550E-02	4.2240E-01	90	1.	0.00			

35 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR LITHIUM

Z = 3

CONVERSION CONSTANT IS 1.152E+01

K-EDGE	0.055	L-EDGES	0.	M-EDGES	0.	0.	0.	0.	SOURCE	WEIGHT	DIFF
		KEV	CM2/GM		BARNs/AT						
1	1.0000E+00	2.1861E+02	2.5191E+03		90		1.	7.67			
2	1.0000E+00	1.9957E+02	2.3009E+03		89		1.	-1.47			
3	1.5000E+00	6.3725E+01	7.3432E+02		90		1.	1.97			
4	1.5000E+00	6.2440E+01	7.1952E+02		90		1.	-0.08			
5	1.5000E+00	5.7098E+01	6.5796E+02		89		1.	-8.63			
6	2.0000E+00	2.5710E+01	2.9626E+02		90		1.	-1.52			
7	2.0000E+00	2.5625E+01	2.9526E+02		90		1.	-1.86			
8	3.0000E+00	7.1756E+00	8.2688E+01		90		1.	-2.77			
9	4.0000E+00	2.9075E+00	3.3502E+01		90		1.	-3.76			
10	4.0000E+00	2.9021E+00	3.3442E+01		90		1.	-3.93			
11	4.0000E+00	2.8655E+00	3.3018E+01		89		1.	-5.15			
12	5.0000E+00	1.4963E+00	1.7242E+01		90		1.	-3.81			
13	5.0000E+00	1.4971E+00	1.7252E+01		90		1.	-3.75			
14	5.0000E+00	1.5559E+00	1.7929E+01		89		1.	0.02			
15	5.0000E+00	1.6480E+00	1.8991E+01		39		5.	5.94			
16	5.0000E+00	1.6473E+00	1.8982E+01		10		1.	5.90			
17	5.5000E+00	1.1400E+00	1.3137E+01		13		2.	-4.06			
18	6.0000E+00	9.0775E-01	1.0460E+01		90		1.	-3.62			
19	6.0000E+00	9.1148E-01	1.0535E+01		90		1.	-3.22			
20	6.0000E+00	9.4129E-01	1.0847E+01		89		1.	-0.06			
21	6.0000E+00	9.7605E-01	1.1247E+01		10		1.	5.63			
22	6.0000E+00	9.7510E-01	1.1248E+01		39		5.	3.64			
23	6.3000E+00	8.1000E-01	9.3340E+00		13		2.	-2.32			
24	7.0000E+00	6.2500E-01	7.2021E+00		13		2.	-2.53			
25	7.0580E+00	6.5880E-01	7.5916E+00		39		5.	4.72			
26	7.0580E+00	6.5879E-01	7.5915E+00		10		1.	4.72			
27	8.0000E+00	4.6982E-01	5.4139E+00		90		1.	-2.51			
28	8.0300E+00	4.7069E-01	5.4239E+00		90		1.	-2.33			
29	8.0000E+00	4.9420E-01	5.6949E+00		39		5.	2.55			
30	8.0000E+00	4.9412E-01	5.6939E+00		10		1.	2.54			
31	1.0000E+01	3.2175E-01	3.7077E+00		90		1.	-1.59			
32	1.0000E+01	3.2193E-01	3.7097E+00		90		1.	-1.54			
33	1.0000E+01	3.2193E-01	3.7097E+00		90		1.	-1.54			
34	1.5000E+01	2.1300E-01	2.4545E+00		39		5.	-0.77			
35	1.5000E+01	2.1636E-01	2.4332E+00		10		1.	0.79			
36	1.5000E+01	2.1332E-01	2.4582E+00		90		1.	-1.62			
37	2.0000E+01	1.7600E-01	2.0281E+00		13		2.	-4.87			
38	2.0000E+01	1.8470E-01	2.1284E+00		39		5.	-0.16			
39	2.0000E+01	1.8457E-01	2.1269E+00		90		1.	-0.23			
40	2.0000E+01	1.8446E-01	2.1256E+00		90		1.	-0.29			
41	3.0000E+01	1.6457E-01	1.8964E+00		90		1.	-0.10			
42	3.0000E+01	1.6290E-01	1.8772E+00		39		5.	-1.12			
43	3.0000E+01	1.6487E-01	1.8999E+00		10		1.	0.08			
44	4.0000E+01	1.5090E-01	1.7389E+00		39		5.	-2.96			
45	4.0000E+01	1.5551E-01	1.7920E+00		10		1.	0.00			
46	5.0000E+01	1.4916E-01	1.7188E+00		90		1.	0.00			
47	5.0000E+01	1.4915E-01	1.7187E+00		90		1.	-0.00			
48	6.0000E+01	1.4406E-01	1.6601E+00		90		1.	0.00			
49	8.0000E+01	1.3578E-01	1.5646E+00		90		1.	0.00			
50	1.0000E+02	1.2898E-01	1.4852E+00		90		1.	0.00			
51	2.0000E+02	1.0599E-01	1.2213E+00		90		1.	0.00			
52	3.0000E+02	9.2083E-02	1.0611E+00		90		1.	0.00			
53	4.0000E+02	8.2479E-02	9.5045E-01		90		1.	0.00			
54	5.0000E+02	7.5502E-02	8.6773E-01		90		1.	0.00			
55	6.0000E+02	6.9652E-02	8.0263E-01		90		1.	0.00			
56	8.0000E+02	6.1175E-02	7.0494E-01		90		1.	-0.00			
57	1.0000E+03	5.4987E-02	6.3364E-01		90		1.	-0.00			

54 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR BERYLLIUM

Z = 4

CONVERSION CONSTANT IS 1.496E+01

K-EDGES	0.112	L-EDGES	0.	M-EDGES	0.	KEV	CM2/GM	BARNs/AT	SOURCE	WEIGHT	DIFF
1		1.0000E+00	5.2408E+02	7.8423E+03	90	1.	-7.59				
2		1.4429E+00	1.8900E+02	2.8282E+03	33	2.	-3.26				
3		1.5000E+00	1.7162E+02	2.5682E+03	10	1.	-1.48				
4		1.5792E+00	1.4800E+02	2.2146E+03	33	2.	-0.71				
5		1.7590E+00	1.1000E+02	1.5456E+03	33	2.	-1.10				
6		2.0000E+00	7.3286E+01	1.0966E+03	10	1.	0.66				
7		2.0840E+00	2.1652E+01	3.2400E+02	37	2.	5.84				
8		3.0000E+00	2.0584E+01	3.0801E+02	90	1.	0.37				
9		3.0000E+00	2.0880E+01	3.1244E+02	10	1.	1.82				
10		3.4440E+00	1.4234E+01	2.1500E+02	37	2.	7.79				
11		3.5200E+00	1.1650E+01	1.7433E+02	39	5.	-5.45				
12		4.0000E+00	8.3475E+00	1.2491E+02	90	1.	1.43				
13		4.0000E+00	8.0326E+00	1.2020E+02	89	1.	-2.39				
14		4.5110E+00	5.8606E+00	8.7700E+01	37	2.	4.33				
15		5.0000E+01	4.1361E+00	6.1892E+01	90	1.	1.58				
16		5.0000E+00	3.9690E+00	5.9377E+01	39	5.	-2.35				
17		5.4150E+00	3.5018E+00	5.2400E+01	37	2.	10.22				
18		6.0000E+00	2.3642E+00	3.5378E+01	90	1.	1.66				
19		6.0000E+00	2.3180E+00	3.4586E+01	39	5.	-0.51				
20		6.4640E+00	1.9770E+00	2.9584E+01	39	5.	3.42				
21		7.0580E+00	1.4760E+00	2.2087E+01	39	5.	2.48				
22		8.0000E+00	1.0421E+00	1.5594E+01	90	1.	2.10				
23		8.0000E+00	1.0421E+00	1.5594E+01	90	1.	2.10				
24		8.0000E+00	1.0570E+00	1.5817E+01	39	5.	3.55				
25		8.0000E+00	1.0558E+00	1.5814E+01	10	1.	3.54				
26		8.0480E+00	1.0091E+00	1.5100E+01	37	2.	0.46				
27		9.9620E+00	6.0050E-01	8.9828E+00	39	5.	1.05				
28		9.9620E+00	6.0105E-01	8.9942E+00	10	1.	1.17				
29		1.0000E+01	5.5736E-01	8.3492E+00	10	1.	-5.29				
30		1.0000E+01	5.6928E-01	8.9676E+00	90	1.	1.73				
31		1.0000E+01	5.9935E-01	8.9686E+00	90	1.	1.74				
32		1.1283E+01	4.5100E-01	6.7487E+00	39	5.	-0.92				
33		1.1283E+01	4.5165E-01	6.7584E+00	10	1.	-0.78				
34		1.5000E+01	2.7970E-01	4.1854E+00	39	5.	-3.35				
35		1.5000E+01	2.9180E-01	4.3554E+00	90	1.	0.83				
36		1.5000E+01	2.9200E-01	4.3594E+00	90	1.	0.93				
37		1.5000E+01	2.9220E-01	4.3724E+00	90	1.	0.97				
38		1.7478E+01	2.3900E-01	3.5764E+00	55	3.	-1.91				
39		2.0000E+01	2.1970E-01	3.2875E+00	90	1.	0.64				
40		2.5000E+01	1.7800E-01	2.6636E+00	48	3.	-6.53				
41		3.0000E+01	1.7080E-01	2.5558E+00	39	5.	-3.94				
42		3.0000E+01	1.7812E-01	2.6653E+00	90	1.	0.18				
43		3.0000E+01	1.7809E-01	2.6649E+00	90	1.	0.16				
44		3.0040E+01	1.6970E-01	2.5394E+00	48	3.	-4.51				
45		3.5000E+01	1.6400E-01	2.4541E+00	39	5.	-3.02				
46		4.0000E+01	1.6362E-01	2.4464E+00	90	1.	0.01				
47		4.0000E+01	1.6353E-01	2.4471E+00	90	1.	-0.04				
48		4.0000E+01	1.5710E-01	2.3500E+00	39	5.	-3.98				
49		4.0040E+01	1.5720E-01	2.3523E+00	48	3.	-3.89				
50		4.4000E+01	1.5430E-01	2.3089E+00	39	5.	-3.41				
51		5.0000E+01	1.5541E-01	2.3255E+00	90	1.	0.02				
52		5.0000E+01	1.5542E-01	2.3256E+00	90	1.	0.03				
53		5.0000E+01	1.5400E-01	2.3044E+00	28	5.	-0.88				
54		5.0080E+01	1.5200E-01	2.2745E+00	48	3.	-2.13				
55		5.7520E+01	1.5390E-01	2.2895E+00	28	5.	1.57				
56		5.0000E+01	1.4935E-01	2.2349E+00	90	1.	0.01				
57		6.0000E+01	1.4935E-01	2.2348E+00	90	1.	0.01				
58		5.0030E+01	1.4670E-01	2.1952E+00	40	5.	-1.75				
59		6.7870E+01	1.4400E-01	2.1548E+00	28	5.	-0.79				
60		6.8840E+01	1.4400E-01	2.1548E+00	28	5.	-0.48				
61		7.5010E+01	1.4210E-01	2.1264E+00	40	5.	-1.42				
62		7.0810E+01	1.4500E-01	2.1698E+00	28	5.	0.84				
63		8.0000E+01	1.4013E-01	2.0969E+00	90	1.	0.00				
64		8.0000E+01	1.4013E-01	2.0968E+00	90	1.	0.00				
65		8.4990E+01	1.3660E-01	2.0441E+00	40	5.	-1.05				
66		8.6540E+01	1.3700E-01	2.0500E+00	28	5.	-0.34				
67		1.0000E+02	1.3286E-01	1.9880E+00	90	5.	0.00				
68		1.0006E+02	1.3050E-01	1.9543E+00	40	5.	-1.68				
69		1.0500E+02	1.2700E-01	1.9004E+00	28	5.	-3.10				

70	1.2300E+02	1.2400E-01	1.8555E+00	28	5.	-1.22
71	1.3031E+02	1.2290E-01	1.8391E+00	40	5.	-0.57
72	1.4560E+02	1.1970E-01	1.7912E+00	48	3.	-0.25
73	1.5000E+02	1.1906E-01	1.7816E+00	90	1.	0.00
74	1.5800E+02	1.1900E-01	1.7807E+00	28	5.	1.58
75	2.0000E+02	1.0692E-01	1.6298E+00	90	1.	0.00
76	2.0800E+02	1.0900E-01	1.6311E+00	28	5.	1.46
77	2.0830E+02	1.0720E-01	1.6041E+00	48	3.	-0.17
78	2.7910E+02	9.7000E-02	1.4515E+00	48	3.	0.01
79	3.0000E+02	9.4592E-02	1.4155E+00	90	1.	0.00
80	4.0000E+02	8.4713E-02	1.2676E+00	90	1.	0.00
81	4.1180E+02	8.3100E-02	1.2435E+00	48	3.	-0.73
82	4.1200E+02	8.2800E-02	1.2390E+00	28	5.	-1.07
83	5.0000E+02	7.7334E-02	1.1572E+00	90	1.	0.00
84	6.0000E+02	7.1526E-02	1.0705E+00	90	1.	0.00
85	8.0000E+02	6.2817E-02	9.3998E-01	90	1.	-0.00
86	1.0000E+03	5.6463E-02	8.4490E-01	90	1.	-0.00

58 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR BORON

Z = 5

CONVERSION CONSTANT IS 1.795E+01

	X-EDGES	0.1148	L-EDGES	0.	0.	M-EDGES	0.	0.	0.	0.	0.
	KEY	CM2/GM		CM2/GM	BARNs/AT		SOURCE	WEIGHT	DIFF		
1	7.0000E-01	3.3433E+03	6.0015E+04	90	1.	4.48					
2	1.0000E+00	1.1730E+03	2.1056E+04	10	1.	0.37					
3	1.0000E+00	1.1406E+03	2.0475E+04	90	1.	-2.40					
4	1.0000E+00	1.0626E+03	1.9075E+04	90	1.	-9.08					
5	1.5000E+00	3.6433E+02	6.5401E+03	10	1.	-2.11					
6	1.5000E+00	3.6685E+02	6.5852E+03	90	1.	-1.43					
7	2.0000E+00	1.5753E+02	2.8278E+03	10	1.	-1.11					
8	3.0000E+00	4.3458E+01	7.8010E+02	89	1.	-5.88					
9	5.0000E+00	4.6075E+01	8.2710E+02	90	1.	-0.21					
10	3.0000E+00	4.5786E+01	8.1831E+02	10	1.	-1.27					
11	4.0000E+00	1.8142E+01	3.2567E+02	89	1.	-3.31					
12	4.0000E+00	1.8773E+01	3.3700E+02	90	1.	0.06					
13	4.5099E+00	1.2241E+01	2.1974E+02	10	1.	-4.69					
14	4.9320E+00	9.2586E+00	1.6520E+02	10	1.	-4.45					
15	5.0000E+01	9.0381E+00	1.6224E+02	10	1.	-2.66					
16	5.0000E+00	9.3696E+00	1.6819E+02	90	1.	0.91					
17	5.0000E+00	9.3022E+00	1.6698E+02	89	1.	0.19					
18	5.4120E+00	7.0024E+00	1.2570E+02	10	1.	-3.15					
19	5.8550E+00	5.3841E+00	9.6650E+01	10	1.	-2.70					
20	5.9470E+00	5.1884E+00	9.3137E+01	10	1.	-3.64					
21	6.0000E+00	5.2876E+00	9.4917E+01	90	1.	0.95					
22	6.0000E+00	5.5016E+00	9.5159E+01	89	1.	1.22					
23	6.4000E+00	4.1708E+00	7.4869E+01	10	1.	-2.56					
24	6.4960E+00	3.9967E+00	7.1744E+01	10	1.	-2.48					
25	6.9250E+00	3.2899E+00	5.9056E+01	10	1.	-1.95					
26	7.0580E+00	3.1927E+00	5.5695E+01	10	1.	-1.99					
27	7.4720E+00	2.6611E+00	4.7770E+01	10	1.	-0.11					
28	7.6490E+00	2.4579E+00	4.4120E+01	10	1.	-1.04					
29	8.0000E+00	2.1531E+00	3.9189E+01	10	1.	0.40					
30	8.0000E+00	2.2404E+00	4.0217E+01	89	1.	3.03					
31	8.0000E+00	2.2509E+00	4.0406E+01	90	1.	3.52					
32	8.0410E+00	2.1403E+00	3.8420E+01	10	1.	-0.06					
33	8.2650E+00	1.9869E+00	3.5666E+01	10	1.	0.65					
34	8.6310E+00	1.7421E+00	3.1273E+01	10	1.	0.19					
35	8.9050E+00	1.5989E+00	2.6701E+01	10	1.	0.62					
36	9.5720E+00	1.3153E+00	2.3629E+01	10	1.	1.54					
37	1.0000E+01	1.1256E+00	2.0205E+01	10	1.	-2.14					
38	1.0000E+01	1.1850E+00	2.1271E+01	89	1.	3.03					
39	1.0300E+01	1.1808E+00	2.1197E+01	90	1.	2.67					
40	1.5000E+01	4.5039E-01	8.9849E+00	89	1.	0.83					
41	1.5000E+01	4.5242E-01	8.1214E+00	90	1.	1.29					
42	1.5000E+01	4.3568E-01	7.8209E+00	10	1.	-2.46					
43	1.5000E+01	4.5459E-01	8.1604E+00	90	1.	1.78					
44	1.7444E+01	3.4873E-01	6.2600E+00	10	1.	1.41					
45	1.9608E+01	2.9672E-01	5.3264E+00	10	1.	1.44					
46	2.0000E+01	2.8539E-01	5.1231E+00	89	1.	-0.06					
47	2.0000E+01	2.8717E-01	5.1550E+00	90	1.	0.56					
48	2.0000E+01	2.8192E-01	5.0608E+00	86	1.	-1.28					
49	2.0169E+01	2.8667E-01	5.1460E+00	10	1.	1.45					
50	2.1125E+01	2.7187E-01	4.8803E+00	10	1.	1.69					
51	2.2105E+01	2.5971E-01	4.6621E+00	10	1.	2.17					
52	2.2724E+01	2.5304E-01	4.5424E+00	10	1.	2.28					
53	2.3819E+01	2.4233E-01	4.3501E+00	10	1.	2.37					
54	2.4942E+01	2.3966E-01	4.1639E+00	10	1.	1.89					
55	3.0000E+01	2.0207E-01	3.6273E+00	90	1.	0.16					
56	3.0000E+01	2.0176E-01	3.6217E+00	90	1.	0.00					
57	3.0000E+01	2.0101E-01	3.6083E+00	89	1.	-0.37					
58	4.0000E+01	1.7765E-01	3.1890E+00	90	1.	0.02					
59	4.0040E+01	1.7780E-01	3.1917E+00	48	3.	0.14					
60	5.0000E+01	1.6584E-01	2.9770E+00	90	1.	0.06					
61	5.0000E+01	1.6551E-01	2.9728E+00	90	1.	-0.08					
62	5.0080E+01	1.6473E-01	2.9565E+00	48	3.	-0.58					
63	6.0000E+01	1.5790E-01	2.8344E+00	90	1.	-0.02					
64	6.0000E+01	1.5790E-01	2.8344E+00	90	1.	-0.02					
65	6.0030E+01	1.5709E-01	2.8183E+00	48	3.	-0.58					
66	7.0040E+01	1.5100E-01	2.7106E+00	48	3.	-0.50					
67	8.0000E+01	1.4718E-01	2.6420E+00	90	1.	0.00					
68	8.4990E+01	1.4490E-01	2.6011E+00	48	3.	0.02					
69	1.0000E+02	1.3910E-01	2.4969E+00	90	1.	-0.01					

70	1.0E+02	1.4080E-01	2.5275E+00	48	3.	1.22
71	1.3051E+02	1.3220E-01	2.3731E+00	48	3.	2.57
72	1.5000E+02	1.2452E-01	2.2316E+00	90	1.	-0.01
73	4.0000E+02	8.8307E-02	1.5852E+00	90	1.	-0.00
74	5.0000E+02	8.0511E-02	1.4470E+00	90	1.	-0.00
75	6.0000E+02	7.4555E-02	1.3585E+00	90	1.	-0.00
76	6.0000E+02	7.4555E-02	1.3585E+00	89	1.	-0.00
77	6.6200E+02	7.1305E-02	1.2800E+00	89	1.	0.00
78	7.0000E+02	6.9523E-02	1.2480E+00	89	1.	0.00
79	8.0000E+02	6.5440E-02	1.1747E+00	89	1.	0.00
80	8.0000E+02	6.5440E-02	1.1747E+00	90	1.	0.00
81	9.0000E+02	6.1878E-02	1.1108E+00	89	1.	0.00
82	1.0000E+03	5.8855E-02	1.0565E+00	89	1.	0.00
83	1.0000E+03	5.8855E-02	1.0565E+00	90	1.	-0.00

76 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR CARBON

2. 6

CONVERSION CONSTANT IS 1.994E+01

	K-EDGE	0.264	L-EDGES	0.	0.	0.	0.	0.	0.
	KEY	CM2/GM		BARNs/AT	SOURCE	WEIGHT	DIFF		
1	5.2490E-01	1.2200E+04		2.4529E+05	47	5.	-8.20		
2	6.7670E-01	6.3950E+03		1.2755E+05	47	5.	-2.21		
3	7.7620E-01	4.4660E+03		8.9060E+04	47	5.	0.15		
4	8.5200E-01	3.1893E+03		6.3600E+04	37	2.	-7.23		
5	9.2970E-01	2.7400E+03		5.4641E+04	47	5.	1.68		
6	9.3000E-01	2.5424E+03		5.0700E+04	37	2.	-5.57		
7	1.0000E+00	2.1771E+03		4.3422E+04	10	1.	-0.97		
8	1.0120E+00	2.6259E+03		4.0400E+04	37	2.	-4.74		
9	1.2536E+00	1.1680E+03		2.5292E+04	47	5.	-0.19		
10	1.2540E+00	1.0952E+03		2.1830E+04	37	2.	-6.50		
11	1.4866E+00	7.2100E+02		1.4378E+04	47	5.	-0.89		
12	1.4873E+00	6.6694E+02		1.3300E+04	37	2.	-8.25		
13	1.5000E+00	6.9301E+02		1.3820E+04	10	1.	-2.32		
14	1.5570E+00	5.7166E+02		1.1400E+04	37	2.	-10.18		
15	2.0000E+00	2.9964E+02		5.9754E+03	10	1.	-2.45		
16	2.9840E+00	8.5248E+01		1.7000E+03	37	2.	-7.43		
17	3.0000E+00	8.8964E+01		1.7741E+03	10	1.	-1.83		
18	3.4440E+00	6.6677E+01		1.2100E+03	37	2.	-2.63		
19	3.5200E+00	5.3410E+01		1.0651E+03	39	5.	-3.36		
20	3.5200E+00	5.3277E+01		1.0625E+03	10	1.	-3.60		
21	3.6910E+00	4.3800E+01		8.7345E+02	38	1.	-8.25		
22	4.0000E+00	3.5740E+01		7.1272E+02	39	5.	-4.08		
23	4.0000E+00	3.5670E+01		7.1133E+02	10	1.	-4.27		
24	4.0930E+00	3.4000E+01		6.7802E+02	38	1.	-2.15		
25	4.5100E+00	2.6100E+01		5.2948E+02	38	1.	-2.02		
26	4.5110E+00	2.5023E+01		4.9900E+02	37	2.	-2.13		
27	4.9520E+00	2.0000E+01		3.9884E+02	38	1.	-4.65		
28	5.0000E+00	1.8580E+01		3.7052E+02	39	5.	-0.18		
29	5.0000E+00	1.8432E+01		3.6758E+02	10	1.	-0.52		
30	5.4150E+00	1.5194E+01		3.0300E+02	37	2.	-5.28		
31	6.0000E+00	1.0320E+01		2.0580E+02	39	5.	-1.45		
32	6.0000E+00	1.0399E+01		2.1737E+02	10	1.	-0.69		
33	6.4440E+00	8.4140E+00		1.6779E+02	39	5.	-1.36		
34	6.4040E+00	8.4256E+00		1.6802E+02	10	1.	-1.23		
35	6.4440E+00	8.7755E+00		1.7500E+02	37	2.	-2.88		
36	6.4270E+00	8.6160E+00		1.7178E+02	15	1.	-2.15		
37	6.9300E+00	6.7200E+00		1.3401E+02	66	3.	0.81		
38	7.0580E+00	6.3360E+00		1.2635E+02	39	5.	0.61		
39	7.0580E+00	6.3445E+00		1.2652E+02	10	1.	0.74		
40	7.5020E+00	5.5690E+00		1.1106E+02	15	1.	5.76		
41	8.0000E+00	4.3150E+00		8.6049E+01	39	5.	0.69		
42	8.0000E+00	4.3588E+00		8.6922E+01	10	1.	1.71		
43	8.0470E+00	4.4100E+00		8.7943E+01	66	3.	4.78		
44	8.0480E+00	4.3276E+00		8.6300E+01	37	2.	2.86		
45	8.3960E+00	3.7233E+00		7.4243E+01	39	5.	0.74		
46	8.3960E+00	3.7723E+00		7.5226E+01	10	1.	2.08		
47	8.6690E+00	3.5151E+00		7.0095E+01	39	5.	4.03		
48	9.9620E+00	2.2550E+00		4.4969E+01	39	5.	1.73		
49	9.9620E+00	2.3104E+00		4.6074E+01	10	1.	4.23		
50	1.0000E+01	2.2202E+00		4.4274E+01	10	1.	1.27		
51	1.0000E+01	2.2661E+00		4.5191E+01	89	1.	3.37		
52	1.1000E+01	1.6920E+00		3.3742E+01	39	5.	1.69		
53	1.1000E+01	1.7405E+00		3.4708E+01	10	1.	4.60		
54	1.5000E+01	7.5800E-01		1.5116E+01	39	5.	1.94		
55	1.5000E+01	7.0171E-01		1.5358E+01	10	1.	3.58		
56	1.7478E+01	5.4900E-01		1.0948E+01	66	3.	3.34		
57	2.0000E+01	4.2710E-01		8.5172E+00	39	5.	3.16		
58	2.0000E+01	4.2781E-01		8.5531E+00	10	1.	3.35		
59	2.5300E+01	3.1190E-01		6.2199E+00	39	5.	4.62		
60	2.5000E+01	3.0880E-01		6.1560E+00	10	1.	3.58		
61	2.5000E+01	2.9680E-01		5.9187E+00	48	3.	-0.44		
62	3.0000E+01	2.4660E-01		4.9177E+00	48	3.	-0.64		
63	3.0000E+01	2.4710E-01		4.9276E+00	39	5.	-0.44		
64	3.0000E+01	2.5100E-01		5.00953E+00	10	1.	1.13		
65	3.0000E+01	2.4147E-01		4.8153E+00	90	1.	-2.70		
66	3.5000E+01	2.2390E-01		4.4649E+00	10	1.	1.49		
67	4.0000E+01	2.0297E-01		4.0476E+00	10	1.	-0.86		
68	4.0000E+01	2.0320E-01		4.0522E+00	48	3.	-0.75		
69	4.0000E+01	1.9964E-01		3.9812E+00	90	1.	-2.48		

70	4.5400E+01	1.8900E-01	3.7690E+00	28	5.	-1.98
71	5.0100E+01	1.8410E-01	3.6715E+00	48	5.	-0.86
72	5.7520E+01	1.7700E-01	3.5297E+00	28	5.	0.01
73	6.0000E+01	1.7367E-01	3.4635E+00	90	1.	-0.61
74	6.0000E+01	1.7150E-01	3.4200E+00	40	5.	-1.85
75	6.7870E+01	1.7000E-01	3.3901E+00	28	5.	-1.10
76	6.8840E+01	1.6500E-01	3.2904E+00	28	5.	-1.47
77	7.0000E+01	1.6490E-01	3.2884E+00	40	5.	-1.06
78	7.0580E+01	1.6030E-01	3.1957E+00	15	1.	-3.67
79	7.0810E+01	1.6300E-01	3.2505E+00	28	5.	-1.88
80	8.0000E+01	1.5087E-01	3.2081E+00	90	1.	-0.01
81	8.5000E+01	1.5490E-01	3.0890E+00	40	5.	-2.03
82	8.6540E+01	1.5600E-01	3.1109E+00	28	5.	-0.83
83	1.0000E+02	1.5129E-01	3.0169E+00	90	1.	-0.04
84	1.0010E+02	1.5120E-01	3.0152E+00	40	5.	-0.07
85	1.0500E+02	1.4430E-01	2.8716E+00	28	5.	-3.43
86	1.2300E+02	1.4100E-01	2.8118E+00	28	5.	-0.96
87	1.2400E+02	1.4200E-01	2.8317E+00	36	1.	-0.02
88	1.3030E+02	1.4140E-01	2.8196E+00	40	5.	0.96
89	1.3440E+02	1.3700E-01	2.7520E+00	57	1.	-1.52
90	1.3800E+02	1.3700E-01	2.7520E+00	36	1.	-0.59
91	1.4500E+02	1.3140E-01	2.6204E+00	56	1.	-3.34
92	1.4560E+02	1.3590E-01	2.7101E+00	48	5.	0.08
93	1.4600E+02	1.3400E-01	2.6722E+00	36	1.	-1.24
94	1.5000E+02	1.3467E-01	2.6855E+00	90	1.	-0.01
95	1.5500E+02	1.3200E-01	2.6323E+00	36	1.	-0.95
96	1.5800E+02	1.3100E-01	2.6124E+00	28	5.	-1.10
97	1.7700E+02	1.2600E-01	2.5127E+00	36	1.	-1.37
98	2.0700E+02	1.2300E-01	2.3930E+00	36	1.	-1.20
99	2.0800E+02	1.2100E-01	2.4130E+00	28	5.	-0.21
100	2.0830E+02	1.2100E-01	2.4130E+00	48	5.	-0.15
101	2.4500E+02	1.0960E-01	2.1856E+00	59	1.	-4.23
102	2.4800E+02	1.1400E-01	2.2734E+00	36	1.	0.04
103	2.7900E+02	1.1200E-01	2.2355E+00	60	1.	2.42
104	2.7910E+02	1.0870E-01	2.1677E+00	48	5.	-0.59
105	3.1000E+02	1.0500E-01	2.0939E+00	36	1.	-0.27
106	3.2000E+02	1.0130E-01	2.0201E+00	56	1.	-2.50
107	3.2000E+02	1.0590E-01	2.1318E+00	51	1.	2.79
108	3.2500E+02	1.0460E-01	2.0859E+00	60	1.	1.18
109	3.4100E+02	9.9600E-02	1.9862E+00	59	1.	-1.86
110	4.1100E+02	9.4100E-02	1.8765E+00	50	1.	-0.29
111	4.1180E+02	9.4000E-02	1.8745E+00	48	5.	-0.32
112	4.1200E+02	9.2500E-02	1.8446E+00	28	5.	-1.89
113	4.8300E+02	8.6700E-02	1.7290E+00	56	1.	-1.82
114	4.9600E+02	8.6650E-02	1.7280E+00	60	1.	-0.80
115	4.9900E+02	8.3400E-02	1.6631E+00	59	1.	-4.29
116	5.1100E+02	8.6400E-02	1.7230E+00	57	1.	0.16
117	6.0000E+02	8.0548E-02	1.6063E+00	89	1.	-0.00
118	6.0000E+02	8.0548E-02	1.6063E+00	91	1.	-0.00
119	6.2200E+02	8.3100E-02	1.6572E+00	59	1.	4.86
120	6.5000E+02	8.0500E-02	1.6053E+00	51	1.	3.63
121	6.6200E+02	7.7643E-02	1.5564E+00	57	1.	0.00
122	6.6200E+02	7.7100E-02	1.5375E+00	57	1.	0.08
123	6.6200E+02	7.7250E-02	1.5405E+00	56	1.	0.27
124	6.6400E+02	7.7000E-02	1.5355E+00	56	1.	0.00
125	7.0000E+02	7.5122E-02	1.4981E+00	89	1.	0.09
126	7.9600E+02	7.0700E-02	1.4099E+00	56	1.	-0.25
127	8.0000E+02	7.0717E-02	1.4102E+00	90	1.	-0.30
128	8.0000E+02	7.0718E-02	1.4102E+00	89	1.	0.00
129	9.0000E+02	6.6851E-02	1.3331E+00	89	1.	0.00
130	1.0000E+03	6.3571E-02	1.2677E+00	89	1.	0.00
131	1.0000E+03	6.3571E-02	1.2677E+00	90	1.	0.00

82 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR NITROGEN

Z = 7

CONVERSION CONSTANT IS 2.526E+01

	X-EDGE L EDGES M EDGES	0.492 0. 0.	CM2/GM	BURNS/AT	SOURCE	WEIGHT	DIFF
1	5.2490E-01	1.7200E+04	4.0036E+05	47	5.	-12.30	
2	6.7670E-01	9.1000E+03	2.1166E+05	47	5.	-7.77	
3	7.7800E-01	6.5500E+03	1.5235E+05	47	5.	-2.82	
4	8.5200E-01	5.2882E+03	1.2303E+05	37	2.	0.56	
5	8.5300E-01	5.3000E+03	1.2327E+05	29	3.	1.11	
6	9.2900E-01	4.0400E+03	9.3968E+04	47	5.	-2.70	
7	9.3000E-01	4.5143E+03	1.0500E+05	37	2.	9.05	
8	9.3200E-01	4.4700E+03	1.0397E+05	29	3.	8.61	
9	1.0000E+00	3.1815E+03	7.4000E+04	90	1.	-6.50	
10	1.0000E+00	3.0925E+03	7.1930E+04	90	1.	-8.92	
11	1.0000E+00	3.3028E+03	7.6821E+04	10	1.	-2.73	
12	1.0120E+00	3.4223E+03	7.9600E+04	37	2.	4.13	
13	1.0140E+00	3.4300E+03	7.9780E+04	29	3.	4.93	
14	1.2540E+00	1.8000E+03	4.1867E+04	47	5.	-1.65	
15	1.2540E+00	1.8229E+03	4.2400E+04	37	2.	-0.39	
16	1.2600E+00	1.8300E+03	4.2565E+04	29	3.	0.43	
17	1.4870E+01	1.1210E+03	2.6074E+04	47	5.	-2.46	
18	1.4870E+00	1.1479E+03	2.6700E+04	37	2.	-0.12	
19	1.4900E+00	1.1500E+03	2.6748E+04	29	3.	0.61	
20	1.5000E+00	1.0558E+03	2.4558E+04	90	1.	-5.93	
21	1.5000E+00	1.0550E+03	2.4538E+04	90	1.	-6.00	
22	1.5000E+00	1.0920E+03	2.5400E+04	10	1.	-2.70	
23	1.5560E+00	9.8100E+02	2.2817E+04	29	3.	-2.96	
24	1.5570E+00	9.6735E+02	2.2500E+04	37	2.	-4.13	
25	2.0300E+00	4.7574E+02	1.1665E+04	90	1.	-3.72	
26	2.0000E+00	4.7617E+02	1.1075E+04	90	1.	-3.63	
27	2.0000E+00	4.7376E+02	1.1019E+04	10	1.	-4.12	
28	2.2950E+00	3.1987E+02	7.4400E+03	37	2.	-3.01	
29	2.2980E+00	3.1800E+02	7.3965E+03	29	3.	-2.95	
30	2.9840E+00	1.4876E+02	3.4600E+03	37	2.	-1.80	
31	2.9970E+00	1.4900E+02	3.4616E+03	29	3.	-0.96	
32	3.0000E+00	1.4740E+02	3.4285E+03	90	1.	-1.15	
33	3.0000E+00	1.4744E+02	3.4295E+03	90	1.	-1.12	
34	3.0000E+00	1.4464E+02	3.3643E+03	10	1.	-3.00	
35	3.4440E+00	9.9745E+01	2.3200E+03	37	2.	1.80	
36	4.0000E+00	6.1936E+01	1.4406E+03	90	1.	-0.45	
37	4.5090E+00	4.3110E+01	1.0027E+03	10	1.	0.34	
38	4.5110E+00	4.4283E+01	1.0301E+03	37	2.	3.21	
39	4.9352E+00	3.2706E+01	7.6071E+02	10	1.	0.34	
40	5.0000E+00	3.0536E+01	7.1026E+02	10	1.	-2.28	
41	5.4720E+00	2.4267E+01	5.6444E+02	10	1.	-0.63	
42	5.4750E+00	2.5151E+01	5.6500E+02	37	2.	3.16	
43	5.8950E+00	1.8735E+01	4.3576E+02	10	1.	0.02	
44	5.9470E+00	1.8063E+01	4.2014E+02	10	1.	-0.91	
45	6.4000E+00	1.4366E+01	3.3276E+02	10	1.	-1.27	
46	6.4040E+00	1.5048E+01	3.5000E+02	37	2.	4.15	
47	6.4900E+00	1.7007E+01	3.2114E+02	10	1.	-0.47	
48	6.9250E+00	1.1222E+01	2.6131E+02	10	1.	-0.98	
49	7.0580E+00	1.0512E+01	2.4682E+02	10	1.	-0.65	
50	7.4720E+00	8.8683E+00	2.0627E+02	10	1.	-0.96	
51	7.6490E+00	8.2092E+00	1.9094E+02	10	1.	-1.46	
52	8.0000E+00	7.3433E+00	1.7080E+02	90	1.	1.18	
53	8.0003E+00	7.3390E+00	1.7070E+02	90	1.	1.12	
54	8.0000E+00	7.1541E+00	1.6640E+02	10	1.	-1.43	
55	8.0410E+00	6.9912E+00	1.6261E+02	10	1.	-2.13	
56	8.0490E+00	7.3089E+00	1.7000E+02	37	2.	2.59	
57	8.2650E+00	6.4434E+00	1.4987E+02	10	1.	-1.78	
58	8.6310E+00	5.6459E+00	1.3132E+02	10	1.	-1.63	
59	8.9050E+00	5.1080E+00	1.1881E+02	10	1.	-2.05	
60	9.5720E+00	4.1437E+00	9.6580E+01	10	1.	-1.01	
61	1.0000E+01	3.7457E+00	8.7123E+01	10	1.	2.08	
62	1.0000E+01	3.7771E+00	8.7954E+01	89	1.	2.94	
63	1.0000E+01	3.7796E+00	8.6517E+01	90	1.	1.37	
64	1.5000E+01	1.1685E+00	2.7179E+01	90	1.	1.30	
65	1.5000E+01	1.1698E+00	2.7209E+01	90	1.	1.41	
66	1.5000E+01	1.1667E+00	2.7136E+01	10	1.	1.14	
67	1.7444E+01	8.0600E-01	1.8747E+01	10	1.	2.25	
68	1.9608E+01	6.1889E-01	1.4395E+01	10	1.	2.28	
69	2.0000E+01	5.6216E-01	1.3076E+01	10	1.	-3.14	

70	2.0000E+01	5.8450E-01	1.3595E+01	90	1.	0.71
71	2.0000E+01	5.8735E-01	1.3661E+01	90	1.	1.20
72	2.0169E+01	5.8768E-01	1.3669E+01	10	1.	3.10
73	2.1125E+01	5.3596E-01	1.2466E+01	10	1.	3.50
74	2.2105E+01	4.9455E-01	1.1503E+01	10	1.	4.42
75	2.2724E+01	4.7069E-01	1.0948E+01	10	1.	4.68
76	2.3819E+01	4.3462E-01	1.0109E+01	10	1.	5.16
77	2.4942E+01	4.0668E-01	9.4592E+00	10	1.	6.30
78	3.0000E+01	2.9543E-01	6.8715E+00	90	1.	-0.12
79	3.0000E+01	2.9620E-01	6.8895E+00	90	1.	0.14
80	4.0000E+01	2.2197E-01	5.1629E+00	10	1.	-1.15
81	4.0000E+01	2.2737E-01	5.1954E+00	90	1.	-0.53
82	5.0000E+01	1.9546E-01	4.5462E+00	90	1.	-0.30
83	6.0000E+01	1.8053E-01	4.1991E+00	90	1.	-0.14
84	6.0000E+01	1.8071E-01	4.2052E+00	90	1.	-0.04
85	8.0000E+01	1.6349E-01	3.8027E+00	90	1.	-0.04
86	8.6540E+01	1.5900E-01	3.6982E+00	28	5.	-0.29
87	1.2300E+02	1.4900E-01	3.4656E+00	28	5.	-0.03
88	1.5000E+02	1.3520E-01	3.1447E+00	90	1.	-0.03
89	3.0000E+02	1.0674E-01	2.4826E+00	90	1.	-0.00
90	4.0000E+02	9.5498E-02	2.2212E+00	90	1.	-0.00
91	5.0000E+02	8.7142E-02	2.0269E+00	90	1.	-0.00
92	6.0000E+02	8.0581E-02	1.8743E+00	90	1.	-0.00
93	6.0000E+02	8.0581E-02	1.8743E+00	89	1.	-0.00
94	6.6200E+02	7.7077E-02	1.7926E+00	89	1.	0.00
95	7.0000E+02	7.5156E-02	1.7481E+00	89	1.	0.00
96	8.0000E+02	7.0793E-02	1.6457E+00	90	1.	-0.00
97	8.0000E+02	7.0754E-02	1.6457E+00	89	1.	0.00
98	9.0000E+02	6.6875E-02	1.5555E+00	89	1.	0.00
99	1.0000E+03	6.3585E-02	1.4789E+00	90	1.	-0.00
100	1.0000E+03	6.3585E-02	1.4790E+00	89	1.	0.00

98 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR OXYGEN

Z = 8

CONVERSION CONSTANT IS 2.657E+01

	K-EDGE	0.532					
	L-EDGES	0.	0.	0.	0.	0.	
	M-EDGES	0.	0.	0.	0.	0.	
	KEV	CM2/GH	BARNs/AT	SOURCE	WEIGHT	DIFF	
1	6.7670E-01	1.2620E+04	3.3527E+05	47	5.	-2.59	
2	7.7800E-01	8.8500E+03	2.3512E+05	47	5.	-1.11	
3	9.2900E-01	5.5600E+03	1.4771E+05	47	5.	-0.56	
4	9.3000E-01	5.4579E+03	1.4500E+05	37	2.	-2.11	
5	9.3200E-01	5.5100E+03	1.4638E+05	29	3.	-0.61	
6	9.3220E-01	5.3400E+03	1.4187E+05	32	1.	-3.62	
7	1.0000E+00	4.6313E+03	1.2304E+05	10	1.	0.70	
8	1.0120E+00	4.3287E+03	1.1500E+05	37	2.	-2.85	
9	1.0140E+00	4.3400E+03	1.1530E+05	29	3.	-2.09	
10	1.2540E+00	2.5400E+03	6.7480E+04	47	5.	0.64	
11	1.2540E+00	2.5400E+03	6.7480E+04	1	1.	0.64	
12	1.2540E+00	2.5106E+03	6.6700E+04	37	2.	-0.52	
13	1.2560E+00	2.5200E+03	6.6949E+04	29	3.	0.27	
14	1.2560E+00	2.4800E+03	6.5086E+04	32	1.	-1.32	
15	1.4870E+00	1.6040E+03	4.2613E+04	47	5.	-0.16	
16	1.4870E+00	1.6110E+03	4.2800E+04	37	2.	0.28	
17	1.4870E+00	1.5400E+03	4.0913E+04	32	1.	-4.14	
18	1.4870E+00	1.5850E+03	4.2109E+04	1	1.	-1.34	
19	1.4900E+00	1.6100E+03	4.2773E+04	29	3.	0.76	
20	1.5000E+00	1.5786E+03	4.1938E+04	10	1.	0.55	
21	1.5560E+00	1.3800E+03	3.6662E+04	29	3.	-2.67	
22	1.5570E+00	1.3799E+03	3.6660E+04	37	2.	-2.51	
23	1.7780E+00	9.7100E+02	2.5797E+04	6	1.	-0.82	
24	1.7780E+00	9.7600E+02	2.5929E+04	1	1.	-0.31	
25	2.0000E+00	6.9329E+02	1.8419E+04	10	1.	-1.83	
26	2.2930E+00	4.7600E+02	1.2646E+04	1	1.	0.02	
27	2.3950E+00	4.1300E+02	1.0972E+04	1	1.	-1.60	
28	2.6380E+00	2.5800E+02	6.8545E+03	1	1.	0.28	
29	2.9840E+00	2.1992E+02	5.8400E+03	37	2.	-1.27	
30	2.9840E+00	2.2210E+02	5.8979E+03	1	1.	-0.29	
31	2.9910E+00	2.2100E+02	5.8713E+03	6	1.	-0.07	
32	2.9910E+00	2.2900E+02	5.8447E+03	29	3.	-0.52	
33	3.0000E+00	2.1747E+02	5.7776E+03	10	1.	-0.81	
34	3.1510E+00	1.8880E+02	5.0158E+03	1	1.	-0.32	
35	3.4440E+00	1.5583E+02	4.1400E+03	37	2.	7.21	
36	3.4440E+00	1.4100E+02	3.7459E+03	1	1.	-2.99	
37	3.6620E+00	1.1680E+02	3.1030E+03	1	1.	-3.55	
38	4.5090E+00	6.3989E+01	1.7990E+03	10	1.	-1.24	
39	4.5110E+00	6.9259E+01	1.8430E+03	37	2.	7.04	
40	4.9320E+00	4.9309E+01	1.3100E+03	10	1.	-0.18	
41	5.0000E+00	4.7140E+01	1.2524E+05	10	1.	-0.54	
42	5.4120E+00	3.6594E+01	9.7220E+02	10	1.	-1.60	
43	5.4280E+00	3.5500E+01	9.4313E+02	6	1.	-3.68	
44	5.8950E+00	2.8553E+01	7.5056E+02	10	1.	-0.31	
45	5.9470E+00	2.7224E+01	7.2326E+02	10	1.	-2.37	
46	6.4000E+00	2.1704E+01	5.7660E+02	10	1.	-2.37	
47	6.4030E+00	2.1800E+01	5.7916E+02	14	1.	-1.80	
48	6.4070E+00	2.2200E+01	5.8979E+02	18	1.	0.20	
49	6.4900E+00	2.0664E+01	5.5733E+02	10	1.	-2.01	
50	6.9250E+00	1.7180E+01	4.5643E+02	10	1.	-1.47	
51	7.0580E+00	1.6311E+01	4.3334E+02	10	1.	-0.82	
52	7.4720E+00	1.5790E+01	3.6637E+02	10	1.	-0.13	
53	7.4770E+00	1.3700E+01	3.6397E+02	14	1.	-0.58	
54	7.6490E+00	1.2772E+01	3.3931E+02	10	1.	-0.64	
55	8.0000E+00	1.1142E+01	2.9600E+02	10	1.	-0.51	
56	8.0410E+00	1.1018E+01	2.9271E+02	10	1.	-0.15	
57	8.0470E+00	1.1100E+01	2.9489E+02	14	1.	0.83	
58	8.0480E+00	1.1819E+01	3.1400E+02	37	2.	7.40	
59	8.0560E+00	1.1100E+01	2.9489E+02	18	1.	1.8	
60	8.0670E+00	1.1630E+01	3.0818E+02	6	1.	6.18	
61	8.2650E+00	1.0227E+01	2.7171E+02	10	1.	0.89	
62	8.6310E+00	8.8132E+00	2.3430E+02	10	1.	-0.60	
63	8.6380E+00	9.0500E+00	2.4043E+02	14	1.	2.26	
64	8.9050E+00	8.0943E+00	2.1504E+02	10	1.	0.41	
65	9.5720E+00	6.4810E+00	1.7218E+02	10	1.	0.20	
66	1.0000E+01	5.8686E+00	1.5591E+02	10	1.	3.58	
67	1.0000E+01	5.8727E+00	1.5602E+02	89	1.	3.65	
68	1.0000E+01	5.9175E+00	1.5721E+02	90	1.	4.44	
69	1.2699E+01	2.7660E+00	7.3484E+01	21	1.	-0.31	

70	1.3350E+01	2.3910E+00	6.3522E+01	21	1.	-0.17
71	1.4080E+01	2.0580E+00	5.4675E+01	21	1.	0.02
72	1.4900E+01	1.7610E+00	4.6784E+01	21	1.	0.28
73	1.5000E+01	1.7711E+00	4.7052E+01	10	1.	2.73
74	1.5830E+01	1.4960E+00	3.9744E+01	21	1.	0.75
75	1.6880E+01	1.2640E+00	3.3581E+01	21	1.	1.22
76	1.7444E+01	1.1596E+00	3.0805E+01	10	1.	1.25
77	1.8080E+01	1.0610E+00	2.8186E+01	21	1.	1.60
78	1.9460E+01	8.8300E-01	2.3455E+01	21	1.	1.53
79	1.9608E+01	8.5377E-01	2.2682E+01	10	1.	-0.02
80	2.0000E+01	8.2743E-01	2.1982E+01	90	1.	1.59
81	2.0000E+01	7.9825E-01	2.1207E+01	10	1.	-1.99
82	2.0169E+01	7.9926E-01	2.1234E+01	10	1.	0.14
83	2.1070E+01	7.2900E-01	1.9367E+01	21	1.	1.26
84	2.1125E+01	7.1947E-01	1.9114E+01	10	1.	0.56
85	2.2105E+01	6.5378E-01	1.7369E+01	10	1.	1.29
86	2.2724E+01	6.1531E-01	1.6347E+01	10	1.	1.30
87	2.2980E+01	5.9309E-01	1.5754E+01	21	1.	0.01
88	2.5819E+01	5.5765E-01	1.4815E+01	10	1.	1.42
89	2.4942E+01	5.1030E-01	1.3557E+01	10	1.	1.82
90	2.5280E+01	4.9100E-01	1.3044E+01	21	1.	0.57
91	2.8080E+01	4.0500E-01	1.0760E+01	21	1.	0.27
92	3.0000E+01	3.5324E-01	9.3846E+00	90	1.	-2.80
93	3.0320E+01	3.4800E-01	9.2453E+00	21	1.	-2.64
94	3.2950E+01	3.0700E-01	8.1561E+00	21	1.	-3.05
95	3.6080E+01	2.7800E-01	7.3885E+00	21	1.	-1.57
96	3.9880E+01	2.4400E-01	6.4823E+00	21	1.	-3.94
97	4.0000E+01	2.4290E-01	6.4532E+00	90	1.	-4.10
98	4.0000E+01	2.5013E-01	6.6453E+00	10	1.	-1.24
99	4.0120E+01	2.5600E-01	6.8011E+00	28	5.	1.57
100	5.0510E+01	2.0900E-01	5.5525E+00	21	1.	-0.31
101	6.0300E+01	1.8905E-01	5.0220E+00	90	1.	-0.58
102	6.8840E+01	1.7500E-01	4.7555E+00	28	5.	0.75
103	8.0000E+01	1.6725E-01	4.4432E+00	90	1.	-0.26
104	8.6540E+01	1.5404E-01	4.0915E+00	28	5.	-5.42
105	1.0000E+02	1.5504E-01	4.1188E+00	10	1.	-0.08
106	1.0000E+02	1.5486E-01	4.1143E+00	90	1.	-0.19
107	1.2300E+02	1.4210E-01	3.7725E+00	28	5.	-1.81
108	1.5000E+02	1.3627E-01	3.6202E+00	10	1.	0.11
109	3.0000E+02	1.0696E-01	2.8416E+00	90	1.	-0.01
110	4.0000E+02	9.5639E-02	2.5408E+00	90	1.	-0.00
111	4.0000E+02	9.5642E-02	2.5409E+00	10	1.	0.10
112	5.0000E+02	8.7231E-02	2.3175E+00	90	1.	-0.00
113	6.0000E+02	8.0665E-02	2.1430E+00	90	1.	-0.00
114	6.0000E+02	8.0665E-02	2.1430E+00	89	1.	-0.00
115	6.6200E+02	7.7144E-02	2.0495E+00	89	1.	0.00
116	7.0000E+02	7.5215E-02	1.9982E+00	89	1.	0.00
117	8.0000E+02	7.0793E-02	1.8808E+00	90	1.	-0.00
118	8.0000E+02	7.0794E-02	1.8808E+00	89	1.	0.00
119	9.0000E+02	6.6922E-02	1.7779E+00	89	1.	0.00
120	1.0000E+03	6.3639E-02	1.6907E+00	90	1.	-0.00
121	1.0000E+03	6.3639E-02	1.6907E+00	89	1.	0.00

119 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR FLORINE
CONVERSION CONSTANT IS 3.155E+01

Z = 9

K-EDGE 0.586

	K-EDGES	0.	0.	0.	0.	0.	0.	0.
	KEV	CM2/GM	BARNs/AT	SOURCE	WEIGHT	DIFF		
1	7.7800E-01	1.1000E+04	3.4703E+05	47	5.	2.52		
2	9.2900E-01	6.8500E+03	2.1611E+05	47	5.	0.05		
3	1.0000E+00	5.8336E+03	1.8404E+05	10	1.	2.67		
4	1.2540E+00	3.1400E+03	9.9062E+04	47	5.	-1.98		
5	1.2560E+00	3.1400E+03	9.9062E+04	32	1.	-1.58		
6	1.4870E+00	2.0300E+03	6.4043E+04	47	5.	-2.44		
7	1.4870E+00	2.0550E+03	6.4201E+04	32	1.	-2.20		
8	1.5000E+00	2.0174E+03	6.3645E+04	10	1.	-0.89		
9	2.0000E+00	9.0599E+02	2.8582E+04	10	1.	-5.88		
10	3.0000E+00	2.9147E+02	9.1953E+03	10	1.	-3.70		
11	4.0000E+00	1.2433E+02	3.9225E+03	89	1.	-5.14		
12	4.5090E+00	8.8239E+01	2.7836E+03	10	1.	-3.83		
13	4.9320E+00	6.7734E+01	2.1369E+03	10	1.	-3.64		
14	5.0000E+00	6.4748E+01	2.0427E+03	10	1.	-4.07		
15	5.0000E+00	6.3141E+01	1.9920E+03	89	1.	-6.45		
16	5.4120E+00	5.2688E+01	1.6622E+03	10	1.	-0.85		
17	5.8950E+00	3.9910E+01	1.2591E+03	10	1.	-2.82		
18	5.9470E+00	3.8440E+01	1.2127E+03	10	1.	-3.90		
19	6.0000E+00	3.7243E+01	1.1750E+03	89	1.	-4.37		
20	6.4040E+00	3.0659E+01	9.6725E+02	10	1.	-4.08		
21	6.4900E+00	2.9476E+01	9.2992E+02	10	1.	-5.76		
22	6.9250E+00	2.4281E+01	7.6603E+02	10	1.	-3.35		
23	7.0580E+00	2.3058E+01	7.2743E+02	10	1.	-2.74		
24	7.4720E+00	1.9619E+01	6.1894E+02	10	1.	-1.58		
25	7.6490E+00	1.8008E+01	5.6811E+02	10	1.	-5.00		
26	8.0000E+00	1.5522E+01	4.8970E+02	10	1.	-4.21		
27	8.0300E+00	1.6051E+01	5.0638E+02	89	1.	-0.94		
28	8.0410E+00	1.5743E+01	4.9666E+02	10	1.	-1.30		
29	8.2650E+00	1.4595E+01	4.6045E+02	10	1.	-0.42		
30	8.6310E+00	1.2478E+01	3.9366E+02	10	1.	-2.75		
31	8.6690E+00	1.2590E+01	3.9719E+02	30	2.	-0.55		
32	8.9050E+00	1.1559E+01	3.5835E+02	10	1.	-2.58		
33	9.2920E+00	1.0220E+01	3.2242E+02	30	2.	-0.18		
34	9.5720E+00	9.0652E+00	2.8599E+02	10	1.	-3.08		
35	9.9150E+00	8.5560E+00	2.6993E+02	30	2.	.81		
36	1.0000E+01	9.2026E+00	2.5878E+02	10	1.	0.16		
37	1.0000E+01	8.1722E+00	2.5782E+02	89	1.	-0.21		
38	1.0570E+01	7.0560E+00	2.2260E+02	30	2.	2.16		
39	1.1250E+01	5.8560E+00	1.8475E+02	30	2.	2.56		
40	1.1950E+01	4.9390E+00	1.5582E+02	30	2.	4.11		
41	1.3430E+01	3.5420E+00	1.1174E+02	50	2.	5.52		
42	1.4180E+01	3.0020E+00	9.4708E+01	30	2.	4.89		
43	1.4980E+01	2.5360E+00	8.0006E+01	30	2.	3.86		
44	1.5000E+01	2.4468E+00	7.7192E+01	10	1.	0.59		
45	1.5810E+01	2.2320E+00	7.0415E+01	30	2.	6.85		
46	1.6650E+01	1.8940E+00	5.9752E+01	30	2.	5.07		
47	1.7444E+01	1.5840E+00	4.9972E+01	10	1.	0.11		
48	1.7520E+01	1.6410E+00	5.1771E+01	30	2.	4.97		
49	1.9310E+01	1.2250E+00	3.8647E+01	30	2.	1.97		
50	1.9608E+01	1.1571E+00	3.6505E+01	10	1.	0.29		
51	2.0000E+01	1.0631E+00	3.5540E+01	10	1.	-2.98		
52	2.0169E+01	1.0694E+00	3.5737E+01	10	1.	-0.22		
53	2.0250E+01	1.1100E+00	3.5019E+01	30	2.	4.66		
54	2.1125E+01	9.5692E-01	3.0189E+01	10	1.	0.66		
55	2.2105E+01	8.6233E-01	2.7205E+01	10	1.	1.68		
56	2.2724E+01	8.1592E-01	2.5741E+01	10	1.	2.36		
57	2.3819E+01	7.2990E-01	2.3627E+01	10	1.	5.06		
58	2.4244E+01	7.0190E-01	2.2144E+01	30	2.	3.23		
59	2.4942E+01	6.4983E-01	2.0501E+01	10	1.	2.01		
60	2.7490E+01	5.2409E-01	1.6531E+01	30	2.	1.41		
61	2.8620E+01	4.8260E-01	1.5225E+01	30	2.	1.24		
62	3.0000E+01	4.2054E-01	1.3267E+01	90	1.	-3.53		
63	3.0970E+01	4.1720E-01	1.3162E+01	30	2.	1.54		
64	3.5900E+01	3.2450E-01	1.0237E+01	30	2.	0.81		
65	3.7320E+01	3.0350E-01	9.5749E+00	30	2.	-0.31		
66	4.0000E+01	2.7462E-01	8.6639E+00	90	1.	-1.20		
67	4.0000E+01	2.7387E-01	8.6400E+00	90	1.	-1.47		
68	5.0000E+01	2.1768E-01	6.8675E+00	90	1.	-0.82		
69	6.0000E+01	1.9014E-01	5.9987E+00	90	1.	-0.56		

70	8.0000E+01	1.6341E-01	5.1552E+30	90	1.	-0.29
71	1.0000E+02	1.4946E-01	4.7152E+00	90	1.	-0.16
72	1.0000E+02	1.4950E-01	4.7166E+00	10	1.	-0.13
73	1.5000E+02	1.2983E-01	4.0960E+00	90	1.	-0.05
74	2.0000E+02	1.1765E-01	3.7115E+00	90	1.	-0.32
75	3.0000E+02	1.0151E-01	3.2025E+00	90	1.	-0.01
76	4.0000E+02	9.0690E-02	2.8611E+00	90	1.	-0.00
77	4.0000E+02	9.0690E-02	2.8611E+00	90	1.	-0.00
78	4.0000E+02	9.0691E-02	2.8611E+00	10	1.	-0.00
79	5.0000E+02	8.2721E-02	2.6097E+00	90	1.	-0.00
80	6.0000E+02	7.6464E-02	2.4123E+00	90	1.	-0.00
81	6.0000E+02	7.6463E-02	2.4123E+00	89	1.	-0.00
82	6.6200E+02	7.3125E-02	2.3070E+00	89	1.	0.00
83	7.0000E+02	7.1296E-02	2.2493E+00	89	1.	0.01
84	8.0000E+02	6.7103E-02	2.1170E+00	90	1.	-0.00
85	8.0000E+02	6.7104E-02	2.1170E+00	89	1.	0.00
86	9.0000E+02	6.3424E-02	2.0009E+00	89	1.	0.00
87	1.0000E+03	6.0503E-02	1.9025E+00	90	1.	-0.00
88	1.0000E+03	6.0504E-02	1.9025E+00	89	1.	0.00

88 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR NEON

Z = 10

CONVERSION CONSTANT IS 3.351E+01

K-EDGE	0.867						
L-EDGES	0.	0.019	0.019	0.	0.	0.	
M-EDGES	0.	0.	0.	0.	0.	0.	
KEV	CM2/GM	BARNs/AT	SOURCE	WEIGHT	DIFF		
1	9.2900E-01	5.7700E+03	3.242E+05	47	5.	6.52	
2	9.3000E-01	5.8172E+03	3.2900E+05	37	2.	7.33	
3	9.3200E-01	5.7900E+03	3.2800E+05	29	3.	7.62	
4	1.0000E+00	7.8199E+03	2.6206E+05	10	1.	2.80	
5	1.0000E+00	8.1063E+03	2.7166E+05	90	1.	6.57	
6	1.0120E+00	7.6986E+03	2.5000E+05	37	2.	4.32	
7	1.0140E+00	7.7000E+03	2.5605E+05	29	3.	4.87	
8	1.2540E+00	4.3100E+03	1.4444E+05	1	1.	0.69	
9	1.2540E+00	4.3080E+03	1.4437E+05	47	5.	0.64	
10	1.2540E+00	4.3267E+03	1.4500E+05	37	2.	1.09	
11	1.2560E+00	4.3200E+03	1.4477E+05	29	3.	1.33	
12	1.4870E+00	2.7760E+03	9.3031E+04	47	5.	-0.02	
13	1.4870E+00	2.7500E+03	9.2160E+04	1	1.	-0.96	
14	1.4870E+00	2.7542E+03	9.2300E+04	37	2.	-0.80	
15	1.4900E+00	2.7600E+03	9.2495E+04	29	3.	-0.09	
16	1.5000E+00	2.6892E+03	9.0121E+04	90	1.	-0.98	
17	1.5000E+00	2.6934E+03	9.0261E+04	10	1.	-0.83	
18	1.5560E+00	2.4200E+03	8.1100E+04	29	3.	-1.72	
19	1.5570E+00	2.4170E+03	8.1000E+04	37	2.	-1.68	
20	1.5900E+00	2.2760E+03	7.6073E+04	71	1.	-2.34	
21	1.6000E+00	2.2530E+03	7.5504E+04	71	1.	-1.43	
22	1.6100E+00	2.2080E+03	7.3996E+04	71	1.	-1.78	
23	1.6210E+00	2.1680E+03	7.2655E+04	71	1.	-1.79	
24	1.6310E+00	2.1290E+03	7.1348E+04	71	1.	-1.96	
25	1.6420E+00	2.0900E+03	7.0041E+04	71	1.	-2.01	
26	1.6530E+00	2.0500E+03	6.8701E+04	71	1.	-2.15	
27	1.6870E+00	1.9406E+03	6.5014E+04	71	1.	-2.23	
28	1.6980E+00	1.9080E+03	6.3942E+04	71	1.	-2.16	
29	1.7100E+00	1.8720E+03	6.2735E+04	71	1.	-2.18	
30	1.7220E+00	1.8430E+03	6.1764E+04	71	1.	-1.88	
31	1.7340E+00	1.8180E+03	6.0926E+04	71	1.	-1.40	
32	1.7460E+00	1.7820E+03	5.9719E+04	71	1.	-1.55	
33	1.7580E+00	1.7580E+03	5.8245E+04	71	1.	-2.21	
34	1.7710E+00	1.7120E+03	5.7373E+04	71	1.	-1.76	
35	1.7780E+00	1.7279E+03	5.7876E+04	1	1.	0.15	
36	1.7970E+00	1.6450E+03	5.5128E+04	71	1.	-1.86	
37	1.8100E+00	1.6170E+03	5.4190E+04	71	1.	-1.65	
38	1.8230E+00	1.5900E+03	5.3285E+04	71	1.	-1.43	
39	1.8370E+00	1.5640E+03	5.2414E+04	71	1.	-1.04	
40	1.8500E+00	1.5270E+03	5.1174E+04	71	1.	-1.54	
41	1.8640E+00	1.4970E+03	5.0168E+04	71	1.	-1.51	
42	1.8780E+00	1.4720E+03	4.9330E+04	71	1.	-1.20	
43	1.8930E+00	1.4340E+03	4.8057E+04	71	1.	-1.69	
44	1.9070E+00	1.3920E+03	4.6649E+04	71	1.	-2.67	
45	1.9370E+00	1.3380E+03	4.4840E+04	71	1.	-2.46	
46	1.9520E+00	1.3130E+03	4.4002E+04	71	1.	-2.29	
47	1.9590E+00	1.2870E+03	4.3131E+04	71	1.	-2.12	
48	1.9840E+00	1.2600E+03	4.2226E+04	71	1.	-2.08	
49	2.0000E+00	1.2538E+03	4.2017E+04	90	1.	-0.45	
50	2.0000E+00	1.2492E+03	4.1365E+04	10	1.	-0.81	
51	2.0000E+00	1.2350E+03	4.1380E+04	71	1.	-1.94	
52	2.0490E+00	1.1380E+03	3.8137E+04	71	1.	-3.33	
53	2.0660E+00	1.1190E+03	3.7501E+04	71	1.	-2.73	
54	2.0840E+00	1.0900E+03	3.6529E+04	71	1.	-2.94	
55	2.1010E+00	1.0700E+03	3.5858E+04	71	1.	-2.53	
56	2.1190E+00	1.0420E+03	3.4920E+04	71	1.	-2.80	
57	2.1360E+00	1.0160E+03	3.4049E+04	71	1.	-2.84	
58	2.1750E+00	9.6600E+02	3.2373E+04	71	1.	-3.10	
59	2.2140E+00	9.1900E+02	3.0798E+04	71	1.	-3.13	
60	2.2930E+00	7.6986E+02	2.5800E+04	37	2.	-10.52	
61	2.2930E+00	8.6500E+02	2.8988E+04	1	1.	0.54	
62	2.2960E+00	8.3100E+02	2.7849E+04	71	1.	-3.06	
63	2.2980E+00	7.7000E+02	2.5805E+04	29	3.	-9.96	
64	2.3170E+00	8.0800E+02	2.7076E+04	71	1.	-3.32	
65	2.3620E+00	7.6600E+02	2.5671E+04	71	1.	-3.30	
66	2.3950E+00	7.6500E+02	2.5570E+04	1	1.	0.11	
67	2.4070E+00	7.3000E+02	2.4464E+04	71	1.	-2.87	
68	2.4310E+00	7.1200E+02	2.3861E+04	71	1.	-2.61	
69	2.4800E+00	6.7400E+02	2.2587E+04	71	1.	-2.54	

70	2.5050E+00	6.5560E+02	2.1951E+04	71	1.	-2.60
71	2.5300E+00	6.3700E+02	2.1347E+04	71	1.	-2.62
72	2.5560E+00	6.1500E+02	2.0610E+04	71	1.	-3.27
73	2.5830E+00	6.0100E+02	2.0141E+04	71	1.	-2.67
74	2.6100E+00	5.8300E+02	1.9538E+04	71	1.	-2.81
75	2.6380E+00	5.7200E+02	1.9169E+04	71	1.	-1.77
76	2.6660E+00	5.5200E+02	1.8499E+04	71	1.	-2.57
77	2.6950E+00	5.3800E+02	1.8030E+04	71	1.	-1.94
78	2.7250E+00	5.2000E+02	1.7427E+04	71	1.	-2.25
79	2.7550E+00	5.0600E+02	1.6957E+04	71	1.	-1.94
80	2.8180E+00	4.7400E+02	1.5885E+04	71	1.	-2.17
81	2.8380E+00	4.7890E+02	1.6019E+04	71	1.	0.61
82	2.8500E+00	4.5900E+02	1.5382E+04	71	1.	-2.25
83	2.8830E+00	4.4600E+02	1.4947E+04	71	1.	-1.92
84	2.9170E+00	4.3100E+02	1.4444E+04	71	1.	-2.08
85	2.9520E+00	4.1900E+02	1.4042E+04	71	1.	-1.59
86	2.9840E+00	4.1600E+02	1.3941E+04	71	1.	0.68
87	2.9840E+00	4.2074E+02	1.4100E+04	37	2.	1.83
88	2.9870E+00	4.0100E+02	1.3639E+04	71	1.	-2.68
89	2.9910E+00	4.2300E+02	1.4176E+04	23	3.	5.04
90	3.0000E+00	4.1123E+02	1.3781E+04	10	1.	1.02
91	3.0240E+00	3.8600E+02	1.2936E+04	71	1.	-2.97
92	3.0610E+00	3.7400E+02	1.2534E+04	71	1.	-2.63
93	3.1000E+00	3.6800E+02	1.2335E+04	71	1.	-0.63
94	3.1390E+00	3.5300E+02	1.1850E+04	71	1.	-1.18
95	3.1510E+00	3.5600E+02	1.1950E+04	71	1.	0.77
96	3.1790E+00	3.5800E+02	1.1927E+04	71	1.	-1.85
97	3.2630E+00	3.1100E+02	1.0422E+04	71	1.	-2.64
98	3.3060E+00	3.0000E+02	1.0054E+04	71	1.	-2.47
99	3.3510E+00	2.9400E+02	9.8927E+03	71	1.	-0.61
100	3.3970E+00	2.8300E+02	9.4841E+03	71	1.	-0.50
101	3.4440E+00	2.7000E+02	9.0484E+03	71	1.	-1.23
102	3.4440E+00	2.7900E+02	9.3500E+03	71	1.	2.06
103	3.4440E+00	2.8198E+02	9.4500E+03	37	2.	3.15
104	3.4920E+00	2.5800E+02	8.5462E+03	71	1.	-1.78
105	3.5420E+00	2.5000E+02	8.3781E+03	71	1.	-0.84
106	3.5940E+00	2.4300E+02	8.1435E+03	71	1.	0.52
107	3.6460E+00	2.3600E+02	7.9090E+03	71	1.	1.75
108	3.6620E+00	2.3100E+02	7.7414E+03	71	1.	0.86
109	3.7010E+00	2.3100E+02	7.7079E+03	71	1.	3.54
110	4.2750E+00	1.5200E+02	5.0939E+03	71	1.	4.10
111	4.4280E+00	1.3600E+02	4.5577E+03	71	1.	3.30
112	4.5080E+00	1.2700E+02	4.2561E+03	71	1.	1.69
113	4.5990E+00	1.2744E+02	4.2707E+03	10	1.	2.10
114	4.5110E+00	1.3010E+02	4.3500E+03	37	2.	4.37
115	4.5920E+00	1.2000E+02	4.0215E+03	71	1.	1.45
116	4.6780E+00	1.1400E+02	3.8204E+03	71	1.	1.78
117	4.7680E+00	1.0800E+02	3.5194E+03	71	1.	1.98
118	4.8620E+00	1.0200E+02	3.4185E+03	71	1.	2.00
119	4.9320E+00	9.7895E+01	3.2807E+03	10	1.	2.10
120	5.0000E+00	9.3575E+01	3.1339E+03	10	1.	1.53
121	5.0600E+00	9.1500E+01	3.0664E+03	71	1.	2.95
122	5.1660E+00	8.5200E+01	2.8553E+03	71	1.	1.98
123	5.2760E+00	8.1100E+01	2.7179E+03	71	1.	3.38
124	5.4120E+00	7.7281E+01	2.5899E+03	10	1.	6.28
125	5.4140E+00	7.5000E+01	2.5134E+03	71	1.	3.25
126	5.4150E+00	7.6031E+01	2.5500E+03	37	2.	4.01
127	5.4200E+00	7.5500E+01	2.5302E+03	71	1.	4.29
128	5.7660E+00	6.5200E+01	2.1181E+03	71	1.	4.98
129	5.8950E+00	5.3130E+01	1.9481E+03	10	1.	3.13
130	5.9040E+00	5.7800E+01	1.9370E+03	71	1.	3.01
131	5.9470E+00	5.6346E+01	1.8885E+03	10	1.	2.61
132	6.4000E+00	1.5192E+01	1.5145E+03	10	1.	2.71
133	6.4040E+00	4.4759E+01	1.5000E+03	37	2.	1.92
134	6.4900E+00	4.3449E+01	1.4561E+03	10	1.	3.09
135	6.9250E+00	3.5700E+01	1.1964E+03	10	1.	2.93
136	7.0580E+00	3.3907E+01	1.1365E+03	10	1.	3.53
137	7.4720E+00	2.8995E+01	9.7135E+02	10	1.	5.06
138	7.6490E+00	2.6535E+01	8.8928E+02	10	1.	3.19
139	8.0000E+00	2.3494E+01	7.8734E+02	89	1.	4.52
140	8.0000E+00	2.2796E+01	7.6396E+02	10	1.	1.41
141	8.0000E+00	2.3145E+01	7.7557E+02	90	1.	2.95
142	8.0000E+00	2.3202E+01	7.7757E+02	90	1.	3.22
143	8.0410E+00	2.3301E+01	7.8086E+02	10	1.	5.28
144	8.0480E+00	2.1992E+01	7.3700E+02	37	2.	-0.37
145	8.0600E+00	2.3300E+01	7.8084E+02	74	1.	6.04
146	8.2650E+00	2.1581E+01	7.2325E+02	10	1.	6.02
147	8.6310E+00	1.8467E+01	6.1886E+02	10	1.	3.48
148	8.9050E+00	1.6737E+01	5.6089E+02	10	1.	3.10

149	8.9300E+00	1.6000E+01	5.3620E+02	74	1.	-0.59
150	9.5720E+00	1.3342E+01	4.4715E+02	10	1.	2.24
151	1.0000E+01	1.1786E+01	3.9499E+02	90	1.	3.03
152	1.0000E+01	1.2060E+01	4.0417E+02	10	1.	5.42
153	1.0000E+01	1.1985E+01	4.0166E+02	89	1.	4.76
154	1.0000E+01	1.1987E+01	4.0175E+02	89	1.	4.78
155	1.5000E+01	3.5079E+00	1.1756E+02	90	1.	2.91
156	1.5000E+01	3.5924E+00	1.2039E+02	10	1.	5.39
157	1.5000E+01	3.5661E+00	1.1951E+02	89	1.	4.62
158	1.7144E+01	2.3031E+00	7.7182E+01	10	1.	4.41
159	1.7480E+01	2.0000E+00	6.7025E+01	8	1.	-8.80
160	1.7480E+01	2.0000E+00	6.7025E+01	76	2.	-8.80
161	1.9608E+01	1.6688E+00	5.5925E+01	10	1.	4.57
162	1.9650E+01	1.6900E+00	5.6636E+01	74	1.	5.51
163	2.0000E+01	1.5472E+00	5.1852E+01	90	1.	2.27
164	2.0000E+01	1.5329E+00	5.1370E+01	10	1.	1.32
165	2.0169E+01	1.5302E+00	5.1281E+01	10	1.	5.46
166	2.1125E+01	1.5638E+00	4.5704E+01	10	1.	4.43
167	2.2100E+01	1.2000E+00	4.0215E+01	74	1.	3.45
168	2.2105E+01	1.2214E+00	4.0932E+01	10	1.	5.35
169	2.2724E+01	1.1596E+00	3.8861E+01	10	1.	7.40
170	2.3819E+01	1.0280E+00	3.4452E+01	10	1.	7.21
171	2.4942E+01	8.9820E-01	3.0101E+01	10	1.	4.86
172	2.5000E+01	8.4000E-01	2.8151E+01	74	1.	-1.39
173	5.0000E+01	5.6888E-01	1.9065E+01	90	1.	0.42
174	4.0000E+01	3.3769E-01	1.1323E+01	10	1.	-0.21
175	4.0000E+01	3.2768E-01	1.0981E+01	90	1.	-3.23
176	6.0000E+01	2.1238E-01	7.1174E+00	90	1.	-1.30
177	1.0000E+02	1.6000E-01	5.3619E+00	10	1.	-0.20
178	1.0000E+02	1.6022E-01	5.3626E+00	90	1.	-0.19
179	1.5000E+02	1.3727E-01	4.6002E+00	10	1.	0.06
180	1.5000E+02	1.3709E-01	4.5935E+00	90	1.	-0.07
181	2.0000E+02	1.2368E-01	4.1447E+00	90	1.	-0.03
182	3.0000E+02	1.0641E-01	3.5661E+00	90	1.	-0.01
183	4.0000E+02	9.4993E-02	3.1834E+00	90	1.	-0.00
184	4.0000E+02	9.4991E-02	3.1834E+00	10	1.	-0.01
185	5.0000E+02	8.6589E-02	2.9018E+00	90	1.	-0.00
186	6.0000E+02	8.0255E-02	2.6818E+00	90	1.	-0.00
187	6.0000E+02	8.0024E-02	2.5818E+00	89	1.	-0.00
188	6.6200E+02	7.6526E-02	2.5646E+00	89	1.	0.21
189	7.0000E+02	7.4610E-02	2.5004E+00	89	1.	0.01
190	8.0000E+02	7.0219E-02	2.3552E+00	89	1.	0.03
191	9.0000E+02	6.6361E-02	2.2239E+00	89	1.	0.00
192	1.0000E+03	5.3090E-02	2.1143E+00	89	1.	0.00

192 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR SODIUM

Z = 11

CONVERSION CONSTANT IS 3.819E+01

K-EDGE	1.072						
L-EDGES	0.	0.031	0.031	0.	0.	0.	
M-EDGES	0.	C.	0.	0.	0.	0.	
KEY	CM2/GM		BARNES/AT	SOURCE	WEIGHT	DIFF	
1	5.0000E-01	4.0511E+03	1.5507E+05	90	1.	-6.18	
2	6.0000E-01	2.6208E+03	1.0007E+05	90	1.	-3.34	
3	8.0000E-01	1.2852E+03	4.9974E+04	90	1.	-0.88	
4	1.0000E+00	7.3469E+02	2.8054E+04	90	1.	0.38	
5	1.0000E+00	7.0884E+02	2.7067E+04	10	1.	-3.15	
6	1.0680E+00	6.1551E+02	2.3505E+04	90	1.	-0.48	
7	1.0690E+00	6.1551E+02	2.3505E+04	90	1.	-0.24	
8	1.0710E+00	5.1865E+02	2.3623E+04	90	1.	0.75	
9	1.0733E+00	5.1865E+02	2.3623E+04	90	1.	9.10	
10	1.0750E+00	5.1865E+02	2.3623E+04	90	1.	8.96	
11	1.5000E+00	3.1716E+03	1.2111E+05	10	1.	-1.97	
12	2.0000E+00	1.5533E+03	5.8548E+04	10	1.	-2.10	
13	2.0000E+00	1.5481E+03	5.9114E+04	90	1.	-1.5	
14	3.0000E+00	5.1510E+02	1.9669E+04	10	1.	-2.81	
15	3.0000E+00	5.1554E+02	1.9686E+04	90	1.	-2.72	
16	4.0000E+00	2.2003E+02	8.7075E+03	90	1.	-3.64	
17	4.5090E+00	1.6309E+02	6.2277E+03	10	1.	-2.62	
18	4.7320E+00	1.2567E+02	4.7967E+03	10	1.	-2.83	
19	5.0000E+00	1.1977E+02	4.5735E+03	10	1.	-3.67	
20	5.0000E+00	1.2082E+02	4.6137E+03	90	1.	-2.81	
21	5.4120E+00	9.8918E+01	3.7772E+03	90	1.	0.44	
22	5.8950E+00	7.4804E+01	2.8564E+03	10	1.	-2.36	
23	5.9470E+00	7.2708E+01	2.7794E+03	10	1.	-2.51	
24	6.0000E+00	7.0523E+01	2.6929E+03	90	1.	-3.05	
25	6.4000E+00	5.8832E+01	2.2465E+03	10	1.	-1.85	
26	6.4900E+00	5.6564E+01	2.1599E+03	10	1.	-1.60	
27	6.9250E+00	4.6304E+01	1.7681E+03	10	1.	-2.18	
28	7.0580E+00	4.3981E+01	1.6794E+03	10	1.	-1.65	
29	7.4720E+00	3.7735E+01	1.4409E+03	10	1.	0.05	
30	7.6490E+00	3.4582E+01	1.3205E+03	10	1.	-1.68	
31	8.0000E+00	2.9703E+01	1.1342E+03	10	1.	-3.47	
32	8.3000E+00	3.0363E+01	1.1594E+03	90	1.	-1.32	
33	8.4241E+00	3.0347E+01	1.1588E+03	10	1.	0.17	
34	8.2650E+00	2.8090E+01	1.0726E+03	10	1.	0.79	
35	8.6310E+00	2.4176E+01	9.2315E+02	10	1.	-1.06	
36	8.9050E+00	2.1870E+01	8.3510E+02	10	1.	-1.60	
37	9.5720E+00	1.7439E+01	6.6589E+02	10	1.	-2.39	
38	1.0000E+01	1.5702E+01	5.9950E+02	10	1.	0.28	
39	1.0000E+01	1.5593E+01	5.9542E+02	89	1.	-0.42	
40	1.0000E+01	1.5611E+01	5.9612E+02	90	1.	-0.30	
41	1.5000E+01	4.6883E+00	1.7502E+02	10	1.	2.02	
42	1.5000E+01	4.6354E+00	1.7790E+02	93	1.	0.87	
43	1.7444E+01	2.9967E+00	1.1443E+02	10	1.	2.05	
44	1.960CE+01	2.1545E+00	8.2269E+01	10	1.	2.72	
45	2.0000E+01	1.9841E+00	7.5762E+01	10	1.	0.02	
46	2.0000E+01	2.1058E+00	7.6590E+01	90	1.	1.12	
47	2.0169E+01	1.9668E+00	7.5101E+01	10	1.	1.56	
48	2.1125E+01	1.7481E+00	6.6750E+01	10	1.	2.86	
49	2.2105E+01	1.5583E+00	5.9504E+01	10	1.	3.99	
50	2.2724E+01	1.4825E+00	5.6609E+01	10	1.	6.69	
51	2.3819E+01	1.3062E+00	4.9877E+01	10	1.	6.69	
52	2.4942E+01	1.1267E+00	4.3024E+01	10	1.	3.87	
53	3.0000E+01	6.9152E-01	2.6406E+01	90	1.	0.18	
54	4.0000E+01	3.8706E-01	1.4810E+01	10	1.	0.73	
55	4.0000E+01	3.8839E-01	1.4831E+01	89	1.	0.87	
56	4.0000E+01	3.8550E-01	1.4715E+01	90	1.	0.06	
57	5.0000E+01	2.7677E-01	1.0568E+01	90	1.	0.45	
58	5.9300E+01	2.3100E-01	8.8207E+00	36	1.	1.56	
59	5.0000E+01	2.7569E-01	1.0566E+01	89	1.	0.43	
60	6.0000E+01	2.7462E-01	8.5770E+00	89	1.	-0.13	
61	6.0000E+01	2.2527E-01	8.6021E+00	90	1.	0.16	
62	7.7400E+01	2.0800E-01	7.9425E+00	36	1.	2.74	
63	7.7500E+01	1.8600E-01	7.1024E+00	36	1.	1.67	
64	8.0000E+01	1.7904E-01	6.8368E+00	89	1.	-0.18	
65	8.0000E+01	1.7941E-01	6.8507E+00	90	1.	0.02	
66	8.0000E+01	1.7938E-01	6.8498E+00	90	1.	0.01	
67	1.0000E+02	1.5868E-01	6.0594E+00	10	1.	-0.02	
68	1.0000E+02	1.5862E-01	6.0569E+00	90	1.	-0.06	
69	1.3800E+02	1.4000E-01	5.3459E+00	36	1.	1.52	

70	1.5000E+02	1.3396E-01	5.1154E+00	10	1.	0.11
71	1.5000E+02	1.3363E-01	5.1026E+00	89	1.	-0.14
72	1.5000E+02	1.3568E-01	5.1047E+00	90	1.	-0.10
73	1.5500E+02	1.3400E-01	5.1168E+00	36	1.	1.46
74	1.7700E+02	1.2600E-01	4.8113E+00	36	1.	0.38
75	2.0000E+02	1.1998E-01	4.5813E+00	89	1.	-0.11
76	2.0700E+02	1.1900E-01	4.5440E+00	36	1.	0.43
77	3.0000E+02	1.0292E-01	3.9300E+00	89	1.	-0.08
78	4.0000E+02	9.1842E-02	3.5070E+00	10	1.	-0.01
79	6.0000E+02	7.7310E-02	2.9521E+00	89	1.	-0.00
80	6.6200E+02	7.3925E-02	2.8228E+00	89	1.	0.01
81	7.0000E+02	7.2070E-02	2.7520E+00	89	1.	0.01
82	8.0000E+02	6.7821E-02	2.5897E+00	89	1.	0.00
83	9.0000E+02	6.4090E-02	2.4475E+00	89	1.	0.01
84	1.0000E+03	6.0927E-02	2.3265E+00	89	1.	0.00

80 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR MAGNESIUM

Z = 12

CONVERSION CONSTANT IS 4.038E+01

K-EDGE	1.305						
L-EDGES	0.063	0.052	0.052	0.	0.	0.	
P-EDGES	0.	0.	0.	0.	0.	0.	
	KEV	CM2/GM	BARNs/AT	SOURCE	HEIGHT	DIFF	
1	5.2490E-01	6.9000E+05	2.7863E+05	27	1.	11.86	
2	7.0500E-01	3.0000E+05	1.2115E+05	27	1.	12.22	
3	7.7620E-01	2.1800E+03	8.8032E+04	27	1.	7.10	
4	7.9990E-01	1.8300E+03	7.3899E+04	33	2.	-2.10	
5	8.6240E-01	1.4700E+03	5.9361E+04	33	2.	3.85	
6	9.2970E-01	1.3400E+03	5.4112E+04	27	1.	9.75	
7	9.5570E-01	1.1000E+03	4.4420E+04	33	2.	-3.17	
8	1.0000E+00	9.3262E+02	3.7661E+04	10	1.	-6.11	
9	1.0410E+00	9.0000E+02	3.6344E+04	27	1.	1.52	
10	1.0780E+00	7.6700E+02	3.0973E+04	33	2.	-4.50	
11	1.2400E+00	5.1000E+02	2.0595E+04	33	2.	-5.66	
12	1.2540E+00	5.1100E+02	2.0595E+04	27	1.	-2.62	
13	1.3000E+00	4.9436E+02	1.9963E+04	90	1.	4.51	
14	1.3020E+00	4.9610E+02	2.0035E+04	90	1.	5.33	
15	1.3030E+00	4.9659E+02	2.0055E+04	90	1.	5.66	
16	1.3070E+00	5.9503E+03	2.4028E+05	90	1.	10.52	
17	1.4870E+00	4.2300E+03	1.7081E+05	27	1.	5.94	
18	1.5000E+01	4.1796E+03	1.6878E+05	90	1.	5.82	
19	1.5000E+00	4.1722E+03	1.6848E+05	90	1.	6.63	
20	1.5000E+00	3.8438E+03	1.5522E+05	10	1.	-1.77	
21	1.7430E+00	2.6800E+03	1.0822E+05	27	1.	-1.79	
22	2.0000E+00	1.9529E+03	7.8862E+04	10	1.	0.36	
23	2.0000E+00	1.9671E+03	7.9434E+04	90	1.	1.09	
24	2.0000E+00	1.9661E+03	7.9394E+04	90	1.	1.04	
25	2.0000E+00	1.9547E+03	7.8935E+04	89	1.	0.45	
26	3.0000E+03	6.6809E+02	2.6979E+04	10	1.	-1.74	
27	3.0000E+00	6.6663E+02	2.6920E+04	89	1.	-1.96	
28	4.0020E+01	2.9737E+02	1.2008E+04	89	1.	-3.86	
29	5.0100E+00	1.5877E+02	6.4114E+03	10	1.	-3.49	
30	5.0100E+00	1.5656E+02	6.3263E+03	89	1.	-4.77	
31	6.0000E+00	9.3215E+01	3.7645E+03	89	1.	-3.98	
32	8.0000E+00	4.0080E+01	1.6105E+03	10	1.	-3.47	
33	8.0000E+00	4.0981E+01	1.6549E+03	89	1.	-1.30	
34	8.0470E+00	3.9330E+01	1.5882E+03	11	10.	-3.59	
35	8.9040E+00	2.9520E+01	1.1843E+03	11	10.	-2.55	
36	9.8850E+00	2.1540E+01	8.6982E+02	11	10.	-2.39	
37	1.0000E+01	2.1116E+01	8.5451E+02	10	1.	-0.43	
38	1.0000E+01	2.1012E+01	8.4850E+02	89	1.	-1.13	
39	1.0000E+01	2.1123E+01	8.5300E+02	89	1.	-0.60	
40	1.1220E+01	1.4710E+01	5.9402E+02	11	10.	-1.66	
41	1.2490E+01	1.0650E+01	4.3007E+02	11	10.	-1.46	
42	1.3390E+01	8.6720E+00	3.5019E+02	11	10.	-1.07	
43	1.4960E+01	6.2800E+00	2.5360E+02	11	10.	-0.27	
44	1.5000E+01	6.3493E+00	2.5639E+02	10	1.	1.63	
45	1.5000E+01	6.3428E+00	2.5613E+02	89	1.	1.53	
46	1.5770E+01	5.3810E+00	2.1729E+02	11	10.	0.17	
47	1.7480E+01	7.9900E+00	1.6112E+02	11	10.	0.97	
48	1.7670E+01	3.0780E+00	1.5650E+02	11	10.	1.32	
49	1.9610E+01	2.6510E+00	1.1513E+02	11	10.	0.97	
50	2.0000E+01	2.7532E+00	1.1118E+02	89	1.	3.19	
51	2.0000E+01	2.6818E+00	1.0830E+02	10	1.	0.51	
52	2.0210E+01	2.6170E+00	1.0568E+02	11	10.	1.11	
53	2.2160E+01	2.0280E+00	8.1894E+01	11	10.	2.06	
54	2.3220E+01	1.7700E+00	7.1476E+01	11	10.	1.57	
55	2.4940E+01	1.4520E+00	5.8634E+01	11	10.	1.39	
56	2.5000E+01	1.4300E+00	5.7746E+01	48	3.	0.50	
57	2.5270E+01	1.4110E+00	5.6979E+01	11	10.	2.08	
58	2.7490E+01	1.1340E+00	4.5795E+01	30	2.	2.43	
59	2.8480E+01	1.0260E+00	4.1432E+01	11	10.	1.43	
60	2.8620E+01	1.0320E+00	4.1674E+01	30	2.	3.29	
61	2.9190E+01	9.7210E-01	3.9255E+01	11	2.	2.22	
62	3.0000E+01	9.2344E-01	3.7290E+01	89	1.	3.88	
63	3.1140E+01	8.9660E-01	3.6206E+01	48	3.	1.20	
64	3.0490E+01	8.7200E-01	3.5215E+01	11	10.	2.09	
65	3.0913E+01	8.3960E-01	3.3541E+01	30	2.	1.02	
66	3.2180E+01	7.6190E-01	3.0767E+01	30	2.	1.56	
67	3.4700E+01	6.4400E-01	2.6006E+01	30	2.	2.01	
68	3.5900E+01	5.9770E-01	2.4134E+01	30	2.	1.97	
69	3.7320E+01	5.4350E-01	2.1947E+01	30	2.	0.62	

70	4.0000E+01	4.7853E-01	1.9324E+01	10	1.	1.73
71	4.0000E+01	4.7935E-01	1.9357E+01	89	1.	1.90
72	4.0040E+01	4.7340E-01	1.9117E+01	48	3.	0.83
73	4.0070E+01	4.6290E-01	1.8693E+01	30	2.	-1.26
74	5.0000E+01	3.2597E-01	1.3163E+01	89	1.	1.30
75	5.0080E+01	3.2000E-01	1.2922E+01	48	3.	-0.33
76	6.0000E+01	2.5543E-01	1.0315E+01	89	1.	0.49
77	6.0030E+01	2.5190E-01	1.0172E+01	40	5.	-0.84
78	7.0040E+01	2.1390E-01	8.6377E+00	40	5.	-1.26
79	8.0000E+01	1.9415E-01	7.8084E+00	89	1.	0.16
80	8.0000E+01	1.9591E-01	7.9112E+00	90	1.	0.70
81	8.4990E+01	1.8640E-01	7.5272E+00	48	3.	0.07
82	1.3000E+02	1.6898E-01	6.8238E+00	13	1.	0.09
83	1.0000E+02	1.6877E-01	6.8153E+00	89	1.	-0.03
84	1.1487E+02	1.5670E-01	6.3278E+00	40	5.	-0.03
85	1.3031E+02	1.4390E-01	5.8109E+00	40	5.	-2.72
86	1.4560E+02	1.4040E-01	5.6696E+00	48	3.	-0.70
87	1.5000E+02	1.3997E-01	5.6521E+00	10	1.	0.13
88	1.5000E+02	1.3968E-01	5.6407E+00	89	1.	-0.08
89	2.0000E+02	1.2463E-01	5.0329E+00	89	1.	-0.10
90	2.0830E+02	1.2060E-01	4.8700E+00	48	3.	-1.71
91	2.7910E+02	1.0910E-01	4.4057E+00	48	3.	-0.35
92	3.0000E+02	1.0648E-01	4.3000E+00	89	1.	-0.09
93	4.0000E+02	9.4907E-02	3.8325E+00	10	1.	-0.21
94	4.1180E+02	9.3200E-02	3.7636E+00	48	3.	-0.59
95	6.0000E+02	7.9817E-02	3.2232E+00	89	1.	-0.00
96	6.6200E+02	7.6314E-02	3.0817E+00	89	1.	0.01
97	7.0000E+02	7.4394E-02	3.0042E+00	89	1.	0.01
98	8.0000E+02	6.9999E-02	2.8267E+00	89	1.	0.00
99	9.0000E+02	6.6141E-02	2.6709E+00	89	1.	0.01
100	1.0000E+03	6.2872E-02	2.5389E+00	89	1.	0.00

95 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR ALUMINUM

Z = 13

CONVERSION CONSTANT IS 4.470E+01

K-EDGE 1.518
 L-EDGES 0.067 0.073
 M-EDGES 0. 0. 0.

	KEY	CM2/GM	BARNs/AT	SOURCE	WEIGHT	DIFF
1	7.2930E-01	2.8430E+03	1.2710E+05	33	2.	2.71
2	7.9990E-01	2.2000E+03	9.8520E+04	33	2.	2.16
3	8.5200E-01	1.8423E+03	8.2500E+04	37	2.	1.46
4	8.5300E-01	1.8500E+03	8.1951E+04	29	3.	1.11
5	8.8240E-01	1.7000E+03	7.6129E+04	33	2.	2.94
6	1.3000E-01	1.4425E+03	6.4600E+04	37	2.	0.68
7	2.3200E-01	1.4400E+03	6.4486E+04	29	3.	1.09
8	9.3220E-01	1.4100E+03	6.3145E+04	32	1.	-0.96
9	9.9180E-01	1.2600E+03	5.3738E+04	33	2.	-0.34
10	1.0000E+00	1.1680E+03	5.2303E+04	10	1.	-0.82
11	1.0000E+00	1.2412E+03	5.5562E+04	90	1.	5.40
12	1.0300E+00	1.2441E+03	5.5712E+04	90	1.	5.64
13	1.0000E+00	1.2604E+03	5.6442E+04	90	1.	7.03
14	1.0120E+00	1.1523E+03	5.1600E+04	37	2.	1.05
15	1.0140E+00	1.1500E+03	5.1499E+04	29	3.	1.39
16	1.1270E+00	8.6200E+02	3.8602E+04	33	2.	1.11
17	1.2540E+00	6.4200E+02	2.9750E+04	83	3.	0.47
18	1.2540E+00	6.2972E+02	2.8200E+04	37	2.	-1.46
19	1.2560E+00	6.3000E+02	2.3213E+04	32	1.	-0.99
20	1.2560E+00	6.3200E+02	2.8302E+04	29	3.	-0.67
21	1.2590E+00	6.3200E+02	2.8302E+04	4	1.	-0.03
22	1.3120E+00	5.5600E+02	2.4899E+04	33	2.	-1.70
23	1.3160E+00	5.4950E+02	2.4608E+04	9	3.	-2.05
24	1.4420E+00	4.3000E+02	1.9256E+04	33	2.	-1.92
25	1.4870E+00	3.8610E+02	1.7290E+04	82	3.	-4.33
26	1.4870E+00	4.0890E+02	1.8271E+04	83	3.	-1.10
27	1.4870E+00	3.9078E+02	1.7500E+04	37	2.	-3.17
28	1.4870E+00	3.9000E+02	1.7465E+04	2	1.	-3.36
29	1.4900E+00	3.9000E+02	1.7465E+04	29	3.	-2.84
30	1.4930E+00	3.9600E+02	1.7734E+04	4	1.	-0.81
31	1.5000E+00	3.8798E+02	1.7575E+04	10	1.	-1.58
32	1.5000E+00	3.9175E+02	1.7544E+04	89	1.	-0.62
33	1.5500E+00	3.6851E+02	1.6533E+04	22	1.	1.85
34	1.5500E+00	3.8369E+02	1.7183E+04	93	1.	6.05
35	1.5570E+00	3.8503E+02	1.7242E+04	90	1.	7.68
36	1.5580E+00	3.8503E+02	1.7242E+04	90	1.	7.86
37	1.5580E+00	3.8525E+02	1.7252E+04	90	1.	7.92
38	1.5600E+00	3.9970E+03	1.7899E+05	22	1.	-5.79
39	1.5620E+00	4.4570E+03	1.9959E+05	90	1.	5.39
40	1.5650E+00	4.4637E+03	1.9989E+05	90	1.	6.04
41	1.6530E+00	3.8900E+03	1.7420E+05	33	2.	5.69
42	1.7390E+00	3.3700E+03	1.5092E+05	33	2.	3.69
43	1.7400E+00	3.4100E+03	1.5271E+05	82	3.	5.07
44	1.7400E+00	3.4500E+03	1.5450E+05	83	3.	6.31
45	1.7400E+00	3.1790E+03	1.4196E+05	38	1.	-2.32
46	1.7470E+00	3.4290E+03	1.5356E+05	4	1.	6.70
47	1.7750E+00	3.2990E+03	1.4774E+05	83	3.	6.74
48	1.9230E+00	2.7000E+03	1.2091E+05	83	3.	6.33
49	2.0000E+00	2.2993E+03	1.0297E+05	10	1.	-0.30
50	2.0000E+00	2.2707E+03	1.0165E+05	89	1.	-1.54
51	2.0000E+00	2.2617E+03	1.0129E+05	22	1.	-1.93
52	2.0140E+00	2.2710E+03	1.0170E+05	82	3.	6.27
53	2.0230E+00	2.2470E+03	1.0062E+05	4	1.	0.36
54	2.0420E+00	2.2810E+03	1.0215E+05	83	3.	4.59
55	2.0420E+00	2.1340E+03	9.5385E+04	38	1.	-2.53
56	2.0500E+00	2.2060E+03	9.8789E+04	83	3.	1.97
57	2.1650E+00	1.9800E+03	8.4190E+04	82	3.	0.10
58	2.1660E+00	1.9020E+03	8.5175E+04	83	3.	1.39
59	2.2570E+00	1.6910E+03	7.5726E+04	82	3.	0.28
60	2.2930E+00	1.6440E+03	7.3621E+04	85	3.	1.57
61	2.2970E+00	1.6300E+03	7.2995E+04	38	1.	0.70
62	2.2930E+00	1.6234E+03	7.2700E+04	37	2.	0.30
63	2.2980E+00	1.6000E+03	7.1651E+04	29	3.	-0.59
64	2.3080E+00	1.5949E+03	7.1423E+04	82	3.	0.21
65	2.3120E+00	1.5980E+03	7.1562E+04	12	2.	0.96
66	2.3170E+00	1.5670E+03	7.0175E+04	4	1.	-0.55
67	2.3950E+00	1.4300E+03	6.4038E+04	38	1.	-7.12
68	2.4230E+00	1.4100E+03	6.3145E+04	83	3.	0.98
69	2.6220E+00	1.1285E+03	5.0536E+04	82	3.	-1.35

70	2.6220E+00	1.1080E+03	4.9610E+04	38	1.	-3.14
71	2.6270E+00	1.1420E+03	5.1141E+04	12	2.	0.32
72	2.6320E+00	1.1670E+03	5.2260E+04	4	1.	3.02
73	2.8210E+00	9.4100E+02	4.2140E+04	58	1.	-0.60
74	2.8390E+00	9.3660E+02	4.1916E+04	83	3.	0.51
75	2.9840E+00	8.1380E+02	3.6406E+04	81	3.	-0.68
76	2.9840E+00	8.2210E+02	3.6811E+04	38	1.	0.41
77	2.9840E+00	7.7263E+02	3.4600E+04	37	2.	-5.62
78	3.0000E+00	7.9923E+02	3.5791E+04	10	1.	-1.01
79	3.0000E+00	7.8853E+02	3.5312E+04	22	1.	-2.33
80	3.0000E+00	7.7579E+02	3.4652E+04	89	1.	-4.16
81	3.1510E+00	7.1000E+02	3.1795E+04	38	1.	0.49
82	3.2870E+00	6.5900E+02	2.8616E+04	83	3.	1.45
83	3.3143E+00	6.9500E+02	2.6645E+04	67	3.	-3.42
84	3.3143E+00	6.0130E+02	2.6927E+04	82	3.	-2.59
85	3.3260E+00	6.1300E+02	2.7451E+04	4	1.	0.49
86	3.4440E+00	5.6700E+02	2.5391E+04	83	3.	-2.18
87	3.4440E+00	5.3500E+02	2.3958E+04	67	3.	-3.59
88	3.4440E+00	5.4040E+02	2.4200E+04	37	2.	-2.61
89	3.6910E+00	4.5900E+02	2.0555E+04	38	1.	-0.17
90	3.6920E+00	4.7600E+02	2.1316E+04	82	3.	3.61
91	3.6920E+00	4.4700E+02	2.0016E+04	67	3.	-2.70
92	3.7050E+00	4.5000E+02	2.0152E+04	4	1.	-1.11
93	3.7690E+00	4.3000E+02	1.9256E+04	83	3.	-1.01
94	4.0000E+00	3.5264E+02	1.5792E+04	89	1.	-4.50
95	4.0900E+00	3.4600E+02	1.5495E+04	38	1.	-0.38
96	4.0910E+00	3.5000E+02	1.5674E+04	83	3.	0.84
97	4.1050E+00	3.3300E+02	1.4912E+04	4	1.	-3.13
98	4.5100E+00	2.6800E+02	1.2022E+04	38	1.	1.44
99	1.5110E+00	2.5700E+02	1.1957E+04	83	3.	1.12
100	4.5110E+00	2.5150E+02	1.1263E+04	67	3.	-4.75
101	4.5110E+00	2.6040E+02	1.1661E+04	82	3.	-1.38
102	4.5110E+00	2.4340E+02	1.0900E+04	37	2.	-7.82
103	4.5150E+00	2.5250E+02	1.1298E+04	72	2.	-4.15
104	4.5270E+00	2.5560E+02	1.1419E+04	4	1.	-2.46
105	4.9520E+00	2.0500E+02	9.1603E+03	83	3.	0.77
106	4.9520E+00	1.9400E+02	8.6677E+03	38	1.	-4.64
107	4.9530E+00	2.0040E+02	8.9745E+03	82	3.	-1.44
108	4.9690E+00	1.9630E+02	8.7907E+03	4	1.	-2.58
109	5.0000E+00	1.9414E+02	8.6938E+03	10	1.	-1.96
110	5.0000E+00	1.9350E+02	8.6652E+03	22	1.	-2.29
111	5.0000E+00	1.9001E+02	8.5092E+03	89	1.	-4.05
112	5.4140E+00	1.5340E+02	6.8695E+03	82	3.	-2.79
113	5.4140E+00	1.5300E+02	6.8516E+03	38	1.	-3.04
114	5.4150E+00	1.6030E+02	7.1785E+03	83	3.	1.64
115	5.4150E+00	1.4950E+02	6.6949E+03	67	3.	-5.21
116	5.4150E+00	1.4894E+02	5.6700E+03	37	2.	-5.56
117	5.4200E+00	1.4960E+02	6.6994E+03	74	1.	-4.89
118	5.4200E+00	1.4910E+02	6.6770E+03	12	2.	-5.21
119	5.4340E+00	1.5230E+02	6.8203E+03	4	1.	-2.46
120	5.4340E+00	1.5170E+02	6.8024E+03	15	1.	-2.72
121	5.8980E+00	1.2090E+02	5.4141E+03	82	3.	-2.19
122	5.9040E+00	1.2300E+02	5.5082E+03	12	2.	-0.20
123	5.9180E+00	1.2240E+02	5.4813E+03	13	1.	-0.02
124	6.0000E+00	1.1236E+02	5.0318E+03	89	1.	-4.54
125	6.4030E+00	9.3500E+01	4.1871E+03	38	1.	-4.01
126	6.4040E+00	9.5330E+01	4.2691E+03	82	3.	-2.08
127	6.4040E+00	9.2100E+01	4.1244E+03	67	3.	-5.40
128	6.4040E+00	9.9700E+01	4.4648E+03	83	3.	2.41
129	6.4040E+00	9.2448E+01	4.1400E+03	37	2.	-5.04
130	6.4090E+00	9.7120E+01	4.3492E+03	12	2.	-0.02
131	6.9300E+00	7.6300E+01	3.4169E+03	82	3.	-1.39
132	6.9520E+00	7.6340E+01	3.4187E+03	15	1.	-0.43
133	7.4770E+00	6.1300E+01	2.7451E+03	38	1.	-1.21
134	7.4780E+00	6.3100E+01	2.8257E+03	83	3.	1.73
135	7.4843E+00	5.2250E+01	2.7877E+03	12	2.	0.59
136	7.4780E+00	6.1750E+01	2.7653E+03	82	3.	-0.45
137	8.0000E+00	4.9895E+01	2.2344E+03	10	1.	-2.17
138	8.0000E+00	4.9299E+01	2.2077E+03	89	1.	-3.34
139	8.0400E+00	4.9800E+01	2.2301E+03	82	3.	-0.90
140	8.0470E+00	5.0290E+01	2.2516E+03	11	10.	0.31
141	8.0470E+00	4.7900E+01	2.1451E+03	66	3.	-4.43
142	8.0470E+00	4.9710E+01	2.2257E+03	38	1.	-0.84
143	8.0480E+00	4.9100E+01	2.1988E+03	67	3.	-2.00
144	8.0480E+00	5.0000E+01	2.2660E+03	83	3.	0.99
145	8.0480E+00	5.1583E+01	2.3100E+03	37	2.	2.95
146	8.0530E+00	5.0700E+01	2.2704E+03	12	2.	1.38
147	8.0600E+00	5.0700E+01	2.2704E+03	74	1.	1.64
148	8.3310E+01	4.4540E+01	1.9946E+03	39	5.	0.76
149	8.6390E+01	4.0470E+01	1.8123E+03	82	3.	-0.38

150	8.6440E+00	4.1440E+01	1.8558E+03	12	2.	2.18
151	8.9040E+00	3.7120E+01	1.6623E+03	11	10.	-0.09
152	8.9050E+00	3.6400E+01	1.6501E+03	67	3.	-2.00
153	8.9300E+00	3.7300E+01	1.6704E+03	74	1.	1.26
154	9.4420E+00	3.1800E+01	1.4241E+03	85	3.	1.77
155	9.8850E+00	2.7120E+01	1.2145E+03	11	10.	-0.66
156	9.9590E+00	2.7570E+01	1.2346E+03	39	5.	3.23
157	1.0000E+01	2.6309E+01	1.1782E+03	10	1.	-0.29
158	1.0000E+01	2.6271E+01	1.1765E+03	22	1.	-0.44
159	1.0000E+01	2.6137E+01	1.1705E+03	89	1.	-0.95
160	1.0839E+01	2.0500E+01	9.1803E+02	85	3.	-1.04
161	1.0980E+01	2.0070E+01	8.9877E+02	11	10.	0.72
162	1.1220E+01	1.8620E+01	8.4280E+02	82	3.	0.76
163	1.1220E+01	1.8770E+01	8.4056E+02	11	10.	0.50
164	1.1921E+01	1.5350E+01	6.8516E+02	82	3.	-1.81
165	1.2490E+01	1.3640E+01	6.1083E+02	11	10.	0.59
166	1.2500E+01	1.3510E+01	6.0500E+02	37	2.	-0.13
167	1.3390E+01	1.1190E+01	5.0111E+02	11	10.	1.46
168	1.4400E+01	8.7245E+00	3.9070E+02	41	1.	-1.93
169	1.4960E+01	8.0830E+00	3.6197E+02	11	10.	1.64
170	1.5000E+01	7.9600E+00	3.5646E+02	39	5.	0.88
171	1.5000E+01	8.0390E+00	3.6000E+02	37	2.	1.88
172	1.5000E+01	7.9435E+00	3.5573E+02	10	1.	0.67
173	1.5400E+01	7.1000E+00	3.1795E+02	17	2.	-2.66
174	1.5773E+01	6.7400E+00	3.0183E+02	82	3.	-0.76
175	1.7478E+01	4.8800E+00	2.1854E+02	66	3.	-2.63
176	1.7478E+01	5.0800E+00	2.2749E+02	38	1.	1.36
177	1.7480E+01	5.1050E+00	2.2861E+02	11	10.	1.89
178	1.7670E+01	4.9510E+00	2.2172E+02	11	10.	2.01
179	1.9610E+01	3.6500E+00	1.6345E+02	11	10.	1.85
180	1.9650E+01	3.8200E+00	1.7107E+02	74	1.	7.22
181	2.0000E+01	3.3616E+00	1.5054E+02	10	1.	-0.72
182	2.0000E+01	3.4360E+00	1.5387E+02	39	5.	1.47
183	2.0000E+01	3.4570E+00	1.5481E+02	22	1.	2.09
184	2.0000E+01	3.4166E+00	1.5300E+02	37	2.	0.90
185	2.0210E+01	3.3420E+00	1.4966E+02	11	10.	1.75
186	2.2160E+01	2.5830E+00	1.1567E+02	11	10.	2.55
187	2.3174E+01	2.3500E+00	1.0524E+02	82	3.	5.92
188	2.3220E+01	2.2580E+00	1.0112E+02	11	10.	2.34
189	2.4940E+01	1.6530E+00	8.2981E+01	11	10.	2.49
190	2.5000E+01	1.8110E+00	8.1100E+01	48	3.	0.83
191	2.5000E+01	1.8325E+00	8.2052E+01	10	1.	2.02
192	2.5000E+01	1.8601E+00	8.3300E+01	37	2.	3.57
193	2.5270E+01	1.7800E+00	7.9712E+01	11	10.	2.08
194	2.8480E+01	1.2730E+00	5.7007E+01	11	10.	0.58
195	2.9126E+01	1.2120E+00	5.4275E+01	11	10.	2.08
196	3.0000E+01	1.1202E+00	5.0522E+01	10	1.	1.92
197	3.0000E+01	1.1411E+00	5.1100E+01	37	2.	3.09
198	3.0000E+01	1.1397E+00	5.1040E+01	22	1.	2.97
199	3.0000E+01	1.0846E+00	4.8570E+01	90	1.	-2.02
200	3.0440E+01	1.0850E+00	4.8588E+01	48	3.	-1.54
201	3.0490E+01	1.0810E+00	4.8409E+01	11	10.	1.81
202	3.1250E+01	1.0200E+00	4.5678E+01	17	2.	2.10
203	3.5000E+01	7.4584E-01	3.3400E+01	37	2.	-1.43
204	4.0000E+01	5.5986E-01	2.5072E+01	10	1.	-0.37
205	4.0000E+01	5.7648E-01	2.5816E+01	22	1.	2.59
206	4.0000E+01	5.5102E-01	2.4676E+01	99	1.	-1.94
207	4.0040E+01	5.5610E-01	2.4903E+01	48	3.	-0.83
208	4.0120E+01	5.5500E-01	2.4854E+01	28	5.	-0.61
209	4.2980E+01	4.8000E-01	2.1495E+01	28	5.	-0.97
210	4.5400E+01	4.2700E-01	1.9122E+01	28	5.	-2.09
211	5.0000E+01	3.6500E-01	1.6345E+01	28	5.	-0.72
212	5.0000E+01	3.6343E-01	1.6275E+01	99	1.	-1.15
213	5.9300E+01	2.7900E-01	1.2494E+01	36	1.	-1.80
214	6.0000E+01	2.7701E-01	1.2405E+01	99	1.	-0.97
215	6.0000E+01	2.7572E-01	1.2392E+01	99	1.	-1.08
216	6.0000E+01	2.8953E-01	1.2697E+01	22	1.	1.36
217	6.0030E+01	2.7480E-01	1.2306E+01	40	5.	-1.70
218	6.7400E+01	2.4000E-01	1.0742E+01	36	1.	-0.69
219	6.8640E+01	2.3300E-01	1.0434E+01	28	5.	-1.25
220	7.7500E+01	2.1300E-01	9.5385E+00	36	1.	1.74
221	8.0000E+01	2.0199E-01	9.0457E+00	99	1.	-0.76
222	8.0000E+01	2.0208E-01	9.0497E+00	99	1.	-0.71
223	8.0000E+01	2.0479E-01	9.1707E+00	22	1.	0.62
224	8.4300E+01	1.9400E-01	8.6877E+00	57	1.	-0.30
225	1.0000E+02	1.7089E-01	7.6527E+00	10	1.	-0.65

226	1.0000E+02	1.7108E-01	7.5615E+00	90	1.	-0.54
227	1.0000E+02	1.7234E-01	7.7176E+00	22	1.	0.20
228	1.2300E+02	1.5000E-01	6.7175E+00	28	5.	-1.43
229	1.2400E+02	1.5000E-01	6.7175E+00	36	1.	-1.01
230	1.3031E+02	1.4630E-01	6.5516E+00	40	5.	-1.04
231	1.3050E+02	1.4700E-01	6.5629E+00	36	1.	-0.50
232	1.3800E+02	1.4400E-01	6.4486E+00	36	1.	0.05
233	1.4500E+02	1.3100E-01	5.8664E+00	56	1.	-6.98
234	1.4560E+02	1.3860E-01	6.2068E+00	48	3.	-1.41
235	1.5000E+02	1.3855E-01	6.2046E+00	90	1.	-0.20
236	1.5000E+02	1.3865E-01	6.2096E+00	20	2.	-0.12
237	1.5400E+02	1.3856E-01	6.2050E+00	10	1.	-0.19
238	1.5500E+02	1.3800E-01	6.1799E+00	36	1.	0.93
239	1.5800E+02	1.3600E-01	6.0903E+00	28	5.	0.33
240	1.5500E+02	1.3500E-01	6.0456E+00	36	1.	1.53
241	1.5770E+02	1.3100E-01	5.8664E+00	36	1.	1.50
242	2.0300E+02	1.2281E-01	5.4995E+00	90	1.	-0.09
243	2.0700E+02	1.2100E-01	5.4186E+00	36	1.	-0.10
244	2.0800E+02	1.2000E-01	5.3738E+00	28	5.	-0.72
245	2.0850E+02	1.1980E-01	5.3649E+00	48	3.	-0.82
246	2.2540E+02	1.1700E-01	5.2395E+00	36	1.	0.10
247	2.4500E+02	1.0890E-01	4.8768E+00	59	1.	-3.63
248	2.4800E+02	1.1300E-01	5.0604E+00	36	1.	0.48
249	2.7900E+02	1.0720E-01	4.8006E+00	61	1.	-0.19
250	2.7910E+02	1.0650E-01	4.7693E+00	48	3.	-0.03
251	3.0000E+02	1.0446E-01	4.6777E+00	90	1.	-0.03
252	3.2000E+02	9.9300E-02	4.4692E+00	56	1.	-1.88
253	3.2500E+02	1.0080E-01	4.5140E+00	60	1.	-0.26
254	3.4100E+02	9.4100E-02	4.2140E+00	59	1.	-5.04
255	4.0000E+02	9.2897E-02	4.1597E+00	90	1.	-0.01
256	4.0000E+02	9.2867E-02	4.1598E+00	10	1.	-0.03
257	4.1100E+02	9.1500E-02	4.0975E+00	50	1.	-0.35
258	4.1180E+02	9.0600E-02	4.0572E+00	48	3.	-1.25
259	4.1200E+02	9.0700E-02	4.0617E+00	28	5.	-1.12
260	4.8300E+02	8.3000E-02	3.7169E+00	59	1.	-3.22
261	4.9600E+02	8.3490E-02	3.7388E+00	60	1.	-1.55
262	4.9900E+02	8.2700E-02	3.7035E+00	59	1.	-2.24
263	5.0000E+02	8.4520E-02	3.7850E+00	90	1.	-0.00
264	5.1100E+02	8.3100E-02	3.7214E+00	49	1.	-0.74
265	5.1100E+02	8.2500E-02	3.6945E+00	57	1.	-1.45
266	5.9500E+02	7.7800E-02	3.4840E+00	59	1.	-0.67
267	6.0000E+02	7.8030E-02	3.4943E+00	88	1.	-0.01
268	6.0400E+02	7.6100E-02	3.4079E+00	58	1.	-2.16
269	6.2200E+02	7.6300E-02	3.4169E+00	59	1.	-0.56
270	6.5160E+02	7.4200E-02	3.3228E+00	50	1.	-0.55
271	6.6200E+02	7.4599E-02	3.3407E+00	88	1.	0.01
272	6.6200E+02	7.3800E-02	3.3049E+00	57	1.	-1.06
273	6.6200E+02	7.4800E-02	3.3497E+00	56	1.	0.28
274	7.0000E+02	7.2721E-02	3.2566E+00	88	1.	0.01
275	7.9600E+02	6.8300E-02	3.0586E+00	56	1.	-0.40
276	7.9800E+02	6.7600E-02	3.0273E+00	58	1.	-1.42
277	8.0300E+02	6.8410E-02	3.0639E+00	88	1.	0.00
278	8.4000E+02	6.7100E-02	3.0049E+00	52	1.	0.42
279	8.8500E+02	6.4500E-02	2.8884E+00	58	1.	-1.01
280	9.0000E+02	6.4637E-02	2.8945E+00	89	1.	0.01
281	1.0000E+03	6.1433E-02	2.7511E+00	88	1.	0.01

241 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR SULFUR

Z = 16

CONVERSION CONSTANT IS 5.324E+01

	K-EDGE	2.472					
	L-EDGES	0.195	0.165	0.164	0.	0.	
	M-EDGES	0.017	0.008	0.008	0.	0.	
	KEV	CM2/GM	BARNs/AT	SOURCE	HEIGHT	DIFF	
1	6.7670E-01	7.0200E+03	5.7377E+05	47	5.	-3.53	
2	7.7800E-01	4.9600E+03	2.6409E+05	47	5.	-0.88	
3	9.2900E-01	5.1000E+03	1.6505E+05	47	5.	-0.28	
4	1.0000E+00	2.4528E+03	1.3060E+05	10	1.	-5.87	
5	1.2540E+00	1.4000E+03	7.4541E+04	47	5.	0.68	
6	1.4870E+00	8.1200E+02	4.6428E+04	47	5.	-1.01	
7	1.5000E+00	8.7891E+02	4.6796E+04	10	1.	2.13	
8	2.4710E+00	2.1881E+02	1.1650E+04	90	1.	0.75	
9	2.4730E+00	2.2914E+03	1.2200E+05	90	1.	3.30	
10	3.0000E+00	1.3057E+03	6.9520E+04	89	1.	-4.16	
11	3.0000E+00	1.3457E+03	7.1650E+04	10	1.	-1.22	
12	4.0000E+00	6.4026E+02	3.4090E+04	89	1.	-0.25	
13	4.5090E+00	4.7734E+02	2.5415E+04	10	1.	2.82	
14	4.9320E+00	3.7362E+02	1.9893E+04	10	1.	2.57	
15	5.0000E+00	3.4936E+02	1.8601E+04	10	1.	-0.48	
16	5.0000E+00	3.6701E+02	1.9541E+04	89	1.	4.55	
17	5.4120E+00	2.7622E+02	1.4707E+04	10	1.	-2.03	
18	5.4200E+00	2.8400E+02	1.5121E+04	74	1.	1.14	
19	5.6950E+00	2.2187E+02	1.1813E+04	10	1.	-0.31	
20	5.9470E+00	2.1668E+02	1.1537E+04	10	1.	-0.25	
21	6.4000E+00	1.8058E+02	9.6146E+03	10	1.	2.29	
22	6.4900E+00	1.7359E+02	9.2428E+03	10	1.	2.30	
23	6.9250E+00	1.4915E+02	7.4621E+03	10	1.	-0.76	
24	7.0580E+00	1.3312E+02	7.0877E+03	10	1.	-0.52	
25	7.4720E+00	1.1572E+02	6.1612E+03	10	1.	1.60	
26	7.6490E+00	1.0798E+02	5.7491E+03	10	1.	1.29	
27	8.0000E+00	9.4563E+01	5.0412E+03	10	1.	0.82	
28	8.0000E+00	9.5252E+01	5.0715E+03	89	1.	1.42	
29	8.0410E+00	9.2984E+01	4.9508E+03	10	1.	0.48	
30	8.0600E+00	8.8400E+01	4.7067E+03	74	1.	-3.82	
31	8.2650E+00	8.5952E+01	4.5764E+03	10	1.	0.56	
32	8.6310E+00	7.6990E+01	4.0992E+03	10	1.	2.09	
33	8.9050E+00	7.0010E+01	3.7275E+03	10	1.	1.60	
34	8.9500E+00	6.6400E+01	3.5354E+03	74	1.	-2.86	
35	9.5720E+00	5.6399E+01	3.0029E+03	10	1.	0.80	
36	1.0000E+01	4.9864E+01	2.6549E+03	10	1.	1.08	
37	1.0000E+01	5.0241E+01	2.5750E+03	89	1.	1.84	
38	1.4980E+01	1.4180E+01	7.5499E+02	30	2.	-6.05	
39	1.5000E+01	1.5382E+01	8.1900E+02	10	1.	2.31	
40	1.5810E+01	1.2400E+01	6.6022E+02	30	2.	-5.61	
41	1.6650E+01	1.0420E+01	5.5480E+02	30	2.	-5.60	
42	1.7446E+01	9.9672E+00	5.3059E+02	10	1.	3.57	
43	1.7460E+01	9.9600E+00	5.3331E+02	74	1.	3.78	
44	1.7480E+01	9.3800E+00	4.9942E+02	23	2.	-1.94	
45	1.9310E+01	7.0590E+00	3.7478E+02	30	2.	-1.51	
46	1.9600E+01	6.9911E+00	3.7223E+02	10	1.	2.27	
47	2.0000E+01	6.6142E+00	3.5216E+02	10	1.	2.49	
48	2.0000E+01	6.4758E+00	3.4479E+02	89	1.	0.34	
49	2.0169E+01	6.3752E+00	3.3944E+02	10	1.	1.27	
50	2.0250E+01	6.0810E+00	3.2377E+02	30	2.	-2.26	
51	2.1125E+01	5.6345E+00	3.0000E+02	10	1.	2.55	
52	2.2100E+01	4.6400E+00	2.4705E+02	74	1.	-3.65	
53	2.2105E+01	4.9703E+00	2.6462E+02	10	1.	3.27	
54	2.2724E+01	4.7320E+00	2.5195E+02	10	1.	6.55	
55	2.3819E+01	4.1269E+00	2.1973E+02	10	1.	6.47	
56	2.4942E+01	3.4960E+00	1.8614E+02	10	1.	2.94	
57	2.5000E+01	3.5522E+00	1.8807E+02	10	1.	4.70	
58	2.5000E+01	3.1080E+00	1.6548E+02	48	3.	-7.98	
59	2.5000E+01	3.4000E+00	1.8103E+02	74	1.	0.78	
60	2.8620E+01	2.2640E+00	1.2054E+02	15	1.	-1.81	
61	2.8622E+01	2.2740E+00	1.2108E+02	30	2.	-1.58	
62	3.0000E+01	2.0135E+00	1.0720E+02	90	1.	-0.61	
63	3.0000E+01	2.1178E+00	1.1276E+02	10	1.	4.54	
64	3.0040E+01	2.0350E+00	1.0835E+02	48	3.	0.83	
65	3.0970E+01	1.8260E+00	9.7223E+01	30	2.	-1.59	
66	3.2180E+01	1.6530E+00	8.8011E+01	30	2.	-1.10	
67	4.0000E+01	9.7753E-01	5.2047E+01	10	1.	2.82	
68	4.0000E+01	9.5294E-01	5.0758E+01	90	1.	0.24	
69	4.0340E+01	9.7640E-01	5.1987E+01	48	3.	2.96	

70	5.0060E+01	5.7110E-01	3.0407E+01	48	3.	1.02
71	6.0000E+01	4.0155E-01	2.1380E+01	93	1.	1.37
72	6.0030E+01	3.9750E-01	2.1164E+01	43	5.	0.44
73	7.0040E+01	3.0950E-01	1.6426E+01	40	5.	0.68
74	7.9960E+01	2.5440E-01	1.3545E+01	40	5.	-0.46
75	8.9920E+01	2.2530E-01	1.1996E+01	40	5.	1.09
76	1.0000E+02	1.9954E-01	1.0624E+01	90	1.	-0.63
77	1.0000E+02	1.9939E-01	1.0616E+01	10	1.	-0.70
78	1.0006E+02	2.0120E-01	1.0713E+01	40	5.	0.25
79	1.1487E+02	1.7730E-01	9.4401E+00	40	5.	-0.62
80	1.3031E+02	1.6530E-01	8.8011E+00	40	5.	1.25
81	1.4560E+02	1.5310E-01	8.1516E+00	48	3.	0.17
82	1.5000E+02	1.4965E-01	7.9679E+00	10	1.	-0.50
83	1.5000E+02	1.5053E-01	8.0149E+00	90	1.	0.09
84	2.0830E+02	1.2870E-01	6.8524E+00	48	3.	0.90
85	2.7910E+02	1.1160E-01	5.9420E+00	48	3.	-0.56
86	4.0000E+02	9.6460E-02	5.1359E+00	10	1.	-0.08
87	4.1180E+02	9.5100E-02	5.0635E+00	48	3.	-0.24
88	5.0000E+02	8.7670E-02	4.6679E+00	89	1.	-0.04
89	6.0000E+02	8.0904E-02	4.3076E+00	89	1.	-0.02
90	6.6200E+02	7.7320E-02	4.1168E+00	89	1.	0.00
91	7.0000E+02	7.5359E-02	4.0124E+00	89	1.	0.01
92	8.0000E+02	7.0872E-02	3.7735E+00	89	1.	0.00
93	9.0000E+02	6.6950E-02	3.5646E+00	89	1.	0.01
94	1.0000E+03	6.3620E-02	3.3878E+00	89	1.	0.01

91 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR CHLORINE

Z = 17

CONVERSION CONSTANT IS 5.007E+01

K-EDGE	2.822					
L-EDGES	0.298	0.202	0.200	0.	0.	
M-EDGES	0.017	0.010	0.010			
KEV	CM2/GM	BARNs/AT	SOURCE	HEIGHT	DIFF	
1	9.2900E+01	3.3000E+03	1.9428E+05	47	5.	-1.21
2	1.0000E+00	2.9128E+03	1.7149E+05	10	1.	4.92
3	1.2540E+00	1.6100E+03	9.4707E+04	47	5.	2.38
4	1.4870E+00	1.0100E+03	5.9465E+04	47	5.	-1.50
5	1.5000E+00	1.0287E+03	6.0565E+04	10	1.	2.54
6	2.0000E+00	4.6442E+02	2.7342E+04	90	1.	-0.15
7	2.8200E+00	1.7785E+02	1.0469E+04	90	1.	0.53
8	2.8230E+00	1.8060E+03	1.0633E+05	90	1.	9.14
9	2.8310E+00	1.7993E+03	1.0593E+05	90	1.	9.37
10	3.0000E+00	1.4733E+03	8.6740E+04	10	1.	2.86
11	4.0000E+00	7.1407E+02	4.2040E+04	89	1.	1.19
12	4.5090E+00	5.3686E+02	3.1607E+04	10	1.	3.61
13	4.9320E+00	3.2047E+02	2.4755E+04	10	1.	2.25
14	5.0000E+00	4.1989E+02	2.4720E+04	89	1.	5.78
15	5.0000E+00	3.9120E+02	2.3031E+04	10	1.	-1.45
16	5.4120E+00	3.0958E+02	1.8226E+04	10	1.	-3.71
17	5.4200E+00	3.1500E+02	1.8545E+04	74	1.	-1.63
18	5.8950E+00	2.5016E+02	1.4728E+04	10	1.	-2.30
19	5.9470E+00	2.4427E+02	1.4381E+04	10	1.	-2.34
20	6.0000E+00	2.4600E+02	1.4483E+04	89	1.	0.70
21	6.4000E+00	2.0386E+02	1.2002E+04	10	1.	-0.33
22	6.4900E+00	1.9598E+02	1.1538E+04	10	1.	-0.43
23	6.9250E+00	1.5P20E+02	9.3140E+03	10	1.	-3.93
24	7.0580E+00	1.5026E+02	8.8465E+03	10	1.	-3.85
25	7.4720E+00	1.5094E+02	7.7092E+03	10	1.	-2.01
26	7.6490E+00	1.2251E+02	7.2124E+03	10	1.	-2.24
27	8.0000E+00	1.0811E+02	6.3648E+03	89	1.	-2.42
28	8.0000E+00	1.0786E+02	6.3504E+03	10	1.	-2.64
29	8.0410E+00	1.0529E+02	6.1930E+03	10	1.	-3.57
30	8.0600E+00	1.0270E+02	6.0464E+03	74	1.	-5.32
31	8.2650E+00	9.7325E+01	5.7299E+03	10	1.	-3.66
32	8.6310E+00	8.7599E+01	5.1573E+03	10	1.	-1.97
33	8.9050E+00	7.9804E+01	4.6984E+03	10	1.	-2.43
34	8.9300E+00	7.6900E+01	4.5274E+03	74	1.	-5.23
35	9.5720E+00	6.4461E+01	3.7951E+03	10	1.	-3.34
36	1.0000E+01	5.6861E+01	3.3476E+03	10	1.	-3.53
37	1.0000E+01	5.7349E+01	3.3763E+03	89	1.	-2.73
38	1.5000E+01	1.7985E+01	1.0589E+03	89	1.	-1.07
39	1.5030E+01	1.7664E+01	1.0400E+03	10	1.	-2.83
40	1.5810E+01	1.5520E+01	9.1372E+02	30	2.	-0.23
41	1.6650E+01	1.3240E+01	7.7949E+02	30	2.	-0.82
42	1.7444E+01	1.1501E+01	6.7739E+02	10	1.	-1.17
43	1.7460E+01	1.1520E+01	6.7823E+02	74	1.	-0.73
44	1.7480E+01	1.0670E+01	6.2819E+02	23	2.	-7.75
45	1.7520E+01	1.1510E+01	6.8353E+02	30	2.	1.06
46	1.9310E+01	9.7890E+00	5.1744E+02	30	2.	1.74
47	1.9608E+01	8.0519E+00	4.7405E+02	10	1.	-2.53
48	1.9650E+01	8.1800E+00	4.8159E+02	74	1.	-0.36
49	2.0000E+01	7.6440E+00	4.5003E+02	10	1.	-1.97
50	2.0000E+01	7.6291E+00	4.6095E+02	89	1.	0.40
51	2.0169E+01	7.3518E+00	4.3283E+02	10	1.	-3.33
52	2.0250E+01	7.8110E+00	4.5987E+02	30	2.	3.94
53	2.1125E+01	6.4942E+00	5.8234E+02	10	1.	-2.03
54	2.2100E+01	5.7600E+00	3.3911E+02	74	1.	-0.72
55	2.2105E+01	5.7143E+00	3.3771E+02	10	1.	-1.27
56	2.2724E+01	5.4465E+00	3.2016E+02	10	1.	1.89
57	2.3819E+01	4.7496E+00	2.7963E+02	10	1.	1.97
58	2.4240E+01	4.6570E+00	2.7418E+02	30	2.	5.22
59	2.4512E+01	4.0272E+00	2.5710E+02	10	1.	-1.14
60	2.5000E+01	4.0713E+00	2.3969E+02	10	1.	0.62
61	2.5000E+01	4.1400E+00	2.4574E+02	74	1.	2.32
62	2.6390E+01	3.5690E+00	2.1012E+02	30	2.	3.11
63	3.0000E+01	2.4309E+00	1.4311E+02	10	1.	1.00
64	3.0000E+01	2.4499E+00	1.4423E+02	89	1.	1.79
65	3.2180E+01	2.0760E+00	1.2222E+02	30	2.	5.12
66	3.3453E+01	1.8270E+00	1.0756E+02	30	2.	2.84
67	3.4710E+01	1.6610E+00	9.7790E+01	30	2.	3.57
68	3.5900E+01	1.5220E+00	8.9636E+01	30	2.	4.06
69	3.7520E+01	1.3630E+00	8.0245E+01	30	2.	3.38

70	4.0000E+01	1.1095E+00	6.5318E+01	10	1.	0.87
71	4.0000E+01	1.1170E+00	6.5808E+01	89	1.	1.63
72	4.0070E+01	1.1580E+00	6.8176E+01	31	2.	5.77
73	5.0000E+01	6.4606E-01	5.8036E+01	89	1.	1.44
74	6.0000E+01	4.5512E-01	2.5617E+01	89	1.	0.72
75	8.0000E+01	2.6696E-01	1.5717E+01	89	1.	0.33
76	1.0000E+02	2.0205E-01	1.1895E+01	10	1.	-0.58
77	1.0000E+02	2.0333E-01	1.1971E+01	89	1.	0.06
78	1.5000E+02	1.4685E-01	8.6455E+00	10	1.	-0.43
79	1.5000E+02	1.4744E-01	8.6801E+00	89	1.	-0.03
80	2.0000E+02	1.2603E-01	7.4201E+00	89	1.	-0.19
81	3.0000E+02	1.0495E-01	6.1788E+00	89	1.	-0.21
82	4.0000E+02	9.2902E-02	5.4695E+00	10	1.	-0.08
83	5.0000E+02	8.4361E-02	4.9567E+00	89	1.	-0.04
84	6.0000E+02	7.7817E-02	4.5814E+00	89	1.	-0.02
85	6.6200E+02	7.4365E-02	4.3782E+00	89	1.	0.01
86	7.0000E+02	7.2476E-02	4.2670E+00	89	1.	0.01
87	8.0000E+02	6.8158E-02	4.0127E+00	89	1.	0.01
88	9.0000E+02	6.4374E-02	3.7899E+00	89	1.	0.02
89	1.0000E+03	6.1171E-02	3.6014E+00	89	1.	0.01

89 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR ARGON

Z = 18

CONVERSION CONSTANT IS 6.632E+01

K-EDGE	3.202	0.287	0.247	0.245	0.	0.	
L-EDGES			0.012	0.012			
M-EDGES		0.027					
KEV	CM2/GM		BARNs/AT	SOURCE	WEIGHT	DIFF	
1	6.7670E+01	8.9400E+03	5.9294E+05	47	5.	-4.24	
2	7.7800E+01	6.3900E+03	4.2381E+05	47	5.	-0.78	
3	9.2900E+01	4.0700E+03	2.6994E+05	47	5.	1.31	
4	9.3000E+01	4.0407E+03	2.6800E+05	37	2.	0.87	
5	9.3200E+01	4.0400E+03	2.6795E+05	29	3.	1.43	
6	1.0000E+00	3.3549E+03	2.2118E+05	10	1.	-0.98	
7	1.0120E+00	3.1964E+03	2.1200E+05	37	2.	-0.09	
8	1.0140E+00	3.2000E+03	2.1224E+05	29	3.	0.55	
9	1.0350E+00	2.7240E+03	1.8067E+05	72	1.	-10.07	
10	1.2553E+00	1.7709E+03	1.1739E+05	29	3.	-2.29	
11	1.2540E+00	1.8650E+03	1.2369E+05	1	1.	3.10	
12	1.2540E+00	1.8500E+03	1.2270E+05	47	5.	2.28	
13	1.3780E+00	1.3180E+03	8.7416E+04	72	1.	-6.38	
14	1.4867E+00	1.1500E+03	7.6273E+04	29	3.	-0.36	
15	1.4870E+00	1.1570E+03	7.6737E+04	1	1.	0.61	
16	1.4870E+00	1.1800E+03	7.8263E+04	47	5.	2.61	
17	1.5000E+00	1.1546E+03	7.6575E+04	10	1.	2.74	
18	1.5570E+00	1.0300E+03	6.8314E+04	29	3.	1.40	
19	1.5690E+00	1.0110E+03	6.7054E+04	71	1.	1.62	
20	1.5900E+00	9.7100E+02	6.4401E+04	71	1.	1.17	
21	1.6000E+00	9.6100E+02	6.3738E+04	71	1.	1.84	
22	1.6210E+00	9.3300E+02	6.1881E+04	71	1.	2.43	
23	1.6640E+00	8.6000E+02	5.7039E+04	71	1.	1.35	
24	1.6750E+00	8.4000E+02	5.5712E+04	71	1.	0.77	
25	1.6870E+00	8.3000E+02	5.5045E+04	71	1.	0.51	
26	1.6980E+00	8.1300E+02	5.3922E+04	71	1.	1.20	
27	1.7100E+00	7.9500E+02	5.2728E+04	71	1.	0.86	
28	1.7220E+00	7.8100E+02	5.1799E+04	71	1.	0.98	
29	1.7340E+00	7.6500E+02	5.0804E+04	71	1.	0.91	
30	1.7460E+00	7.5000E+02	4.9743E+04	71	1.	0.67	
31	1.7580E+00	7.3900E+02	4.9014E+04	71	1.	1.04	
32	1.7710E+00	7.2600E+02	4.8152E+04	71	1.	1.27	
33	1.7710E+00	6.8399E+02	4.5359E+04	72	1.	-4.61	
34	1.7780E+00	7.6200E+02	5.0539E+04	6	1.	7.43	
35	1.7780E+00	7.6800E+02	4.9611E+04	1	1.	5.45	
36	1.7840E+00	7.1200E+02	4.7223E+04	71	1.	1.30	
37	1.7970E+00	6.9700E+02	4.6228E+04	71	1.	1.13	
38	1.8100E+00	6.7900E+02	4.4437E+04	71	1.	-0.08	
39	1.6230E+00	6.5800E+02	4.3641E+04	71	1.	-0.75	
40	1.8570E+00	6.3200E+02	4.1917E+04	71	1.	-2.68	
41	1.8500E+00	6.3000E+02	4.1794E+04	71	1.	-1.12	
42	1.8640E+00	6.0800E+02	4.0325E+04	71	1.	-2.61	
43	1.9220E+00	5.6400E+02	3.7407E+04	71	1.	-1.85	
44	1.9370E+00	5.5700E+02	3.6943E+04	71	1.	-1.01	
45	1.9520E+00	5.4100E+02	3.5881E+04	71	1.	-1.83	
46	1.9680E+00	5.2500E+02	3.4820E+04	71	1.	-2.61	
47	1.9840E+00	5.1800E+02	3.4356E+04	71	1.	-1.78	
48	2.0000E+00	5.2591E+02	3.4681E+04	10	1.	1.90	
49	2.0000E+00	5.0400E+02	3.3427E+04	71	1.	-2.54	
50	2.0160E+00	4.8600E+02	3.2234E+04	71	1.	-3.74	
51	2.0100E+00	4.3400E+02	2.8785E+04	71	1.	-3.69	
52	2.1190E+00	4.2600E+02	2.8254E+04	71	1.	-3.22	
53	2.2930E+00	3.1500E+02	2.0892E+04	29	3.	-11.09	
54	2.2930E+00	3.6000E+02	2.3877E+04	1	1.	1.61	
55	2.3840E+00	3.0600E+02	2.0428E+04	71	1.	-3.26	
56	2.3950E+00	3.2400E+02	2.1489E+04	1	1.	3.96	
57	2.4070E+00	3.0600E+02	2.0295E+04	71	1.	-1.32	
58	2.4310E+00	3.0000E+02	1.9897E+04	71	1.	-0.56	
59	2.4550E+00	2.9500E+02	1.9566E+04	71	1.	0.44	
60	2.4800E+00	2.8520E+02	1.8916E+04	72	1.	-0.16	
61	2.4800E+00	2.8600E+02	1.8969E+04	71	1.	0.12	
62	2.5050E+00	2.7200E+02	1.8040E+04	71	1.	-2.12	
63	2.5830E+00	2.5100E+02	1.6647E+04	71	1.	-1.75	
64	2.6100E+00	2.4700E+02	1.6382E+04	71	1.	-0.52	
65	2.6380E+00	2.4500E+02	1.6249E+04	71	1.	1.61	
66	2.6660E+00	2.3800E+02	1.5785E+04	71	1.	1.61	
67	2.6950E+00	2.3200E+02	1.5387E+04	71	1.	2.03	
68	2.7250E+00	2.2700E+02	1.5056E+04	71	1.	2.90	
69	2.7550E+00	2.1900E+02	1.4525E+04	71	1.	2.30	

70	2.7860E+01	2.1200E+02	1.4061E+04	71	1.	2.11
71	2.8180E+01	2.0690E+02	1.3665E+04	71	1.	2.58
72	2.8380E+01	2.0200E+02	1.3398E+04	71	1.	2.35
73	2.8500E+01	2.0300E+02	1.3464E+04	71	1.	4.06
74	2.9520E+01	1.8300E+02	1.2137E+04	71	1.	3.28
75	2.9640E+01	1.7400E+02	1.1540E+04	29	3.	1.14
76	2.9840E+01	1.7430E+02	1.1560E+04	1	1.	1.32
77	2.9870E+01	1.7900E+02	1.1072E+04	71	1.	4.34
78	2.9910E+01	1.7100E+02	1.1541E+04	6	1.	0.04
79	3.0000E+01	1.7146E+02	1.1372E+04	19	1.	1.14
80	3.0240E+01	1.7200E+02	1.1408E+04	71	1.	5.72
81	3.0610E+01	1.6900E+02	1.0612E+04	71	1.	-0.21
82	3.1000E+01	1.5140E+02	1.0042E+04	72	1.	-2.20
83	3.1000E+01	1.5600E+02	1.0347E+04	71	1.	0.77
84	3.1390E+01	1.5300E+02	1.0148E+04	71	1.	2.31
85	3.1420E+01	1.5100E+02	1.0015E+04	6	1.	1.24
86	3.1510E+01	1.5270E+02	1.0128E+04	1	1.	3.26
87	3.1790E+01	1.5100E+02	1.0015E+04	71	1.	4.58
88	3.1960E+01	1.3500E+02	8.9538E+03	46	3.	-5.11
89	3.2000E+01	1.4700E+02	9.7497E+03	6	1.	3.68
90	3.2220E+01	1.2000E+03	7.9509E+04	46	3.	-11.92
91	3.3060E+01	1.3400E+03	8.8875E+04	71	1.	4.96
92	3.3360E+01	1.3200E+03	8.7548E+04	6	1.	5.78
93	3.3510E+01	1.2950E+03	8.5895E+04	71	1.	4.96
94	3.3970E+01	1.2620E+03	8.3701E+04	71	1.	5.86
95	3.4440E+01	1.2100E+03	8.0253E+04	1	1.	5.08
96	3.4920E+01	1.1650E+03	7.7268E+04	71	1.	4.77
97	3.5940E+01	1.0890E+03	7.2227E+04	71	1.	5.52
98	3.6460E+01	1.0490E+03	6.9574E+04	71	1.	5.20
99	3.6620E+01	1.0250E+03	6.7983E+04	1	1.	5.93
100	3.7010E+01	1.0980E+03	6.6955E+04	71	1.	4.98
101	3.7570E+01	9.7500E+02	6.4534E+04	71	1.	5.24
102	3.8150E+01	9.3800E+02	6.2212E+04	71	1.	5.46
103	4.0000E+01	8.0437E+02	5.3349E+04	90	1.	1.81
104	4.0650E+01	7.9000E+02	5.2396E+04	71	1.	4.40
105	4.1330E+01	7.5600E+02	5.0141E+04	71	1.	4.35
106	4.2750E+01	6.9600E+02	4.6162E+04	71	1.	4.95
107	4.3500E+01	6.7500E+02	4.4769E+04	71	1.	6.52
108	4.4280E+01	6.5600E+02	4.3509E+04	71	1.	8.46
109	4.5290E+01	5.8416E+02	3.8744E+04	10	1.	1.27
110	4.9320E+01	4.5731E+02	3.0331E+04	10	1.	0.25
111	4.9590E+01	4.7800E+02	3.1703E+04	71	1.	6.29
112	5.0000E+01	4.2319E+02	2.8068E+04	10	1.	-3.85
113	5.0000E+01	4.3182E+02	2.8641E+04	90	1.	-1.88
114	5.1660E+01	4.0900E+02	2.7127E+04	71	1.	1.48
115	5.3900E+01	3.6200E+02	2.4009E+04	71	1.	0.71
116	5.4120E+01	3.3698E+02	2.2350E+04	1	1.	-5.21
117	5.4140E+01	3.5400E+02	2.3479E+04	1	1.	-0.33
118	5.4200E+01	3.3940E+02	2.2510E+04	71	1.	-4.15
119	5.4280E+01	3.4660E+02	2.2816E+04	5	1.	-2.47
120	5.5100E+01	3.1700E+02	2.3015E+04	71	1.	2.44
121	5.7660E+01	3.0200E+02	2.0030E+04	71	1.	0.76
122	5.8950E+01	2.7301E+02	1.8107E+04	10	1.	-3.32
123	5.9040E+01	2.8900E+02	1.9168E+04	71	1.	2.77
124	5.9460E+01	2.8200E+02	1.8703E+04	1	1.	2.21
125	5.9470E+01	2.6649E+02	1.7075E+04	10	1.	-3.36
126	6.0000E+01	2.6271E+02	1.7424E+04	10	1.	-2.43
127	6.0000E+01	2.6441E+02	1.7957E+04	90	1.	-1.80
128	6.1990E+01	2.4800E+02	1.6448E+04	71	1.	0.84
129	6.4000E+01	2.2235E+02	1.4747E+04	10	1.	-1.22
130	6.4900E+01	2.1375E+02	1.4177E+04	10	1.	-1.28
131	6.9250E+01	1.7270E+02	1.1454E+04	10	1.	-4.51
132	7.0580E+01	1.6403E+02	1.0879E+04	10	1.	-4.39
133	7.4720E+01	1.4331E+02	9.5047E+03	10	1.	-2.16
134	7.6490E+01	1.3432E+02	8.9086E+03	10	1.	-2.15
135	8.0000E+01	1.1770E+02	7.8066E+03	90	1.	-2.91
136	8.0000E+01	1.1867E+02	7.8710E+03	10	1.	-2.11
137	8.0000E+01	1.2500E+02	8.1579E+03	77	2.	1.46
138	8.0410E+01	1.1536E+02	7.6515E+03	10	1.	-3.44
139	8.0480E+01	1.1806E+02	7.8300E+03	57	2.	-0.94
140	8.0600E+01	1.1400E+02	7.5610E+03	74	1.	-3.94
141	8.0670E+01	1.1200E+02	7.4285E+03	6	1.	-5.39
142	8.2650E+01	1.0665E+02	7.0723E+03	10	1.	-3.48
143	8.6510E+01	9.3281E+01	6.3858E+03	10	1.	-1.39
144	8.9050E+01	8.7874E+01	5.8282E+03	10	1.	-1.63
145	8.9300E+01	8.5700E+01	5.6840E+03	74	1.	-3.29
146	9.0000E+01	8.4000E+01	5.5712E+03	77	2.	-3.08

147	9.5720E+00	7.1170E+01	4.7203E+03	10	1.	-2.15
148	1.0000E+01	6.2585E+01	4.1509E+03	89	1.	-2.56
149	1.0000E+01	6.2671E+01	4.1566E+03	10	1.	-2.43
150	1.0000E+01	6.3600E+01	4.1784E+03	77	2.	-1.92
151	1.1000E+01	4.7800E+01	3.1705E+03	77	2.	-1.66
152	1.2000E+01	3.6800E+01	2.4407E+03	77	2.	-2.41
153	1.3000E+01	2.9300E+01	1.9435E+03	77	2.	-1.91
154	1.4000E+01	2.4460E+01	1.6223E+03	77	2.	1.55
155	1.5000E+01	1.9600E+01	1.2999E+03	10	1.	-0.63
156	1.5000E+01	2.0310E+01	1.3470E+03	77	2.	2.97
157	1.7000E+01	1.2590E+01	8.3502E+02	77	2.	-7.51
158	1.7444E+01	1.2822E+01	8.5039E+02	10	1.	1.64
159	1.7460E+01	1.2980E+01	8.6089E+02	74	1.	3.17
160	1.7480E+01	1.2200E+01	8.0916E+02	76	2.	-2.70
161	1.7480E+01	1.2200E+01	8.0916E+02	8	4.	-2.70
162	1.9608E+01	8.5691E+00	5.9487E+02	10	1.	0.25
163	2.0000E+01	8.3190E+00	5.5175E+02	89	1.	-1.48
164	2.0000E+01	8.5355E+00	5.6611E+02	10	1.	1.09
165	2.0000E+01	8.5100E+00	5.6442E+02	77	2.	0.78
166	2.0169E+01	8.2002E+00	5.4387E+02	10	1.	-0.42
167	2.1125E+01	7.2400E+00	4.8019E+02	10	1.	0.89
168	2.2100E+01	6.8900E+00	4.5698E+02	74	1.	9.72
169	2.2105E+01	6.3785E+00	4.2305E+02	10	1.	1.65
170	2.2724E+01	6.0644E+00	4.0222E+02	10	1.	4.84
171	2.3812E+01	5.2899E+00	3.5085E+02	10	1.	5.00
172	2.4000E+01	5.2300E+00	3.4688E+02	77	2.	6.14
173	2.4942E+01	4.4926E+00	2.9797E+02	10	1.	2.01
174	2.5000E+01	4.5597E+00	3.0169E+02	10	1.	3.78
175	3.0000E+01	2.7029E+00	1.7927E+02	10	1.	4.21
176	3.0000E+01	2.6540E+00	1.7603E+02	89	1.	2.32
177	4.0000E+01	1.2243E+00	8.1200E+01	10	1.	1.21
178	4.0000E+01	1.2180E+00	8.0783E+01	89	1.	5.67
179	4.2960E+01	1.0100E+00	6.6988E+01	28	5.	3.54
180	5.0000E+01	7.0090E-01	4.6487E+01	89	1.	4.35
181	6.0000E+01	4.6135E-01	3.0599E+01	89	1.	2.79
182	8.0000E+01	2.7177E-01	1.8025E+01	89	1.	1.17
183	8.6540E+01	2.4300E-01	1.6117E+01	28	5.	1.30
184	1.0000E+02	2.0123E-01	1.3347E+01	10	1.	3.22
185	1.0000E+02	2.0172E-01	1.3379E+01	89	1.	0.46
186	1.2300E+02	1.6300E-01	1.0811E+01	28	5.	-0.50
187	1.5000E+02	1.4138E-01	9.3772E+00	10	1.	-0.27
188	1.5000E+02	1.4149E-01	9.3840E+00	89	1.	-0.26
189	2.0000E+02	1.1989E-01	7.9516E+00	89	1.	-0.18
190	3.0000E+02	9.9211E-02	6.5801E+00	89	1.	-0.13
191	4.0000E+02	8.7939E-02	5.8060E+00	10	1.	-0.09
192	5.0000E+02	7.9422E-02	5.2676E+00	89	1.	-0.04
193	6.0000E+02	7.3220E-02	4.8553E+00	89	1.	-0.02
194	6.6200E+02	6.9958E-02	4.6359E+00	89	1.	0.01
195	7.0000E+02	6.8174E-02	4.5216E+00	89	1.	0.01
196	8.0000E+02	6.4097E-02	4.2512E+00	89	1.	0.01
197	9.0000E+02	6.0537E-02	4.0151E+00	89	1.	0.02
198	1.0000E+03	5.7524E-02	3.8152E+00	89	1.	0.02

198 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR CALCIUM

Z = 20

CONVERSION CONSTANT IS 6.655E+01

K-EDGE	4.150					
L-EDGES	0.400	0.350	0.346	0.005	0.005	
M-EDGES	0.044	0.025	0.025			
	KEV	CM2/GM	BARNs/AT	SOURCE	HEIGHT	DIFF
1	1.0000E+00	5.2374E+03	3.4855E+05	10	1.	5.81
2	1.0001E+00	4.9705E+03	3.3132E+05	90	1.	0.60
3	1.5000E+00	1.7474E+03	1.1629E+05	10	1.	0.71
4	1.5000E+00	1.6840E+03	1.1207E+05	90	1.	-2.95
5	2.0000E+00	8.4375E+02	5.6152E+04	10	1.	4.14
6	2.0000E+00	7.9591E+02	5.2968E+04	90	1.	-1.76
7	3.0000E+00	2.5863E+02	1.7877E+04	10	1.	-0.71
8	3.0000E+00	2.7089E+02	1.8028E+04	90	1.	0.12
9	4.0390E+00	1.1037E+03	7.3453E+04	90	1.	3.26
10	4.5690E+00	8.4362E+02	5.6143E+04	10	1.	4.86
11	4.9320E+00	6.5759E+02	4.3765E+04	10	1.	3.02
12	5.0000E+00	6.0133E+02	4.0018E+04	10	1.	-2.41
13	5.0000E+00	6.9517E+02	4.6263E+04	89	1.	12.82
14	5.4120E+00	4.9303E+02	3.2811E+04	10	1.	-1.31
15	5.8950E+00	3.9705E+02	2.6424E+04	10	1.	-0.34
16	5.9470E+00	3.8745E+02	2.5785E+04	10	1.	-0.46
17	6.0000E+00	3.9909E+02	2.6554E+04	89	1.	4.94
18	6.4000E+00	3.2141E+02	2.1390E+04	10	1.	0.77
19	6.4900E+00	3.0897E+02	2.0562E+04	10	1.	0.62
20	6.9250E+00	2.5082E+02	1.6692E+04	10	1.	-2.55
21	7.0580E+00	2.3823E+02	1.5854E+04	10	1.	-2.53
22	7.4720E+00	2.0926E+02	1.3926E+04	10	1.	-0.04
23	7.6490E+00	1.9636E+02	1.3068E+04	10	1.	-0.03
24	8.0000E+00	1.7292E+02	1.1508E+04	89	1.	-0.56
25	8.0000E+00	1.7425E+02	1.1597E+04	10	1.	0.21
26	8.0410E+00	1.6208E+02	1.1252E+04	10	1.	-1.57
27	8.2650E+00	1.5629E+02	1.0401E+04	10	1.	-1.57
28	8.6310E+00	1.4128E+02	9.4023E+03	10	1.	0.41
29	8.9050E+00	1.2936E+02	8.6091E+03	10	1.	0.30
30	9.5720E+00	1.0532E+02	7.0094E+03	10	1.	-0.14
31	1.0000E+01	9.3266E+01	6.2059E+03	89	1.	-0.13
32	1.0000E+01	9.2572E+01	6.1607E+03	10	1.	-0.87
33	1.0000E+01	9.1481E+01	6.0881E+03	89	1.	-2.04
34	1.5000E+01	2.9305E+01	1.9503E+03	10	1.	-0.41
35	1.5000E+01	3.0013E+01	1.9974E+03	89	1.	1.99
36	1.7444E+01	1.9348E+01	1.2876E+03	10	1.	1.84
37	1.9510E+01	1.2990E+01	8.6449E+02	30	2.	-8.35
38	1.9608E+01	1.3548E+01	9.0159E+02	10	1.	-0.11
39	2.0000E+01	1.2916E+01	8.5954E+02	10	1.	0.80
40	2.0000E+01	1.2569E+01	8.3647E+02	88	1.	-1.91
41	2.0169E+01	1.2417E+01	8.2635E+02	10	1.	-0.58
42	2.0250E+01	1.1550E+01	7.7132E+02	30	2.	-6.20
43	2.1125E+01	1.0952E+01	7.2887E+02	10	1.	0.30
44	2.1210E+01	1.0360E+01	6.8946E+02	30	2.	-4.01
45	2.2105E+01	9.6447E+00	6.4186E+02	10	1.	0.80
46	2.2200E+01	9.1600E+00	6.0950E+02	30	2.	-3.07
47	2.2724E+01	9.1546E+00	6.0924E+02	10	1.	3.67
48	2.3210E+01	8.0540E+00	5.3600E+02	30	2.	-3.02
49	2.3819E+01	7.9938E+00	5.3199E+02	10	1.	3.74
50	2.4240E+01	7.0360E+00	4.6825E+02	30	2.	-3.95
51	2.4942E+01	6.8204E+00	4.5390E+02	10	1.	1.10
52	2.5000E+01	5.8645E+00	4.5682E+02	10	1.	2.43
53	2.5300E+01	5.5120E+00	4.2005E+02	30	2.	-2.52
54	2.6390E+01	5.5940E+00	3.7228E+02	30	2.	-2.50
55	2.7490E+01	4.9760E+00	3.3115E+02	30	2.	-2.55
56	3.0000E+01	4.0730E+00	2.7106E+02	10	1.	2.14
57	3.0000E+01	3.5226E+00	2.6505E+02	88	1.	-0.12
58	3.5450E+01	2.8350E+00	1.8867E+02	30	2.	-3.39
59	3.4700E+01	2.5430E+00	1.5924E+02	30	2.	-3.82
60	3.7520E+01	2.0910E+00	1.3916E+02	30	2.	-3.30
61	4.0000E+01	1.8277E+00	1.2163E+02	10	1.	2.01
62	4.0000E+01	1.8023E+00	1.1994E+02	88	1.	0.59
63	4.0070E+01	1.8190E+00	1.2105E+02	30	2.	2.00
64	5.0000E+01	1.0091E+00	6.7155E+01	88	1.	0.76
65	5.7460E+01	7.4160E-01	4.9354E+01	30	2.	3.58
66	5.9070E+01	6.9840E-01	4.6479E+01	30	2.	3.92
67	6.0000E+01	6.4861E-01	4.3165E+01	88	1.	-0.02
68	6.0750E+01	6.3990E-01	4.2585E+01	30	2.	1.44
69	6.6500E+01	5.5080E-01	3.6656E+01	30	2.	6.28

70	6.8520E+01	5.1440E+01	3.4235E+01	30	2.	5.60
71	7.0000E+01	4.6349E+01	3.0846E+01	88	1.	-0.65
72	7.0380E+01	4.9310E+01	3.2816E+01	30	2.	6.05
73	7.2440E+01	4.6820E+01	3.1159E+01	30	2.	7.38
74	8.0000E+01	3.5777E+01	2.3810E+01	88	1.	-1.45
75	9.0000E+01	2.9457E+01	1.9591E+01	88	1.	-1.41
76	9.1680E+01	3.1970E+01	2.0611E+01	30	2.	6.69
77	9.7130E+01	2.7930E+01	1.8587E+01	30	2.	4.65
78	1.0000E+02	2.5199E+01	1.6770E+01	10	1.	-1.74
79	1.0000E+02	2.5405E+01	1.6907E+01	90	1.	-0.93
80	1.0000E+02	2.5387E+01	1.6895E+01	90	1.	-1.00
81	1.5000E+02	1.6497E+01	1.0979E+01	10	1.	-1.45
82	2.0000E+02	1.3666E+01	9.0949E+00	90	1.	-3.61
83	2.0000E+02	1.3668E+01	9.0963E+00	90	1.	-0.59
84	3.0000E+02	1.1103E+01	7.3888E+00	90	1.	-0.34
85	3.0000E+02	1.1103E+01	7.3893E+00	90	1.	-0.33
86	3.0000E+02	1.1099E+01	7.3864E+00	88	1.	-0.37
87	4.0000E+02	9.7438E-02	6.4845E+00	10	1.	-0.21
88	5.0000E+02	8.8227E-02	5.8715E+00	88	1.	-0.10
89	6.0000E+02	8.1286E-02	5.4096E+00	90	1.	-3.01
90	6.0000E+02	8.1259E-02	5.4078E+00	88	1.	-0.05
91	6.6200E+02	7.7615E-02	5.1653E+00	88	1.	0.00
92	7.0000E+02	7.5622E-02	5.0327E+00	88	1.	0.01
93	8.0000E+02	7.1069E-02	4.7297E+00	90	1.	0.00
94	8.0000E+02	7.1073E-02	4.7299E+00	88	1.	0.01
95	9.0000E+02	6.7110E-02	4.4662E+00	88	1.	0.03
96	1.0000E+03	6.5749E-02	4.2425E+00	90	1.	0.01
97	1.0000E+03	6.5749E-02	4.2425E+00	90	1.	0.01
98	1.0000E+03	6.5758E-02	4.2431E+00	88	1.	0.03

98 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR SCANDIUM

Z • 21

CONVERSION CONSTANT IS 7.465E+01

K-EDGE	4.493					
L-EDGES	0.439	0.407	0.403			
M-EDGES	0.054	0.032	0.032	0.007	0.007	
KEV	CM2/GM	BARNs/AT	SOURCE	HEIGHT	DIFF	
1	1.0000E+00	5.7086E+03	4.2617E+05	10	1.	6.93
2	1.0001E+00	5.4590E+03	4.0753E+05	90	1.	2.28
3	1.4900E+00	2.0000E+03	1.4931E+05	7	3.	0.54
4	1.5000E+00	1.8844E+03	1.4068E+05	10	1.	-3.69
5	1.5000E+00	1.8679E+03	1.3945E+05	90	1.	-4.53
6	2.0000E+00	9.1173E+02	6.8063E+04	10	1.	-1.67
7	2.0400E+00	9.0000E+02	6.7188E+04	7	3.	2.44
8	2.3100E+00	6.3606E+02	4.7479E+04	7	3.	1.45
9	2.9800E+00	3.1600E+02	2.3590E+04	7	3.	0.52
10	3.0000E+00	2.9537E+02	2.2051E+04	90	1.	-4.32
11	3.0000E+00	2.9448E+02	2.1984E+04	10	1.	-4.61
12	3.4400E+00	2.1200E+02	1.5826E+04	7	3.	1.10
13	4.0000E+00	1.3630E+02	1.0175E+04	90	1.	-0.58
14	4.3100E+00	1.4100E+02	1.0526E+04	7	3.	3.59
15	4.4910E+00	9.4584E+01	7.0610E+03	90	1.	-3.70
16	4.4920E+00	9.4798E+01	7.0770E+03	90	1.	-3.42
17	4.4940E+00	8.6946E+02	6.4908E+04	90	1.	5.24
18	4.5090E+00	8.9146E+02	6.6550E+04	10	1.	0.79
19	4.9320E+00	6.9227E+02	5.1680E+04	10	1.	5.25
20	4.9500E+00	6.6800E+02	4.9868E+04	7	3.	2.47
21	5.0000E+00	6.2906E+02	4.6961E+04	10	1.	-1.10
22	5.4120E+00	5.2767E+02	5.9392E+04	10	1.	1.30
23	5.8950E+00	4.2135E+02	3.1455E+04	10	1.	0.35
24	5.9000E+00	4.1800E+02	3.1205E+04	7	3.	-0.24
25	5.9470E+00	4.1114E+02	3.0693E+04	10	1.	0.31
26	6.0000E+00	4.2551E+02	3.1766E+04	89	1.	5.95
27	6.4000E+00	3.3914E+02	2.5325E+04	10	1.	0.09
28	6.4900E+00	3.2611E+02	2.4345E+04	10	1.	-0.19
29	6.9250E+00	2.6574E+02	1.9838E+04	10	1.	-3.55
30	6.9300E+00	2.6900E+02	2.0082E+04	7	3.	-2.18
31	7.0580E+00	2.5239E+02	1.8842E+04	10	1.	-3.70
32	7.4720E+00	2.2235E+02	1.6599E+04	10	1.	-1.46
33	7.4800E+00	2.2000E+02	1.6424E+04	7	3.	-2.22
34	7.6490E+00	2.0848E+02	1.5564E+04	12	1.	-1.74
35	8.0000E+00	1.8325E+02	1.5661E+04	89	1.	-2.84
36	8.0000E+00	1.8520E+02	1.3826E+04	10	1.	-1.81
37	8.0410E+00	1.8011E+02	1.3446E+04	10	1.	-3.16
38	8.0500E+00	1.8300E+02	1.3662E+04	7	3.	-1.31
39	8.2650E+00	1.6649E+02	1.2429E+04	10	1.	-3.51
40	8.6310E+00	1.5020E+02	1.1213E+04	10	1.	-2.02
41	8.9050E+00	1.3772E+02	1.0281E+04	10	1.	-2.17
42	9.5700E+00	1.1500E+02	8.5851E+03	7	3.	-0.58
43	9.5720E+00	1.1241E+02	8.3921E+03	10	1.	-2.76
44	1.0000E+01	9.8812E+01	7.3756E+03	10	1.	-3.71
45	1.0000E+01	9.8843E+01	7.3789E+03	90	1.	-3.68
46	1.0000E+01	9.9581E+01	7.4191E+03	89	1.	-3.15
47	1.0550E+01	9.1300E+01	6.8158E+03	7	3.	3.55
48	1.1220E+01	7.4000E+01	5.5243E+03	7	3.	-0.08
49	1.2610E+01	5.6500E+01	4.2179E+03	7	3.	6.15
50	1.5000E+01	3.1455E+01	2.3482E+05	10	1.	-3.61
51	1.5000E+01	3.2238E+01	2.4067E+03	89	1.	-1.21
52	1.5770E+01	2.9600E+01	2.2097E+03	7	3.	4.95
53	1.7444E+01	2.0846E+01	1.5562E+03	10	1.	-0.91
54	1.9608E+01	1.4622E+01	1.0916E+03	10	1.	-2.50
55	2.0000E+01	1.3939E+01	1.0406E+03	10	1.	-1.60
56	2.0000E+01	1.3728E+01	1.0249E+03	90	1.	-3.09
57	2.0000E+01	1.4204E+01	1.0604E+03	89	1.	0.27
58	2.0159E+01	1.3415E+01	1.0015E+03	10	1.	-2.91
59	2.1257E+01	1.1827E+01	8.8291E+02	10	1.	-1.84
60	2.2105E+01	1.0415E+01	7.7750E+02	10	1.	-1.19
61	2.2724E+01	9.8773E+00	7.3737E+02	10	1.	1.64
62	2.3819E+01	8.6307E+00	6.4431E+02	10	1.	1.97
63	2.4942E+01	7.3842E+00	5.5125E+02	10	1.	-0.17
64	2.5000E+01	7.4123E+00	5.5335E+02	10	1.	0.89
65	3.0000E+01	4.3951E+00	3.2811E+02	10	1.	1.34
66	5.0000E+01	4.4478E+00	3.3204E+02	89	1.	2.55
67	4.0000E+01	1.9685E+00	1.4696E+02	10	1.	2.98
68	4.0000E+01	1.9530E+00	1.4580E+02	89	1.	2.17
69	5.0000E+01	1.0861E+00	8.1080E+01	89	1.	3.61

70	6.0000E+01	6.8570E-01	5.1190E+01	89	1.	2.79
71	8.0000E+01	3.6864E-01	2.7520E+01	89	1.	1.70
72	1.0000E+02	2.5235E-01	1.0839E+01	10	1.	0.62
73	1.0000E+02	2.5766E-01	1.8862E+01	89	1.	0.75
74	1.5000E+02	1.5927E-01	1.1890E+01	10	1.	-0.24
75	3.0000E+02	1.0455E-01	7.8048E+00	89	1.	-0.18
76	4.0000E+02	9.1504E-02	6.8310E+00	10	1.	-0.14
77	6.0000E+02	7.6173E-02	5.6866E+00	89	1.	-0.03
78	6.6290E+02	7.2736E-02	5.4300E+00	89	1.	0.00
79	7.0000E+02	7.0861E-02	5.2900E+00	89	1.	0.01
80	8.0000E+02	6.6585E-02	4.9706E+00	89	1.	0.00
81	9.0000E+02	6.2860E-02	4.6927E+00	89	1.	0.02
82	1.0000E+03	5.9714E-02	4.4578E+00	89	1.	0.02

82 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR TITANIUM

Z = 22

CONVERSION CONSTANT 'S' 7.955E+01

K-EDGE	4.365						
L-EDGES	0.381	0.460	0.454				
M-EDGES	0.039	0.033	0.033	0.002	0.002		
	KEV	CM2/GM	BARNs/AT	SOURCE	HEIGHT	DIFF	
1	8.0000E-01	1.0314E+04	8.2030E+05	90	1.	-6.29	
2	1.0000E+00	6.0363E+03	4.8010E+05	90	1.	-2.60	
3	1.0000E+00	6.0086E+03	4.7790E+05	90	1.	-3.05	
4	1.0000E+00	6.0086E+03	4.7790E+05	90	1.	-3.05	
5	1.0000E+00	6.0363E+03	4.8010E+05	90	1.	-2.60	
6	1.0000E+00	6.4420E+03	5.1237E+05	10	1.	3.26	
7	1.4870E+00	2.2800E+03	1.8134E+05	83	3.	2.08	
8	1.4900E+00	2.2560E+03	1.7784E+05	7	3.	0.63	
9	1.5000E+00	2.1208E+03	1.6867E+05	10	1.	-2.90	
10	1.7400E+00	1.5150E+03	1.2050E+05	83	3.	2.58	
11	1.9230E+00	1.1560E+03	9.1942E+04	83	3.	1.87	
12	2.0000E+00	1.0184E+03	8.1002E+04	10	1.	-0.47	
13	2.0140E+00	1.0380E+03	8.2557E+04	82	3.	3.37	
14	2.0435E+00	9.3400E+02	7.4286E+04	7	3.	-3.71	
15	2.0500E+00	9.8100E+02	7.8024E+04	83	3.	2.48	
16	2.2936E+00	7.2200E+02	5.7424E+04	83	3.	2.05	
17	2.3070E+00	6.7770E+02	5.3901E+04	5	2.	-2.63	
18	2.3086E+00	7.2500E+02	5.7384E+04	82	3.	3.79	
19	2.3100E+00	6.5800E+02	5.2334E+04	7	3.	-5.13	
20	2.3120E+00	6.8710E+02	5.4649E+04	12	2.	-0.70	
21	2.4270E+00	6.1300E+02	4.8755E+04	83	3.	0.55	
22	2.6220E+00	4.9550E+02	3.9409E+04	5	2.	0.53	
23	2.6220E+00	5.0960E+02	4.0531E+04	82	3.	3.39	
24	2.6270E+00	4.7330E+02	3.7644E+04	12	2.	-3.48	
25	2.8390E+00	4.9200E+02	3.1973E+04	83	3.	1.03	
26	2.9800E+00	3.4400E+02	2.7360E+04	7	3.	-1.50	
27	3.0000E+00	3.3661E+02	2.6725E+04	10	1.	-2.04	
28	3.2070E+00	2.7700E+02	2.2031E+04	83	3.	3.87	
29	3.3150E+00	2.5810E+02	2.0528E+04	5	2.	-1.10	
30	3.3140E+00	2.5930E+02	2.0623E+04	82	3.	-0.56	
31	3.4400E+00	2.2800E+02	1.8134E+04	7	3.	-3.11	
32	5.6910E+00	1.9290E+02	1.5342E+04	5	2.	-0.51	
33	5.6920E+00	2.0040E+02	1.5939E+04	82	3.	3.43	
34	5.6970E+00	1.8760E+02	1.4921E+04	12	2.	-2.81	
35	4.0100E+00	1.5300E+02	1.2169E+04	7	3.	-0.92	
36	4.0120E+00	1.5030E+02	1.1954E+04	82	3.	-2.54	
37	4.5110E+00	1.1400E+02	9.0570E+03	83	3.	2.49	
38	4.5110E+00	1.0850E+02	8.6295E+03	82	3.	-2.45	
39	4.5120E+00	1.0900E+02	8.6695E+03	5	2.	-1.94	
40	4.5200E+00	1.0600E+02	8.4307E+03	26	5.	-4.17	
41	4.9500E+00	9.0800E+01	7.2218E+03	7	3.	5.66	
42	4.9510E+00	8.7900E+01	6.9911E+03	5	2.	2.35	
43	4.9520E+00	8.9300E+01	7.1025E+03	83	3.	4.04	
44	4.9530E+00	8.7300E+01	6.9434E+03	82	3.	1.76	
45	4.9640E+00	8.1713E+01	6.4990E+03	90	1.	-4.16	
46	5.0000E+00	6.9558E+02	5.5323E+04	90	1.	-0.60	
47	5.0000E+00	6.8595E+02	5.4557E+04	10	1.	-1.98	
48	5.4120E+00	3.9850E+02	4.7602E+04	5	2.	4.73	
49	5.4140E+00	5.8990E+02	4.6846E+04	82	3.	3.16	
50	5.4150E+00	5.9360E+02	4.7164E+04	83	3.	3.91	
51	5.4300E+00	5.4000E+02	4.2949E+04	7	3.	-4.70	
52	5.8950E+00	4.7380E+02	3.7684E+04	5	2.	3.17	
53	5.8980E+00	4.6700E+02	3.7145E+04	82	3.	1.92	
54	5.8990E+00	4.7000E+02	3.7381E+04	83	3.	2.52	
55	5.9000E+00	4.4530E+02	3.5234E+04	7	3.	-3.33	
56	6.4010E+00	3.7580E+02	2.9889E+04	5	2.	1.58	
57	6.4040E+00	3.6160E+02	2.9396E+04	82	3.	0.03	
58	6.4040E+00	3.7700E+02	2.9985E+04	83	3.	2.03	
59	6.9300E+00	2.9470E+02	2.3439E+04	82	3.	-1.73	
60	6.9300E+00	2.9900E+02	2.3781E+04	7	3.	-0.30	
61	7.4730E+00	2.4590E+02	1.9558E+04	5	2.	0.08	
62	7.4780E+00	2.5100E+02	1.9953E+04	83	3.	2.34	
63	7.4780E+00	2.4510E+02	1.9494E+04	82	3.	-0.07	
64	7.4800E+00	2.4300E+02	1.9327E+04	7	3.	-0.85	
65	7.4840E+00	2.3880E+02	1.8993E+04	12	2.	-2.43	
66	8.0000E+00	2.0550E+02	1.6344E+04	39	5.	0.13	
67	8.0000E+00	2.0511E+02	1.6314E+04	10	1.	-0.06	
68	8.0400E+00	2.0230E+02	1.6090E+04	82	3.	-0.08	
69	8.0400E+00	1.9610E+02	1.5597E+04	26	5.	-3.14	

70	8.0470E+00	1.9450E+02	1.5470E+04	66	3.	-3.70
71	8.0480E+00	2.0600E+02	1.6384E+04	83	3.	2.03
72	8.0470E+00	2.3040E+02	1.5939E+04	11	10.	-0.78
73	8.0500E+00	2.0400E+02	1.6225E+04	7	3.	1.11
74	8.0530E+00	1.9900E+02	1.5899E+04	12	2.	-0.85
75	8.3980E+00	1.8940E+02	1.4348E+04	39	5.	0.34
76	8.3960E+00	1.7990E+02	1.4308E+04	11	10.	0.00
77	8.6340E+00	1.6470E+02	1.3099E+04	26	3.	-1.20
78	8.6390E+00	1.6570E+02	1.3179E+04	82	3.	-0.44
79	8.9040E+00	1.5370E+02	1.2225E+04	11	10.	0.27
80	9.2450E+00	1.3780E+02	1.0960E+04	5	2.	-0.41
81	9.4420E+00	1.3370E+02	1.0534E+04	83	3.	2.34
82	9.5700E+00	1.3100E+02	1.0419E+04	7	3.	4.02
83	9.5740E+00	1.2470E+02	9.9180E+03	26	5.	-0.87
84	9.6700E+00	1.2270E+02	9.7589E+03	11	10.	0.22
85	9.8850E+00	1.1430E+02	9.0908E+03	11	10.	-0.88
86	9.9620E+00	1.1290E+02	8.9795E+03	39	5.	-0.00
87	1.0000E+01	1.0999E+02	8.7482E+03	10	1.	-1.36
88	1.0000E+01	1.1018E+02	8.7635E+03	89	1.	-1.39
89	1.0530E+01	9.5100E+01	7.5638E+03	26	5.	-1.59
90	1.0544E+01	9.9100E+01	7.8819E+03	83	3.	2.93
91	1.0550E+01	9.7700E+01	7.7706E+03	7	3.	1.64
92	1.0550E+01	9.7210E+01	7.7316E+03	11	10.	1.13
93	1.0639E+01	9.1300E+01	7.2615E+03	83	3.	2.48
94	1.0980E+01	8.6280E+01	6.8623E+03	11	10.	0.42
95	1.1220E+01	8.1650E+01	6.4949E+03	82	3.	0.98
96	1.1220E+01	8.2800E+01	6.5855E+03	7	3.	2.41
97	1.1220E+01	8.1600E+01	6.4900E+03	11	10.	0.92
98	1.1910E+01	6.7580E+01	5.3750E+03	5	2.	-1.17
99	1.1910E+01	6.8100E+01	5.4165E+03	26	5.	-0.11
100	1.1920E+01	6.9740E+01	5.5466E+03	12	2.	2.23
101	1.1921E+01	6.8480E+01	5.4465E+03	82	3.	0.49
102	1.2490E+01	6.0660E+01	4.8246E+03	11	10.	1.36
103	1.3290E+01	4.9600E+01	3.9608E+03	26	5.	-0.98
104	1.3370E+01	4.9350E+01	3.9250E+03	5	2.	-0.21
105	1.5390E+01	5.0179E+01	5.9903E+03	11	10.	1.88
106	1.4960E+01	3.6710E+01	2.9197E+03	11	10.	1.63
107	1.5000E+01	3.5200E+01	2.7996E+03	10	1.	-1.62
108	1.5000E+01	3.5570E+01	2.8291E+03	39	5.	-0.79
109	1.5750E+01	2.9700E+01	2.3622E+03	26	5.	-4.68
110	1.5770E+01	3.1810E+01	2.5300E+03	11	10.	2.46
111	1.6570E+01	2.5490E+01	2.0202E+03	26	5.	-5.70
112	1.6650E+01	2.5950E+01	2.0639E+03	30	2.	-2.31
113	1.7460E+01	2.2100E+01	1.7577E+03	26	5.	-4.67
114	1.7480E+01	2.3470E+01	1.8667E+03	11	10.	1.57
115	1.7520E+01	2.1700E+01	1.7259E+03	30	2.	-5.47
116	1.7670E+01	2.2830E+01	1.8158E+03	11	10.	1.91
117	1.8640E+01	1.9000E+01	1.5112E+03	26	5.	-1.08
118	1.9310E+01	1.7130E+01	1.3624E+03	39	2.	-1.46
119	1.9610E+01	1.6660E+01	1.3250E+03	11	10.	0.14
120	1.9620E+01	1.6530E+01	1.2964E+03	26	5.	-1.88
121	2.0000E+01	1.5480E+01	1.2312E+03	39	5.	-1.58
122	2.0000E+01	1.5678E+01	1.2469E+03	10	1.	-0.32
123	2.0210E+01	1.5370E+01	1.2225E+03	11	10.	0.74
124	2.0250E+01	1.5030E+01	1.1930E+03	30	2.	-1.11
125	2.1120E+01	1.5200E+01	1.0495E+03	26	5.	-1.64
126	2.1210E+01	1.3170E+01	1.0475E+03	30	2.	-0.64
127	2.2100E+01	1.1500E+01	9.1465E+02	26	5.	-2.24
128	2.2160E+01	1.1860E+01	9.4328E+02	11	10.	1.62
129	2.2200E+01	1.1460E+01	9.1147E+02	30	2.	-1.29
130	2.3210E+01	0.0060E+01	8.0012E-02	30	2.	-1.43
131	2.3220E+01	1.02300E+01	8.1364E+02	11	10.	0.36
132	2.4240E+01	8.8780E+00	7.0611E+02	30	2.	-1.39
133	2.4940E+01	8.4410E+00	6.7135E+02	11	10.	1.78
134	2.5000E+01	8.3454E+00	6.6375E+02	10	1.	1.32
135	2.5000E+01	8.5410E+00	6.7931E+02	48	3.	3.70
136	2.5200E+01	8.0000E+00	6.3628E+02	26	5.	-0.62
137	2.5270E+01	8.0450E+00	6.3986E+02	11	10.	0.74
138	2.5300E+01	7.9130E+00	6.2936E+02	30	2.	-0.57
139	2.6399E+01	6.9680E+00	5.5420E+02	30	2.	-1.17
140	2.7490E+01	6.1940E+00	4.9264E+02	30	2.	-1.27
141	2.8480E+01	5.7660E+00	4.5860E+02	11	10.	1.66
142	2.8620E+01	5.5500E+00	4.4142E+02	30	2.	-0.77
143	2.9190E+01	5.3560E+00	4.2599E+02	11	10.	1.27
144	3.0000E+01	4.9478E+00	3.9352E+02	10	1.	1.10
145	3.0040E+01	4.9920E+00	3.9794E+02	48	3.	2.39
146	3.0490E+01	4.7404E+00	3.7731E+02	11	10.	1.56
147	3.0970E+01	4.3780E+00	3.4820E+02	30	2.	-1.97
148	3.2180E+01	3.9990E+00	3.1806E+02	30	2.	-0.08
149	3.2643E+01	3.8100E+00	3.0303E+02	78	3.	-0.87

150	3.3439E+01	3.6170E+00	2.8768E+02	30	2.	0.74
151	3.4720E+01	3.1860E+00	2.5340E+02	30	2.	-1.38
152	3.5060E+01	3.2460E+00	2.5817E+02	48	3.	3.44
153	3.5900E+01	2.9370E+00	2.3559E+02	30	2.	0.04
154	3.7320E+01	2.6200E+00	2.0838E+02	30	2.	-0.52
155	4.0000E+01	2.2148E+00	1.7615E+02	10	1.	1.88
156	4.0040E+01	2.2390E+00	1.7808E+02	48	3.	3.28
157	4.0070E+01	2.1940E+00	1.7453E+02	30	2.	1.41
158	4.1530E+01	1.9900E+00	1.5827E+02	78	3.	1.54
159	5.0080E+01	1.1990E+00	9.5362E+01	48	3.	0.98
160	6.0030E+00	7.5150E-01	5.9770E+01	40	5.	-0.26
161	6.0759E+00	7.4170E-01	5.8991E+01	30	2.	1.31
162	6.6500E+01	6.1750E-01	4.9113E+01	30	2.	4.18
163	6.8170E+01	5.4600E-01	4.3426E+01	78	3.	-2.60
164	6.8520E+01	5.7150E-01	4.5454E+01	30	2.	3.12
165	7.0040E+01	5.2520E-01	4.1772E+01	40	5.	-0.54
166	7.0380E+01	5.4100E-01	4.3028E+01	30	2.	5.54
167	7.2440E+01	5.0410E-01	4.0093E+01	30	2.	2.67
168	7.4700E+01	4.7160E-01	3.7509E+01	30	2.	2.46
169	7.9500E+01	3.8600E-01	3.0704E+01	78	3.	-4.89
170	7.9960E+01	3.9970E-01	3.1790E+01	40	5.	-0.40
171	8.9920E+01	3.1870E-01	2.5348E+01	40	5.	-1.16
172	1.0000E+02	2.6642E-01	2.1190E+01	10	1.	-1.53
173	1.0000E+02	2.6664E-01	2.1207E+01	89	1.	-1.45
174	1.0006E+02	2.6700E-01	2.1235E+01	40	5.	-1.22
175	1.0999E+02	2.2970E-01	1.8269E+01	40	5.	-2.16
176	1.2021E+02	2.0500E-01	1.6505E+01	40	5.	-1.77
177	1.3031E+02	1.9100E-01	1.5191E+01	40	5.	3.67
178	1.4560E+02	1.7773E-01	1.4133E+01	48	3.	4.99
179	1.5000E+02	1.6206E-01	1.2890E+01	10	1.	-1.57
180	2.0830E+02	1.2930E-01	1.0284E+01	48	3.	1.28
181	2.7910E+02	1.0840E-01	8.6216E+00	48	3.	0.52
182	3.0000E+02	1.0357E-01	8.2371E+00	89	1.	-0.49
183	4.0000E+02	9.0526E-02	7.1841E+00	10	1.	-0.29
184	4.1180E+02	8.8900E-02	7.0706E+00	48	3.	-0.49
185	5.0000E+02	6.1578E-02	6.4883E+00	89	1.	-0.14
186	6.0000E+02	7.5040E-02	5.9683E+00	89	1.	-0.07
187	6.6200E+02	7.1634E-02	5.6974E+00	89	1.	-0.02
188	7.0000E+02	6.9776E-02	5.5496E+00	89	1.	-0.00
189	8.0000E+02	6.5544E-02	5.2130E+00	89	1.	0.00
190	9.0000E+02	6.1870E-02	4.9208E+00	89	1.	0.03
191	1.0000E+03	5.8767E-02	4.6740E+00	89	1.	0.03

190 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR VANADIUM

Z = 23

CONVERSION CONSTANT IS 8.459E+01

K-EDGE	5.465					
L-EDGES	0.604	0.520	0.515			
M-EDGES	0.067	0.038	0.038	0.002	0.002	
KEV	CM2/JM	BARNs/AT	SOURCE	WEIGHT	DIFF	
1	1.0000E+00	7.1652E+05	6.0500E+05	10	1.	6.48
2	1.0001E+00	7.0876E+05	5.9951E+05	90	1.	5.35
3	1.4900E+00	2.3880E+05	2.0199E+05	7	3.	-2.34
4	1.5000E+00	2.3743E+05	2.0083E+05	10	1.	-1.24
5	1.5000E+00	2.4057E+05	2.0349E+05	90	1.	0.07
6	2.0000E+00	1.1264E+03	9.5281E+04	10	1.	-0.74
7	2.0009E+00	1.1058E+03	9.3536E+04	90	1.	-2.55
8	2.0400E+00	1.0610E+03	8.9746E+04	7	3.	-1.40
9	2.3080E+00	7.8850E+02	6.6696E+04	82	3.	2.01
10	2.3100E+00	7.6300E+02	6.4539E+04	7	3.	-1.06
11	2.6220E+00	5.5590E+02	4.7021E+04	5	2.	1.19
12	2.6240E+00	5.5750E+02	4.7165E+04	82	3.	1.50
13	2.9800E+00	4.0400E+02	3.4175E+04	7	3.	3.55
14	2.9840E+00	3.8160E+02	3.2870E+04	82	3.	-0.04
15	3.0000E+00	3.8013E+02	3.2154E+04	10	1.	-0.81
16	3.0000E+00	3.7342E+02	3.1586E+04	90	1.	-2.56
17	3.3130E+00	3.0030E+02	2.5401E+04	5	2.	2.89
18	3.5110E+00	2.8900E+02	2.4445E+04	82	3.	-0.90
19	3.4400E+00	2.6500E+02	2.2415E+04	7	3.	0.66
20	3.6910E+01	2.2520E+02	1.9049E+04	5	2.	3.74
21	3.6920E+00	2.1890E+02	1.8516E+04	82	3.	0.91
22	4.0100E+00	1.6900E+02	1.4295E+04	7	3.	-2.33
23	4.0120E+00	1.7320E+02	1.4650E+04	82	3.	0.24
24	4.5110E+00	1.2400E+02	1.0489E+04	82	3.	-0.54
25	4.5120E+00	1.2310E+02	1.0413E+04	5	2.	-1.21
26	4.9500E+00	9.5700E+01	8.0949E+03	7	3.	-0.67
27	4.9530E+00	9.4680E+01	8.0086E+03	82	3.	-1.56
28	5.0000E+01	9.4211E+01	7.9690E+03	10	1.	0.55
29	5.4140E+00	7.2000E+01	6.0902E+03	82	3.	-3.97
30	5.4280E+00	7.3530E+01	6.2196E+03	5	2.	-1.22
31	5.4300E+00	8.0000E+01	6.7669E+03	5	3.	7.58
32	5.4630E+00	7.3698E+01	5.9800E+03	90	1.	-3.30
33	5.4660E+00	6.1617E+02	5.2119E+04	90	1.	-1.51
34	5.8950E+00	5.2720E+02	4.4594E+04	5	2.	2.83
35	5.8980E+00	5.1130E+02	4.3249E+04	82	3.	-0.4
36	5.9000E+00	5.2400E+02	4.4323E+04	7	3.	2.45
37	6.0000E+00	5.2282E+02	4.4223E+04	89	1.	6.85
38	6.4010E+00	4.1653E+02	3.5230E+04	5	2.	-1.29
39	6.4040E+00	4.0580E+02	3.4325E+04	82	3.	-1.19
40	6.9300E+00	3.4100E+02	2.8844E+04	82	3.	2.68
41	7.4780E+00	2.6869E+02	2.2720E+04	82	3.	-0.75
42	8.0000E+00	2.2189E+02	1.8769E+04	89	1.	-1.70
43	8.0000E+00	2.2544E+02	1.9069E+04	10	1.	-0.13
44	8.0400E+00	2.2050E+02	1.8651E+04	5	2.	-0.97
45	8.0400E+00	2.2020E+02	1.8626E+04	82	3.	-1.10
46	8.0470E+00	2.1800E+02	1.8440E+04	66	3.	-1.85
47	8.0480E+00	2.1390E+02	1.8093E+04	65	2.	-3.67
48	8.0500E+00	2.2000E+02	1.8609E+04	7	3.	-0.85
49	8.6390E+00	1.8200E+02	1.5395E+04	82	3.	-0.34
50	9.2450E+00	1.5230E+02	1.2882E+04	5	2.	0.53
51	9.5700E+00	1.4000E+02	1.1842E+04	7	3.	1.63
52	1.0000E+01	1.2160E+02	1.0285E+04	10	1.	-0.37
53	1.0000E+01	1.2164E+02	1.0289E+04	89	1.	-0.33
54	1.0530E+01	1.0680E+02	9.0338E+03	5	2.	1.26
55	1.1220E+01	9.2300E+01	7.8073E+03	82	3.	4.59
56	1.1220E+01	9.0700E+01	7.6719E+03	7	3.	2.88
57	1.2610E+01	6.4200E+01	5.43504E+03	7	3.	1.23
58	1.3370E+01	5.4740E+01	4.6302E+03	5	2.	1.78
59	1.4169E+01	4.7300E+01	4.0009E+03	82	3.	3.55
60	1.5600E+01	3.9108E+01	3.3080E+03	10	1.	0.48
61	1.5000E+01	4.0069E+01	3.3893E+03	89	1.	2.95
62	1.5500E+01	2.8020E+01	2.3701E+03	30	2.	-2.83
63	1.7460E+01	2.5800E+01	2.1825E+03	5	2.	2.52
64	1.7480E+01	2.5180E+01	2.1299E+03	65	2.	0.39
65	1.7520E+01	2.5700E+01	2.0047E+03	30	2.	-4.89
66	1.9310E+01	1.7710E+01	1.4980E+03	30	2.	-6.14
67	2.0000E+01	1.7499E+01	1.4802E+03	10	1.	2.51
68	2.0000E+01	1.7755E+01	1.5019E+03	89	1.	4.01
69	2.0250E+01	1.5490E+01	1.3102E+03	30	2.	-5.92

70	2.1210E+01	1.3780E+01	1.1656E+03	30	2.	-4.27
71	2.2200E+01	1.2100E+01	1.0235E+03	30	2.	-4.07
72	2.3210E+01	1.0710E+01	9.0591E+02	30	2.	-3.45
73	2.4240E+01	9.5000E+00	8.0357E+02	30	2.	-2.94
74	2.5000E+01	9.3285E+00	7.8904E+02	10	1.	-4.15
75	2.5300E+01	8.2520E+00	6.9800E+02	30	2.	-4.66
76	2.6390E+01	7.5590E+00	6.3938E+02	30	2.	-1.45
77	2.7490E+01	6.6130E+00	5.5937E+02	30	2.	-3.12
78	2.8620E+01	6.0390E+00	5.1081E+02	30	2.	-0.79
79	3.0000E+01	5.5322E+00	4.6795E+02	10	1.	3.85
80	3.0000E+01	5.5953E+00	4.7329E+02	89	1.	5.04
81	3.0970E+01	4.6360E+00	3.9214E+02	30	2.	-4.67
82	3.2180E+01	4.3620E+00	3.6896E+02	30	2.	0.06
83	3.5430E+01	3.8180E+00	3.2295E+02	30	2.	-2.40
84	3.4700E+01	3.4560E+00	2.9233E+02	30	2.	-1.84
85	3.5960E+01	3.0649E+00	2.5917E+02	30	2.	-4.25
86	3.7320E+01	2.7740E+00	2.3464E+02	30	2.	-3.39
87	4.0000E+01	2.4771E+00	2.0953E+02	10	1.	4.52
88	4.0000E+01	2.5129E+00	2.1256E+02	89	1.	6.03
89	4.0070E+01	2.2440E+00	1.8981E+02	30	2.	-4.06
90	5.0000E+01	1.3628E+00	1.1528E+02	89	1.	4.98
91	5.7460E+01	9.0870E-01	7.6863E+01	30	2.	-0.11
92	5.9070E+01	8.6760E-01	7.3587E+01	30	2.	2.10
93	6.0000E+01	8.4742E-01	7.1680E+01	89	1.	3.60
94	6.0750E+01	7.8340E-01	6.6265E+01	30	2.	-1.28
95	6.6500E+01	6.3930E-01	5.4076E+01	30	2.	-0.15
96	6.8520E+01	6.1540E-01	5.2054E+01	30	2.	2.93
97	7.0380E+01	5.8560E-01	4.9533E+01	30	2.	4.33
98	7.2440E+01	5.4910E-01	4.6446E+01	30	2.	3.95
99	7.4700E+01	5.2800E-01	4.4661E+01	30	2.	6.81
100	7.6540E+01	4.8900E-01	4.1278E+01	30	2.	3.93
101	8.0000E+01	4.3608E-01	3.5886E+01	89	1.	1.70
102	9.1680E+01	3.5700E-01	3.0197E+01	30	2.	8.08
103	9.7130E+01	3.2190E-01	2.7229E+01	30	2.	7.74
104	1.1370E+02	2.8188E-01	2.3843E+01	10	1.	-0.99
105	1.0000E+02	2.8655E-01	2.4238E+01	89	1.	0.65
106	1.5000E+02	1.6534E-01	1.3986E+01	10	1.	-1.60
107	1.5000E+02	1.6731E-01	1.4152E+01	89	1.	-0.42
108	2.0000E+02	1.3083E-01	1.1066E+01	90	1.	-0.73
109	2.0000E+02	1.3089E-01	1.1071E+01	90	1.	-0.69
110	2.0000E+02	1.3088E-01	1.1071E+01	89	1.	-0.69
111	3.0000E+02	1.0274E-01	8.6901E+00	90	1.	-0.48
112	3.0000E+02	1.0262E-01	8.6802E+00	89	1.	-0.59
113	4.0000E+02	8.9185E-02	7.5436E+00	10	1.	-0.33
114	5.0000E+02	8.0363E-02	6.7975E+00	90	1.	-0.22
115	6.0000E+02	7.3943E-02	6.2545E+00	90	1.	-0.02
116	6.0000E+02	7.3908E-02	6.2516E+00	89	1.	-0.06
117	6.6200E+02	7.0534E-02	5.9661E+00	89	1.	-0.01
118	7.0000E+02	6.8095E-02	5.8106E+00	89	1.	0.01
119	8.0000E+02	6.4536E-02	5.4563E+00	90	1.	0.01
120	8.0000E+02	6.3510E-02	5.4566E+00	89	1.	0.02
121	9.0000E+02	6.0878E-02	5.1494E+00	89	1.	0.04
122	1.0000E+03	5.7799E-02	4.8890E+00	90	1.	0.02
123	1.0000E+03	5.7613E-02	4.8901E+00	89	1.	0.05

123 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR CHROMIUM

Z = 24

CONVERSION CONSTANT IS 2.634E+01

L-EDGE	5.989					
L-EDGES	0.582	0.583	0.574			
M-EDGES	0.074	0.043	0.043	0.002	0.002	
1	1.0000E+00	8.1760E+03	7.0508E+05	10	1.	4.40
2	1.0001E+00	7.8723E+03	6.7966E+05	90	1.	0.55
3	1.5000E+00	2.7546E+03	2.3782E+05	10	1.	-0.90
4	1.5000E+00	2.8265E+03	2.4403E+05	90	1.	1.69
5	2.0000E+00	1.2899E+03	1.1136E+05	10	1.	-1.32
6	2.0000E+00	1.2882E+03	1.1122E+05	90	1.	-1.45
7	3.0000E+00	4.4396E+02	3.8330E+04	10	1.	0.98
8	3.0000E+00	4.3397E+02	3.7467E+04	90	1.	-1.29
9	4.0000E+00	1.9942E+02	1.7217E+04	90	1.	-0.03
10	4.5090E+00	1.4544E+02	1.2557E+04	10	1.	1.84
11	4.9320E+00	1.1432E+02	9.8439E+03	10	1.	2.45
12	5.0000E+00	1.0934E+02	9.4396E+03	10	1.	2.06
13	5.4120E+00	8.5312E+01	7.3715E+03	10	1.	-0.39
14	5.8950E+00	6.6705E+01	5.7590E+03	10	1.	-1.07
15	5.9470E+00	6.5201E+01	5.6292E+03	10	1.	-0.89
16	5.9500E+00	6.4220E+01	5.5445E+03	90	1.	-1.78
17	6.0000E+00	5.4967E+02	4.7457E+04	90	1.	0.19
18	6.4000E+00	4.6093E+02	3.9795E+04	10	1.	-0.29
19	6.4100E+00	4.7400E+02	4.0925E+04	17	2.	2.96
20	6.4900E+00	4.4313E+02	3.8258E+04	10	1.	-0.52
21	6.9250E+00	3.6711E+02	3.1695E+04	10	1.	-2.11
22	7.0000E+00	3.8000E+02	3.2808E+04	17	2.	4.26
23	7.0580E+00	3.4868E+02	3.0104E+04	10	1.	-2.21
24	7.4720E+00	3.1007E+02	2.6770E+04	10	1.	1.15
25	7.6900E+00	3.0900E+02	2.6678E+04	17	2.	5.44
26	7.6490E+00	2.8863E+02	2.4919E+04	10	1.	0.18
27	8.0000E+00	2.5137E+02	2.1702E+04	89	1.	-1.73
28	8.0000E+00	2.5598E+02	2.2100E+04	10	1.	0.07
29	8.0410E+00	2.5376E+02	2.1939E+04	10	1.	0.59
30	8.2650E+00	2.3461E+02	2.0255E+04	10	1.	0.23
31	8.5000E+00	2.3100E+02	1.9944E+04	17	2.	6.52
32	8.6310E+00	2.0837E+02	1.7993E+04	10	1.	0.17
33	8.9050E+00	1.9159E+02	1.6541E+04	10	1.	0.28
34	9.5720E+00	1.5750E+02	1.3598E+04	10	1.	0.34
35	1.0300E+01	1.3853E+02	1.1950E+04	89	1.	-0.59
36	1.0000E+01	1.3898E+02	1.1999E+04	10	1.	-0.27
37	1.5000E+01	4.5968E+01	3.9687E+03	89	1.	2.24
38	1.5000E+01	4.4912E+01	3.8775E+03	10	1.	-0.11
39	1.7444E+01	2.9985E+01	2.5688E+03	10	1.	2.52
40	1.7520E+01	2.7120E+01	2.3414E+03	30	2.	-6.13
41	1.9310E+01	2.0893E+01	1.8035E+03	30	2.	-4.70
42	1.9608E+01	2.1233E+01	1.8332E+03	10	1.	1.16
43	2.0000E+01	2.0429E+01	1.7634E+03	89	1.	2.91
44	2.0000E+01	2.0181E+01	1.7424E+03	10	1.	1.68
45	2.0169E+01	1.9523E+01	1.6855E+03	10	1.	0.79
46	2.0250E+01	1.6120E+01	1.5644E+03	30	2.	-5.37
47	2.1125E+01	1.7176E+01	1.4829E+03	10	1.	1.35
48	2.1210E+01	1.5970E+01	1.3780E+03	30	2.	-4.67
49	2.2105E+01	1.5133E+01	1.3065E+03	10	1.	1.75
50	2.2160E+01	1.5180E+01	1.3106E+03	65	2.	2.80
51	2.2200E+01	1.4100E+01	1.2173E+03	30	2.	-4.02
52	2.2724E+01	1.4316E+01	1.2360E+03	10	1.	4.22
53	2.3210E+01	1.2610E+01	1.0887E+03	30	2.	-2.45
54	2.3819E+01	1.2538E+01	1.0825E+03	10	1.	4.47
55	2.4240E+01	1.1030E+01	9.5747E+02	30	2.	-2.84
56	2.4942E+01	1.0825E+01	9.3458E+02	10	1.	2.91
57	2.5000E+01	1.0776E+01	9.3032E+02	10	1.	3.13
58	2.5300E+01	9.6340E+00	8.2917E+02	30	2.	-4.50
59	2.6390E+01	8.5500E+00	7.3895E+02	30	2.	-4.41
60	2.7490E+01	7.4590E+00	6.4398E+02	30	2.	-6.44
61	2.8620E+01	6.6720E+00	5.7603E+02	30	2.	-6.18
62	3.0000E+01	6.4616E+00	5.5778E+02	89	1.	3.77
63	3.2000E+01	6.3935E+00	5.5199E+02	10	1.	2.69
64	3.0976E+01	5.2470E+00	4.5500E+02	30	2.	-7.69
65	3.2126E+01	4.8210E+00	4.1623E+02	30	2.	-5.39
66	3.3450E+01	4.2470E+00	3.6667E+02	30	2.	-7.13
67	3.4700E+01	3.9350E+00	3.3975E+02	30	2.	-4.39
68	3.5900E+01	3.6240E+00	3.1288E+02	30	2.	-3.11
69	3.7320E+01	3.2370E+00	2.7947E+02	30	2.	-3.53

70	4.0000E+01	2.9084E+00	2.5110E+02	89	1.	5.07
71	4.0000E+01	2.8650E+00	2.4735E+02	10	1.	3.50
72	5.0000E+01	1.5710E+03	1.3956E+02	89	1.	4.10
73	5.7460E+01	1.1300E+00	9.7560E+01	30	2.	7.45
74	5.9070E+01	1.0300E+00	8.8926E+01	30	2.	4.99
75	6.0000E+01	9.7045E+01	8.3785E+01	89	1.	2.85
76	6.0750E+01	9.3700E+01	8.0897E+01	30	2.	2.43
77	6.6500E+01	7.9280E+01	6.8447E+01	30	2.	7.99
78	6.8520E+01	7.4000E+01	6.3889E+01	30	2.	8.16
79	7.0380E+01	6.9250E+01	5.9788E+01	30	2.	7.70
80	7.2440E+01	6.4640E+01	5.5775E+01	30	2.	7.29
81	7.4700E+01	6.1390E+01	5.3020E+01	30	2.	9.20
82	7.6540E+01	5.6990E+01	4.9205E+01	30	2.	6.93
83	8.0000E+01	4.8237E+01	4.1646E+01	90	1.	-0.53
84	8.0000E+01	4.9031E+01	4.2351E+01	89	1.	1.11
85	9.7130E+01	3.3940E+01	2.9302E+01	30	2.	2.25
86	1.0000E+02	3.1292E+01	2.7716E+01	90	1.	-0.79
87	1.0000E+02	3.1059E+01	2.6815E+01	10	1.	-1.53
88	1.0000E+02	3.1607E+01	2.7288E+01	89	1.	0.21
89	1.5000E+02	1.7582E+01	1.5180E+01	10	1.	-1.95
90	1.5000E+02	1.7800E+01	1.5568E+01	89	1.	-0.74
91	1.5000E+02	1.7755E+01	1.5329E+01	90	1.	-0.99
92	2.0000E+02	1.3683E+01	1.1813E+01	89	1.	-0.89
93	2.0000E+02	1.3691E+01	1.1820E+01	90	1.	-0.83
94	5.0000E+02	1.0605E+01	9.1557E+00	90	1.	-0.52
95	3.0000E+02	1.0587E+01	9.1405E+00	89	1.	-0.69
96	4.0000E+02	9.1649E+02	7.9126E+00	90	1.	-0.34
97	4.0000E+02	9.1616E+02	7.9097E+00	10	1.	-0.38
98	5.0000E+02	8.2411E+02	7.1150E+00	90	1.	-0.24
99	6.0000E+02	7.5760E+02	6.5408E+00	90	1.	-0.02
100	6.0000E+02	7.5720E+02	6.5374E+00	89	1.	-0.07
101	6.6200E+02	7.2237E+02	6.2366E+00	89	1.	-0.31
102	7.0000E+02	7.0341E+02	6.0730E+00	89	1.	0.01
103	8.0000E+02	6.6026E+02	5.7004E+00	90	1.	0.02
104	8.0000E+02	6.6031E+02	5.7008E+00	89	1.	0.02
105	9.0000E+02	6.2301E+02	5.3768E+00	89	1.	0.05
106	1.0000E+03	5.9140E+02	5.1059E+00	97	1.	0.03
107	1.0000E+05	5.9156E+02	5.1675E+00	89	1.	0.06

107 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR MANGANESE

Z = 25

CONVERSION CONSTANT IS 9.122E+01

K-EDGE	6.540	L-EDGES	0.754	0.652	0.641			
M-EDGES	0.084		0.049	0.049	0.004	0.004		
1	1.0000E+00	9.8791E+05	8.0399E+05	10	1.	2.86		
2	1.0001E+00	8.5930E+03	7.8389E+05	90	1.	-0.43		
3	1.5000E+00	3.0740E+03	2.8045E+05	10	1.	-0.32		
4	1.5000E+00	3.1841E+03	2.9047E+05	90	1.	3.25		
5	2.0000E+00	1.4232E+03	1.2985E+05	10	1.	-2.23		
6	2.0000E+00	1.4395E+03	1.3132E+05	90	1.	-1.11		
7	3.0000E+00	4.9643E+02	4.5287E+04	10	1.	1.00		
8	3.0000E+00	4.8382E+02	4.4136E+04	90	1.	-1.57		
9	4.0000E+00	2.2262E+02	2.0308E+04	90	1.	-0.35		
10	4.5090E+00	1.6248E+02	1.4822E+04	10	1.	1.54		
11	4.9520E+00	1.2708E+02	1.1593E+04	10	1.	1.89		
12	5.0000E+00	1.2182E+02	1.1115E+04	10	1.	1.45		
13	5.0000E+00	1.2072E+02	1.1012E+04	90	1.	0.53		
14	5.4120E+00	9.6411E+01	8.7950E+03	10	1.	0.34		
15	5.8950E+00	7.5472E+01	6.8849E+03	10	1.	-0.15		
16	5.9470E+00	7.3738E+01	6.7267E+03	10	1.	-0.01		
17	6.0000E+00	6.8400E+01	6.2397E+03	90	1.	-4.92		
18	6.4130E+00	6.0529E+01	5.5217E+03	10	1.	1.00		
19	6.4900E+00	5.8180E+01	5.3074E+03	10	1.	0.98		
20	6.5300E+00	5.6462E+01	5.1507E+03	90	1.	-0.28		
21	6.5500E+00	4.7222E+02	4.3078E+04	90	1.	0.56		
22	6.9250E+00	4.0962E+02	3.6546E+04	10	1.	-1.11		
23	7.0580E+00	3.8050E+02	3.4711E+04	10	1.	-1.21		
24	7.4720E+00	3.3951E+02	3.0972E+04	10	1.	2.53		
25	7.6490E+00	3.1476E+02	2.8714E+04	10	1.	1.15		
26	8.0000E+00	2.7291E+02	2.4896E+04	89	1.	-1.22		
27	8.0410E+00	2.7904E+02	2.5455E+04	10	1.	2.40		
28	8.0000E+00	2.7853E+02	2.5408E+04	10	1.	0.81		
29	8.2650E+00	2.5799E+02	2.3535E+04	10	1.	2.00		
30	8.6310E+00	2.2725E+02	2.0731E+04	10	1.	1.05		
31	8.9050E+00	2.0906E+02	1.9071E+04	10	1.	1.18		
32	9.5720E+00	1.7722E+02	1.5711E+04	10	1.	1.37		
33	1.0000E+01	1.5720E+02	1.3793E+04	89	1.	0.19		
34	1.0000E+01	1.5232E+02	1.3895E+04	10	1.	0.93		
35	1.5000E+01	4.9443E+01	4.5104E+03	10	1.	1.12		
36	1.5000E+01	5.0527E+01	4.6093E+03	89	1.	3.34		
37	1.7444E+01	3.3053E+01	3.0152E+03	10	1.	5.77		
38	1.9608E+01	2.3510E+01	2.1447E+03	10	1.	2.75		
39	2.0000E+01	2.2303E+01	2.0345E+03	10	1.	3.07		
40	2.0000E+01	2.2508E+01	2.0532E+03	89	1.	4.02		
41	2.0169E+01	2.1620E+01	1.9723E+03	10	1.	2.37		
42	2.1125E+01	1.9007E+01	1.7339E+03	10	1.	2.83		
43	2.2105E+01	1.6751E+01	1.5281E+03	10	1.	3.23		
44	2.2724E+01	1.5836E+01	1.4446E+03	10	1.	5.64		
45	2.3210E+01	1.3520E+01	1.2334E+03	39	2.	-4.17		
46	2.3819E+01	1.3879E+01	1.2661E+03	10	1.	5.94		
47	2.4240E+01	1.1580E+01	1.0564E+03	30	2.	-7.07		
48	2.4942E+01	1.2020E+01	1.0965E+03	10	1.	4.65		
49	2.5000E+01	1.1932E+01	1.0885E+03	10	1.	4.58		
50	2.5300E+01	1.0280E+01	9.5779E+02	30	2.	-6.79		
51	2.6390E+01	9.4650E+00	8.6344E+02	30	2.	-3.23		
52	2.7490E+01	8.4150E+00	7.6765E+02	30	2.	-3.39		
53	2.8620E+01	7.4100E+00	6.7597E+02	30	2.	-4.88		
54	3.0000E+01	7.0872E+00	6.4655E+02	10	1.	4.15		
55	3.0000E+01	7.1521E+00	6.5245E+02	89	1.	5.10		
56	3.0970E+01	5.6810E+00	5.1825E+02	30	2.	-8.57		
57	3.2180E+01	5.1920E+00	4.7364E+02	30	2.	-6.80		
58	3.3430E+01	4.6720E+00	4.2620E+02	30	2.	-6.55		
59	3.4700E+01	4.2560E+00	3.8898E+02	30	2.	-5.23		
60	3.5900E+01	3.9660E+00	3.6180E+02	30	2.	-3.00		
61	3.7320E+01	3.6630E+00	3.2914E+02	30	2.	-1.62		
62	4.0000E+01	3.1803E+00	2.9012E+02	10	1.	5.15		
63	4.0000E+01	3.1161E+00	2.8427E+02	90	1.	3.03		
64	4.0070E+01	3.0150E+00	2.7504E+02	30	2.	0.17		
65	5.0000E+01	1.6893E+00	1.5411E+02	90	1.	2.71		
66	5.7460E+01	1.1970E+00	1.0920E+02	30	2.	4.76		
67	5.9070E+01	1.1030E+00	1.0662E+02	30	2.	3.57		
68	6.0000E+01	1.0494E+00	9.5754E+01	90	1.	2.50		
69	6.0750E+01	1.0030E+00	9.1498E+01	30	2.	1.08		

70	6.6500E+01	8.3270E-01	7.5962E+01	30	2.	4.96
71	6.8520E+01	7.7180E-01	7.0407E+01	30	2.	4.46
72	7.0580E+01	7.0920E-01	6.4696E+01	30	2.	2.26
73	7.2440E+01	6.6930E-01	6.1056E+01	30	2.	3.20
74	7.4700E+01	6.2300E-01	5.6833E+01	30	2.	3.04
75	7.6540E+01	5.8600E-01	5.3457E+01	30	2.	2.36
76	8.0000E+01	5.3015E-01	4.8563E+01	90	1.	2.02
77	9.1680E+01	3.9540E-01	3.6070E+01	30	2.	0.82
78	9.7150E+01	3.5750E-01	3.2622E+01	30	2.	1.77
79	1.0000E+02	3.3105E-01	3.0200E+01	10	1.	-0.65
80	1.0000E+02	3.3706E-01	3.0748E+01	90	1.	1.15
81	1.5000E+02	1.8104E-01	1.6515E+01	10	1.	-1.66
82	1.5000E+02	1.8417E-01	1.6801E+01	90	1.	0.04
83	2.0000E+02	1.3898E-01	1.2679E+01	90	1.	-0.35
84	3.0000E+02	1.0583E-01	9.6541E+00	90	1.	-0.41
85	4.0000E+02	9.0842E-02	8.2870E+00	10	1.	-0.42
86	5.0000E+02	8.1603E-02	7.4442E+00	89	1.	-0.20
87	6.0000E+02	7.4846E-02	6.8278E+00	89	1.	-0.09
88	6.6200E+02	7.1373E-02	6.5111E+00	89	1.	-0.02
89	7.0000E+02	6.9486E-02	6.3308E+00	89	1.	0.00
90	8.0000E+02	6.5200E-02	5.9478E+00	89	1.	0.02
91	9.0000E+02	6.1501E-02	5.6104E+00	89	1.	0.05
92	1.0000E+03	5.8384E-02	5.3260E+00	89	1.	0.06

02 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR IRON

Z = 26

CONVERSION CONSTANT IS 9.274E+01

K-EDGE	7.112					
L-EDGES	0.842	0.721	0.709	0.	0.	
M-EDGES	0.034	0.054	0.003			
	KEV	CM2/GM	BARNs/AT	SOURCE	HEIGHT	DIFF
1	1.0000E+00	9.8816E+03	9.1637E+05	10	1.	5.98
2	1.0001E+00	9.6365E+03	8.9362E+05	90	1.	3.37
3	1.4900E+00	3.4500E+03	3.1808E+05	7	3.	-2.44
4	1.5000E+00	3.5542E+03	3.2960E+05	10	1.	2.76
5	2.0000E+00	1.6337E+03	1.5150E+05	10	1.	-1.94
6	2.0400E+00	1.5720E+03	1.4578E+05	7	3.	-0.59
7	2.3100E+00	1.1840E+03	1.0980E+05	7	3.	3.85
8	2.9800E+00	5.6200E+02	5.2117E+04	7	3.	-5.73
9	3.0000E+00	5.7254E+02	5.5095E+04	10	1.	-0.19
10	3.3130E+00	4.3600E+02	4.0435E+04	5	2.	-3.44
11	3.3180E+00	4.4940E+02	4.1675E+04	12	2.	3.04
12	3.4400E+00	3.8000E+02	3.5239E+04	7	3.	-3.89
13	3.6910E+00	3.3160E+02	3.0751E+04	5	2.	1.54
14	3.6970E+00	3.3760E+02	3.1307E+04	12	2.	3.83
15	4.0100E+00	2.6200E+02	2.4297E+04	7	3.	0.46
16	4.5120E+00	1.8780E+02	1.7416E+04	5	2.	-0.08
17	4.5160E+00	2.0040E+02	1.8584E+04	12	2.	6.88
18	4.9500E+00	1.4200E+02	1.3168E+04	7	3.	-2.34
19	5.0000E+00	1.4339E+02	1.3019E+04	10	1.	-0.73
20	5.1000E+00	1.4040E+02	1.3029E+04	39	5.	-0.72
21	5.4150E+00	1.1220E+02	1.0405E+04	65	2.	-0.65
22	5.4200E+00	1.1450E+02	1.0618E+04	12	2.	1.65
23	5.9000E+00	9.1100E+01	8.4482E+03	7	3.	2.68
24	5.9040E+00	9.3900E+01	8.7078E+03	12	2.	6.03
25	5.9460E+00	8.5510E+01	7.9298E+03	5	2.	-1.50
26	6.4043E+00	7.1000E+01	6.5842E+03	68	1.	1.04
27	6.4040E+00	6.9210E+01	6.4182E+03	39	5.	-1.51
28	6.4040E+00	6.9700E+01	6.4636E+03	65	2.	-0.21
29	6.9300E+00	5.8400E+01	5.4157E+03	7	3.	4.05
30	6.9300E+00	5.6450E+01	5.2349E+03	65	2.	0.57
31	7.0560E+00	5.2430E+01	4.8621E+03	5	2.	-1.68
32	7.0580E+00	5.2210E+01	4.8417E+03	39	5.	-2.02
33	7.1100E+00	5.0238E+01	4.6588E+03	89	1.	-3.73
34	7.1330E+00	4.0786E+02	3.7823E+04	89	1.	-1.74
35	7.4750E+00	3.8580E+02	3.5777E+04	2	2.	5.29
36	7.4800E+00	3.8400E+02	3.5510E+04	7	3.	5.05
37	8.0000E+00	3.1778E+02	2.9006E+04	10	1.	1.39
38	8.0000E+00	3.0511E+02	2.8295E+04	89	1.	-1.09
39	8.0000E+00	3.1520E+02	2.9230E+04	39	5.	2.18
40	8.0400E+00	3.0830E+02	2.3599E+04	5	2.	1.24
41	8.0470E+00	3.0610E+02	2.8386E+04	11	10.	0.75
42	8.0480E+00	5.1430E+02	2.9147E+04	65	2.	3.48
43	8.0500E+00	3.1000E+02	2.8748E+04	3	2.	2.13
44	8.0536E+00	3.2660E+02	3.3267E+04	12	2.	7.70
45	8.3980E+00	2.7800E+02	2.5780E+04	39	5.	2.23
46	8.9040E+00	2.3190E+02	2.1505E+04	11	10.	-0.73
47	9.5700E+00	2.0200E+02	1.8753E+04	7	3.	4.28
48	9.5740E+00	1.9241E+02	1.7842E+04	5	2.	-0.57
49	9.8850E+00	1.7532E+02	1.6256E+04	11	10.	-1.57
50	9.2611E+00	1.7290E+02	1.6034E+04	39	5.	-0.95
51	1.0000E+01	1.7242E+02	1.5989E+04	10	1.	-0.25
52	1.0000E+01	1.7019E+02	1.5783E+04	89	1.	-1.53
53	1.0530E+01	1.4860E+02	1.3780E+04	5	2.	-1.09
54	1.0550E+01	1.5900E+02	1.4745E+04	7	3.	6.37
55	1.0550E+01	1.4860E+02	1.3780E+04	11	10.	-0.58
56	1.0980E+01	1.3200E+02	1.2241E+04	11	10.	-1.58
57	1.1220E+01	1.3100E+02	1.2148E+04	7	3.	3.57
58	1.1220E+01	1.2570E+02	1.1657E+04	11	10.	-0.62
59	1.1580E+01	1.2000E+02	1.1128E+04	68	1.	3.35
60	1.1920E+01	1.1060E+02	1.0257E+04	12	2.	3.02
61	1.2490E+01	9.3810E+01	8.6995E+03	11	10.	-0.83
62	1.2610E+01	9.8200E+01	9.1056E+03	7	3.	6.53
63	1.3390E+01	7.7090E+01	7.1490E+03	11	10.	-1.62
64	1.3580E+01	8.0300E+01	7.4466E+03	68	1.	2.27
65	1.4150E+01	6.6080E+01	6.1279E+03	5	2.	-2.10
66	1.4960E+01	5.7360E+01	5.3193E+03	11	10.	-1.23
67	1.5000E+01	5.6199E+01	5.2116E+03	10	1.	-2.53
68	1.5000E+01	5.6590E+01	5.2572E+03	39	5.	-1.68
69	1.5770E+01	5.1000E+01	4.7295E+03	7	3.	1.82

70	1.5770E+01	4.9430E+01	4.5839E+03	11	10.	-1.32
71	1.6620E+01	4.2610E+01	3.9514E+03	5	2.	-1.43
72	1.7180E+01	3.7600E+01	3.4868E+03	68	1.	0.20
73	1.7480E+01	3.7610E+01	3.4878E+03	65	2.	0.23
74	1.7480E+01	3.7110E+01	3.4414E+03	11	10.	-1.10
75	1.7670E+01	3.6190E+01	3.3561E+03	11	10.	-0.59
76	1.9610E+01	2.6900E+01	2.4946E+03	11	10.	-1.11
77	2.0000E+01	2.5430E+01	2.3583E+03	39	5.	-1.23
78	2.0000E+01	2.5438E+01	2.3590E+03	10	1.	-1.20
79	2.0210E+01	2.4940E+01	2.3128E+03	11	10.	-0.17
80	2.0800E+01	2.3500E+01	2.1793E+03	68	1.	2.19
81	2.2150E+01	1.9580E+01	1.7972E+03	65	2.	1.10
82	2.2160E+01	1.9060E+01	1.7675E+03	11	10.	-0.57
83	2.4940E+01	1.3740E+01	1.2742E+03	11	10.	0.54
84	2.4942E+01	1.3670E+01	1.2677E+03	34	5.	0.05
85	2.5000E+01	1.3637E+01	1.2646E+03	10	1.	0.48
86	2.5000E+01	1.3720E+01	1.2723E+03	48	3.	1.09
87	2.5270E+01	1.3300E+01	1.2056E+03	11	10.	-1.23
88	2.7700E+01	1.3100E+01	9.3663E+02	68	1.	-0.35
89	2.8480E+01	9.4350E+00	8.7496E+02	11	10.	0.72
90	2.8490E+01	9.7000E+00	8.9953E+02	68	1.	3.65
91	2.3190E+01	8.8620E+00	8.2182E+02	11	10.	1.43
92	3.0000E+01	8.1077E+00	7.5187E+02	10	1.	0.26
93	3.0040E+01	8.1670E+00	7.5737E+02	48	3.	1.38
94	3.0490E+01	7.7380E+00	7.1944E+02	11	10.	0.54
95	3.2000E+01	6.9000E+00	6.3987E+02	68	1.	2.79
96	3.2180E+01	6.2430E+00	5.7895E+02	30	2.	-5.49
97	3.2640E+01	6.2500E+00	5.7960E+02	78	3.	-1.44
98	3.5430E+01	5.6850E+00	5.2720E+02	30	2.	-3.98
99	3.4700E+01	5.1370E+00	4.7638E+02	30	2.	-3.47
100	3.5900E+01	4.6300E+00	4.2936E+02	30	2.	-4.15
101	3.7320E+01	4.1120E+00	3.9135E+02	30	2.	-4.97
102	3.8700E+01	3.8500E+00	3.5703E+02	68	1.	-1.41
103	4.0000E+01	3.6437E+00	3.3790E+02	10	1.	2.38
104	4.0000E+01	3.6040E+00	3.3422E+02	39	5.	1.27
105	4.0040E+01	3.6370E+00	3.5728E+02	48	3.	2.49
106	4.0070E+01	3.4010E+00	3.1539E+02	30	2.	-3.96
107	4.0120E+01	3.5790E+00	3.3106E+02	28	5.	1.17
108	4.1530E+01	3.2300E+00	2.9953E+02	78	3.	0.94
109	4.2980E+01	2.9500E+00	2.7357E+02	28	5.	1.55
110	4.5400E+01	2.5500E+00	2.3740E+02	28	5.	2.71
111	5.0080E+01	1.9670E+00	1.8241E+02	48	3.	3.38
112	5.7460E+01	1.1560E+00	1.1648E+02	30	2.	-4.44
113	5.9070E+01	1.1820E+00	1.0961E+02	30	2.	-3.31
114	6.0035E+01	1.2070E+00	1.1193E+02	40	5.	2.96
115	6.8178E+01	8.5200E-01	7.9010E+01	78	3.	0.46
116	6.3520E+01	8.1400E-01	7.5487E+01	30	2.	-2.80
117	6.8840E+01	8.4300E-01	7.8176E+01	28	5.	1.83
118	7.0040E+01	8.1100E-01	7.5208E+01	40	5.	2.20
119	7.0380E+01	7.6340E-01	7.0794E+01	30	2.	-2.66
120	7.0810E+01	8.4700E-01	7.8547E+01	28	5.	9.61
121	7.2440E+01	7.1900E-01	6.6677E+01	30	2.	-1.70
122	7.4700E+01	6.7340E-01	6.2448E+01	30	2.	-0.97
123	7.6540E+01	5.4580E-01	5.9888E+01	30	2.	0.53
124	7.9960E+01	5.9200E-01	5.4899E+01	40	5.	1.85
125	8.6540E+01	5.1000E-01	4.7295E+01	28	5.	4.49
126	8.9920E+01	4.5420E-01	4.2120E+01	40	5.	0.92
127	9.1680E+01	4.4090E-01	4.0887E+01	30	2.	1.97
128	9.7130E+01	3.9240E-01	3.6389E+01	30	2.	1.86
129	1.0000E+02	3.6594E-01	3.3536E+01	11	1.	0.45
130	1.0000E+02	3.6584E-01	3.3926E+01	68	1.	0.42
131	1.0006E+02	3.6740E-01	3.4371E+01	40	5.	0.97
132	1.0999E+02	3.0850E-01	2.8609E+01	40	5.	0.79
133	1.2021E+02	2.6610E-01	2.4677E+01	40	5.	0.76
134	1.3031E+02	2.3740E-01	2.2015E+01	40	5.	1.50
135	1.4550E+02	2.0360E-01	1.8681E+01	48	3.	0.92
136	1.5000E+02	1.9365E-01	1.7959E+01	10	1.	-0.49
137	1.8200E+02	1.5700E-01	1.4559E+01	78	3.	-0.58
138	1.9925E+02	1.4100E-01	1.3076E+01	78	3.	-3.20
139	2.0850E+02	1.3920E-01	1.2909E+01	48	3.	-0.78
140	2.5500E+02	1.2340E-01	1.1444E+01	61	1.	2.11
141	2.7910E+02	1.1270E-01	1.0451E+01	48	3.	-1.30
142	2.9700E+02	1.1196E-01	1.0377E+01	61	1.	1.61
143	3.0000E+02	1.0911E-01	1.0118E+01	88	1.	-0.36
144	3.2200E+02	1.0430E-01	9.6723E+00	61	1.	-0.75
145	4.0000E+02	9.3493E-02	8.6701E+00	10	1.	-0.24
146	4.1180E+02	9.0600E-02	8.4018E+00	48	3.	-1.87
147	5.0000E+02	8.3813E-02	7.7724E+00	88	1.	-0.09

148	6.0000E+02	7.6703E-02	7.1205E+00	88	1.	-0.02
149	6.6200E+02	7.5105E-02	6.7060E+00	88	1.	0.03
150	7.0000E+02	7.1235E-02	6.6060E+00	88	1.	0.05
151	8.0000E+02	6.6815E-02	6.1961E+00	88	1.	0.05
152	9.0000E+02	6.3003E-02	5.8426E+00	88	1.	0.07
153	1.0000E+03	5.9795E-02	5.5451E+00	88	1.	0.07

152 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR COBALT

Z = 27

CONVERSION CONSTANT IS 9.785E+01

	K-EDGE	7.709	L-EDGES	0.929	0.794	0.779	0.060	0.003	0.003	KEY	CM2/GM	BARNs/AT	SOURCE	WEIGHT	DIFF
1	1.0000E+00	1.0455E+04	1.0229E+06	10	1.	-3.17									
2	1.0001E+00	.09295E+04	1.0075E+06	90	1.	-4.60									
3	1.4900E+00	3.3920E+03	3.9063E+05	7	3.	1.84									
4	1.5000E+00	5.9493E+03	3.8645E+05	10	1.	2.47									
5	1.5000E+00	5.1227E+03	4.0342E+05	90	1.	6.97									
6	2.0000E+00	1.8126E+03	1.7758E+05	10	1.	-0.68									
7	2.0000E+00	1.0354E+03	1.7963E+05	90	1.	0.57									
8	2.0400E+00	1.6970E+03	1.6606E+05	7	3.	-1.99									
9	2.3100E+00	1.2530E+03	1.2261E+05	7	3.	0.67									
10	2.9800E+00	6.2760E+02	6.1355E+04	7	3.	-1.00									
11	3.0000E+00	6.3156E+02	6.1801E+04	10	1.	1.50									
12	3.4400E+00	3.9700E+02	3.8848E+04	7	3.	-7.57									
13	3.6920E+00	3.6790E+02	3.6001E+04	82	3.	3.70									
14	4.0100E+00	2.8000E+02	2.7393E+04	7	3.	-1.35									
15	4.5110E+00	2.1120E+02	2.0667E+04	82	3.	2.7									
16	4.9500E+00	1.5500E+02	1.5167E+04	7	3.	-2.76									
17	4.9550E+00	1.6250E+02	1.5911E+04	82	3.	2.18									
18	5.0000E+00	1.5507E+02	1.5174E+04	10	1.	-0.01									
19	5.4140E+00	1.2119E+02	1.2437E+04	82	3.	2.12									
20	5.6980E+00	9.9700E+01	9.7561E+03	82	3.	1.46									
21	5.9000E+00	9.9700E+01	9.7561E+03	7	3.	1.55									
22	6.1040E+00	7.9700E+01	7.7990E+03	82	3.	1.99									
23	6.4048E+00	7.8000E+01	7.6326E+03	65	2.	-0.19									
24	6.9300E+00	6.3560E+01	6.2186E+03	82	3.	1.31									
25	6.9300E+00	6.4100E+01	6.2725E+03	7	3.	2.18									
26	6.9300E+00	6.1500E+01	6.0239E+03	65	2.	-1.87									
27	7.4780E+00	5.1020E+01	4.9925E+03	82	3.	0.46									
28	7.4800E+00	4.7600E+01	4.6579E+03	7	3.	-6.21									
29	7.6000E+00	4.9000E+01	4.7949E+03	17	2.	0.90									
30	7.7100E+00	3.6552E+02	3.5767E+04	90	1.	-3.9									
31	7.8000E+00	3.8100E+02	3.7289E+04	17	2.	3.99									
32	8.0000E+00	3.3613E+02	3.2892E+04	10	1.	-2.04									
33	8.0400E+00	3.5310E+02	3.4552E+04	82	3.	4.27									
34	8.0500E+00	3.6200E+02	3.5423E+04	17	2.	7.24									
35	8.0500E+00	3.2800E+02	3.2096E+04	7	3.	-2.83									
36	8.6390E+00	2.7750E+02	2.7155E+04	82	3.	-0.96									
37	8.9200E+00	2.7671E+02	2.7008E+04	17	2.	7.18									
38	1.0000E+01	1.0868E+02	1.8287E+04	10	1.	-1.07									
39	1.0000E+01	1.8180E+02	1.7790E+04	89	1.	-4.58									
40	1.0040E+01	2.0370E+02	1.9854E+04	17	2.	7.72									
41	1.0550E+01	1.5400E+02	1.5077E+04	7	3.	-6.39									
42	1.1220E+01	1.3900E+02	1.3692E+04	82	3.	0.02									
43	1.1220E+01	1.3300E+02	1.3115E+04	7	3.	-4.30									
44	1.1921E+01	1.1670E+02	1.1615E+04	82	3.	0.83									
45	1.2610E+01	9.7200E+01	9.5114E+03	7	3.	-3.71									
46	1.5000E+01	6.1115E+01	5.9845E+03	10	1.	-2.64									
47	1.5773E+01	5.5500E+01	5.4509E+03	82	3.	1.84									
48	1.7480E+01	4.0400E+01	3.9533E+03	65	2.	-0.92									
49	2.0000E+01	2.7377E+01	2.6790E+03	89	1.	-1.90									
50	2.0000E+01	2.7768E+01	2.7172E+03	10	1.	-0.51									
51	2.2160E+01	2.1140E+01	2.0686E+03	65	2.	1.81									
52	2.2179E+01	7.2010E+01	2.1538E+03	82	3.	6.27									
53	2.3174E+01	1.9050E+01	1.8641E+03	82	3.	4.35									
54	2.3210E+01	1.7250E+01	1.6880E+03	30	2.	-5.09									
55	2.4240E+01	1.5390E+01	1.7060E+03	30	2.	-4.08									
56	2.5000E+01	1.4919E+01	1.4599E+03	10	1.	1.59									
57	2.5251E+01	1.5000E+01	1.4678E+03	82	3.	5.10									
58	2.5500E+01	1.3760E+01	1.3465E+03	30	2.	-3.05									
59	2.6390E+01	1.2350E+01	1.2085E+03	30	2.	-1.83									
60	2.8620E+01	9.7700E+00	9.5604E+02	30	2.	-2.14									
61	3.0000E+01	8.8802E+00	8.5897E+02	10	1.	1.67									
62	5.0000E+01	8.8305E+00	8.6410E+02	89	1.	1.10									
63	3.0970E+01	7.6820E+00	7.5172E+02	30	2.	-3.50									
64	4.0000E+01	3.9977E+00	3.9119E+02	10	1.	4.13									
65	4.0120E+01	3.7800E+00	3.6989E+02	28	5.	-0.70									
66	4.2980E+01	3.0300E+00	3.0139E+02	28	5.	-1.69									
67	4.5400E+01	2.6000E+00	2.5442E+02	28	5.	-3.25									
68	5.0000E+01	2.0800E+00	2.0354E+02	28	5.	1.03									
69	5.7460E+01	1.4120E+00	1.3817E+02	30	2.	-0.11									

70	5.7520E+01	1.4200E+00	1.3895E+02	28	5.	0.73
71	5.9070E+01	1.3090E+00	1.2809E+02	30	2.	-0.39
72	6.8510E+01	9.7340E-01	9.5251E+01	30	2.	0.61
73	6.7870E+01	9.3600E-01	9.1592E+01	28	5.	1.84
74	6.8520E+01	9.0840E-01	8.8891E+01	30	2.	1.22
75	7.0580E+01	8.4450E-01	8.2618E+01	30	2.	0.54
76	7.0810E+01	8.4100E-01	8.2296E+01	28	5.	1.66
77	7.2440E+01	7.8420E-01	7.6737E+01	30	2.	0.21
78	7.4700E+01	7.3220E-01	7.1649E+01	30	2.	0.75
79	7.6540E+01	6.8940E-01	6.7461E+01	30	2.	0.50
80	8.6540E+01	5.1000E-01	4.9906E+01	28	5.	-1.66
81	1.0000E+02	3.8955E-01	3.8119E+01	10	1.	1.37
82	1.0000E+02	3.8908E-01	3.8073E+01	89	1.	1.25
83	1.0500E+02	3.7600E-01	3.6793E+01	28	5.	7.47
84	1.2300E+02	2.5800E-01	2.5246E+01	26	5.	-2.83
85	1.5000E+02	1.9970E-01	1.9541E+01	13	1.	-0.22
86	1.5000E+02	2.0160E-01	1.9630E+01	89	1.	0.24
87	2.0000E+02	1.4671E-01	1.4356E+01	89	1.	-0.10
88	2.7900E+02	9.2500E-02	9.0320E+00	3	3.	-19.14
89	3.0000E+02	1.0868E-01	1.0635E+01	89	1.	-0.49
90	3.2300E+02	9.3000E-02	9.1605E+00	3	3.	-10.96
91	4.0000E+02	9.2615E-02	9.0628E+00	10	1.	-0.35
92	4.7700E+02	7.9300E-02	7.7599E+00	3	3.	-6.60
93	5.0000E+02	8.2827E-02	8.1953E+00	89	1.	-0.17
94	6.0000E+02	7.5786E-02	7.4160E+00	89	1.	-0.08
95	6.6200E+02	7.2700E-02	7.1140E+00	3	3.	0.67
96	6.5200E+02	7.2204E-02	7.0655E+00	89	1.	-0.01
97	7.0000E+02	7.0263E-02	6.8756E+00	89	1.	0.01
98	6.0000E+02	6.5867E-02	6.4454E+00	89	1.	0.02
99	9.0330E+02	6.2098E-02	6.0766E+00	89	1.	0.05
100	1.0000E+03	5.8928E-02	5.7664E+00	89	1.	0.05

96 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR NICKEL

Z = 28

CONVERSION CONSTANT IS 9.745E+01

K-EDGE	8.533					
L-EDGES	1.012	0.872	0.855			
M-EDGES	0.113	0.069	0.069	0.004	0.004	
KEV	CH2/GM	BARNs/AT	SOURCE	WEIGHT	DIFF	
1	1.4900E+00	4.5570E+03	4.4400E+05	7	3.	2.18
2	1.5000E+00	4.6416E+03	4.5235E+05	10	1.	5.84
3	1.7400E+00	4.9000E+03	2.8261E+05	83	3.	-3.09
4	1.9230E+00	2.3100E+03	2.2511E+05	83	3.	-0.14
5	2.0000E+00	2.1422E+03	2.0876E+05	10	1.	2.45
6	2.0400E+00	1.9400E+03	1.8705E+05	7	3.	-2.25
7	2.0420E+00	1.9800E+03	1.9295E+05	83	3.	0.03
8	2.1650E+00	1.6636E+03	1.6212E+05	82	3.	-1.96
9	2.1660E+00	1.7330E+03	1.6888E+05	83	3.	2.26
10	2.2930E+00	1.4470E+03	1.4101E+05	83	3.	-0.80
11	2.3080E+00	1.4723E+03	1.4548E+05	82	3.	2.69
12	2.3100E+00	1.4560E+03	1.3994E+05	7	3.	0.38
13	2.6220E+00	1.0450E+03	1.0184E+05	82	3.	-1.96
14	2.6270E+00	1.0020E+03	9.7645E+04	12	2.	-1.74
15	2.8390E+00	8.3100E+02	8.0982E+04	83	3.	-0.06
16	2.9800E+00	6.8000E+02	6.6267E+04	7	3.	-7.11
17	2.9843E+00	7.2000E+02	7.0165E+04	83	3.	-1.30
18	3.0000E+00	7.3327E+02	7.1457E+04	10	1.	1.94
19	3.2870E+00	5.6500E+02	5.5060E+04	83	3.	0.42
20	3.3140E+00	5.5080E+02	5.4436E+04	82	3.	1.48
21	3.3180E+00	5.5190E+02	5.3783E+04	12	2.	0.59
22	3.4400E+00	5.0100E+02	4.8823E+04	7	3.	0.62
23	3.4410E+00	5.1000E+02	4.9700E+04	83	3.	2.74
24	3.6910E+00	4.1770E+02	4.0705E+04	5	2.	1.34
25	3.6920E+00	4.2000E+02	4.0929E+04	82	3.	.97
26	3.6970E+00	4.0740E+02	3.9701E+04	12	2.	-0.73
27	4.0100E+00	3.3600E+02	3.2744E+04	7	3.	.82
28	4.5110E+00	2.4000E+02	2.3588E+04	83	3.	0.20
29	4.5110E+00	2.3940E+02	2.3330E+04	82	3.	-0.05
30	4.5120E+00	2.4070E+02	2.3456E+04	5	2.	0.56
31	4.5160E+00	2.4780E+02	2.4148E+04	12	2.	3.77
32	4.9500E+00	1.8800E+02	1.8321E+04	7	3.	.02
33	4.9510E+00	1.8430E+02	1.7360E+04	5	2.	-0.91
34	4.9530E+00	1.8480E+02	1.8009E+04	82	3.	-0.54
35	5.0000E+00	1.8058E+02	1.7597E+04	10	1.	-0.29
36	5.4120E+00	1.4230E+02	1.3867E+04	5	2.	-2.32
37	5.4150E+00	1.4500E+02	1.4277E+04	65	2.	0.71
38	5.4150E+00	1.4540E+02	1.4179E+04	83	3.	0.03
39	5.4200E+00	1.4340E+02	1.4462E+04	12	2.	2.28
40	5.8980E+00	1.1300E+02	1.1012E+04	82	3.	-1.81
41	5.9000E+00	1.1400E+02	1.1109E+04	7	3.	-0.85
42	5.9040E+00	1.1590E+02	1.1392E+04	12	2.	1.86
43	5.9180E+00	1.1240E+02	1.0953E+04	15	1.	-1.42
44	5.9180E+00	1.1230E+02	1.0944E+04	19	2.	-1.51
45	6.4010E+00	8.8850E+01	8.6585E+03	5	2.	-3.15
46	6.4040E+00	9.2000E+01	8.9655E+03	82	3.	0.41
47	6.4040E+00	9.2000E+01	8.9655E+03	83	3.	0.41
48	6.4040E+00	9.1500E+01	8.9168E+03	65	2.	-0.13
49	6.4040E+00	9.5000E+01	9.0529E+03	68	1.	1.50
50	6.4090E+00	9.2110E+01	8.9762E+03	12	2.	0.75
51	6.4100E+00	9.0300E+01	8.7706E+03	17	2.	-1.51
52	6.4270E+00	9.0050E+01	8.7755E+03	19	2.	-0.73
53	6.9300E+00	7.3100E+01	7.1237E+03	82	3.	-0.70
54	6.9300E+00	7.2800E+01	7.0944E+03	65	2.	-1.11
55	6.9300E+00	7.6100E+01	7.4160E+03	7	3.	3.37
56	6.9520E+00	7.2590E+01	7.0746E+03	15	1.	-0.53
57	6.9520E+00	7.2680E+01	7.0827E+03	19	2.	-0.40
58	7.4780E+00	5.8920E+01	5.7126E+03	82	3.	-1.73
59	7.4780E+00	6.2000E+01	6.0420E+03	68	1.	3.93
60	7.4780E+00	6.1300E+01	5.9737E+03	83	3.	2.76
61	7.4840E+00	5.9690E+01	5.8168E+03	12	2.	0.28
62	7.5000E+00	6.1000E+01	5.9445E+03	17	2.	3.09
63	7.5020E+00	6.0360E+01	5.8821E+03	19	2.	2.08
64	7.5020E+00	6.0670E+01	5.9123E+03	15	1.	2.61
65	8.0000E+00	4.7602E+01	4.6368E+03	10	1.	-3.90
66	8.0400E+00	4.7550E+01	4.6737E+03	82	3.	-1.83
67	8.0470E+00	4.9100E+01	4.7848E+03	66	3.	0.75
68	8.0470E+00	4.8120E+01	4.6895E+03	11	10.	-1.26
69	8.0480E+00	4.9600E+01	4.8336E+03	83	3.	1.81

70	8.046E+01	4.7500E+01	4.6094E+03	68	1.	-2.91
71	8.0480E+01	4.8960E+01	4.7712E+03	65	2.	0.50
72	8.0500E+00	4.9000E+01	4.7751E+03	7	3.	0.65
73	8.0530E+00	4.9450E+01	4.8189E+03	12	2.	1.68
74	8.0720E+00	4.9250E+01	4.7995E+03	19	2.	1.93
75	8.0720E+00	5.0010E+01	4.8735E+03	15	1.	3.51
76	8.2650E+00	4.3350E+01	4.2245E+03	5	2.	-4.19
77	8.3960E+00	3.3520E+02	3.2666E+04	11	10.	2.10
78	8.3980E+00	3.5200E+02	3.2354E+04	68	1.	1.19
79	8.4000E+00	3.3500E+02	3.2646E+04	17	2.	2.16
80	8.5000E+00	3.2700E+02	3.1866E+04	17	2.	2.76
81	8.6340E+00	3.1740E+02	3.0931E+04	5	2.	5.78
82	8.6390E+00	3.0880E+02	3.0093E+04	82	3.	1.12
83	8.6400E+00	3.1500E+02	3.0697E+04	7	3.	3.18
84	8.6440E+00	3.1800E+02	3.1048E+04	12	2.	4.48
85	8.6690E+00	3.0530E+02	2.9752E+04	19	2.	0.85
86	8.9040E+00	2.9110E+02	2.8368E+04	11	10.	2.91
87	8.9200E+00	2.7700E+02	2.6994E+04	17	2.	-1.63
88	9.2920E+00	2.5350E+02	2.4683E+04	19	2.	-0.23
89	9.4420E+00	2.4600E+02	2.3973E+04	83	3.	0.91
90	9.5700E+00	2.3200E+02	2.2509E+04	7	3.	-1.53
91	9.5740E+00	2.3450E+02	2.2852E+04	5	2.	-0.36
92	9.6700E+00	2.3240E+02	2.2648E+04	11	10.	1.28
93	9.7130E+00	2.3060E+02	2.2414E+04	68	1.	1.36
94	9.8850E+00	2.1940E+02	2.1381E+04	11	10.	1.09
95	9.9150E+00	2.1420E+02	2.0974E+04	19	2.	-0.55
96	1.0000E+01	2.1344E+02	2.0800E+04	10	1.	1.27
97	1.0268E+01	1.9500E+02	1.9003E+04	83	3.	-0.74
98	1.0550E+01	1.8440E+02	1.7970E+04	11	10.	0.68
99	1.0550E+01	1.8600E+02	1.8266E+04	7	3.	1.76
100	1.0570E+01	1.8000E+02	1.7541E+04	19	2.	-1.03
101	1.0839E+01	1.6870E+02	1.6440E+04	83	3.	-0.83
102	1.1000E+01	1.6200E+02	1.5787E+04	17	2.	-0.96
103	1.1210E+01	1.5280E+02	1.4890E+04	5	2.	-1.77
104	1.1220E+01	1.5380E+02	1.4998E+04	82	3.	-0.89
105	1.1220E+01	1.5700E+02	1.5300E+04	7	3.	1.17
106	1.1220E+01	1.5560E+02	1.5163E+04	11	10.	0.27
107	1.1250E+01	1.5430E+02	1.5037E+04	19	2.	0.14
108	1.1440E+01	1.4600E+02	1.4228E+04	68	1.	-0.93
109	1.1580E+01	1.3900E+02	1.3546E+04	68	1.	-2.58
110	1.1921E+01	1.3230E+02	1.2893E+04	82	3.	0.16
111	1.1960E+01	1.3060E+02	1.2727E+04	19	2.	-0.27
112	1.2490E+01	1.1530E+02	1.1236E+04	11	10.	-1.23
113	1.2610E+01	1.1600E+02	1.1304E+04	7	3.	1.95
114	1.3380E+01	9.7000E+01	9.4527E+03	68	1.	-0.22
115	1.3390E+01	9.6180E+01	9.3728E+03	11	10.	-0.87
116	1.3450E+01	9.6610E+01	9.4147E+03	19	2.	0.37
117	1.4150E+01	8.1490E+01	7.9413E+03	5	2.	-2.76
118	1.4180E+01	8.3480E+01	8.1352E+03	15	1.	0.18
119	1.4180E+01	8.1960E+01	7.9871E+03	19	2.	-1.65
120	1.4960E+01	7.1220E+01	6.9405E+03	11	10.	-1.50
121	1.5000E+01	7.0115E+01	6.8328E+03	10	1.	-2.34
122	1.5770E+01	6.1590E+01	6.0020E+03	11	10.	-1.43
123	1.5773E+01	6.2350E+01	6.0761E+03	82	3.	-0.16
124	1.5810E+01	6.0830E+01	5.9279E+03	19	2.	-1.96
125	1.6620E+01	5.2490E+01	5.1152E+03	5	2.	-2.82
126	1.6650E+01	5.1780E+01	5.0460E+03	19	2.	-3.66
127	1.6650E+01	5.3080E+01	5.1727E+03	15	1.	-1.24
128	1.7480E+01	4.6410E+01	4.5227E+03	65	2.	-1.19
129	1.7480E+01	4.9000E+01	4.7751E+03	68	1.	4.53
130	1.7480E+01	4.6340E+01	4.5159E+03	11	10.	-1.34
131	1.7520E+01	4.5570E+01	4.4408E+03	19	2.	-2.36
132	1.7670E+01	4.5780E+01	4.4613E+03	11	10.	0.43
133	1.9310E+01	3.4600E+01	3.3718E+03	19	2.	-2.97
134	1.9610E+01	3.4200E+01	3.3328E+03	68	1.	0.08
135	1.9610E+01	3.3790E+01	3.2929E+03	11	10.	-1.12

136	2.0730E+01	3.1921E+01	3.1107E+03	10	1.	-1.37
137	2.0210E+01	3.1190E+01	3.0395E+03	11	10.	-0.71
138	2.0250E+01	3.0970E+01	3.0181E+03	19	2.	-0.85
139	2.0850E+01	2.9310E+01	2.8553E+03	68	1.	1.28
140	2.1210E+01	2.7060E+01	2.6370E+03	19	2.	-1.10
141	2.2160E+01	2.4600E+01	2.3975E+03	68	1.	-1.89
142	2.2160E+01	2.3740E+01	2.3135E+03	11	10.	-1.67
143	2.2160E+01	2.4450E+01	2.3827E+03	65	2.	1.27
144	2.2174E+01	2.4530E+01	2.3125E+03	82	3.	1.78
145	2.2179E+01	2.4510E+01	2.3805E+03	82	3.	1.77
146	2.2200E+01	2.4670E+01	2.4041E+03	15	1.	2.71
147	2.2200E+01	2.3640E+01	2.3537E+03	19	2.	-1.58
148	2.2300E+01	2.4390E+01	2.3681E+03	68	1.	2.47
149	2.2300E+01	2.4300E+01	2.3681E+03	68	1.	2.47
150	2.3174E+01	2.1570E+01	2.1020E+03	82	3.	1.50
151	2.3210E+01	2.0930E+01	2.0396E+03	19	2.	-1.08
152	2.3220E+01	2.0840E+01	2.0309E+03	11	10.	-1.38
153	2.4240E+01	1.8730E+01	1.8253E+03	19	2.	0.17
154	2.4500E+01	1.8700E+01	1.8223E+03	68	1.	3.09
155	2.4940E+01	1.7800E+01	1.7346E+03	68	1.	3.22
156	2.4940E+01	1.7400E+01	1.6956E+03	11	10.	0.90
157	2.5000E+01	1.7199E+01	1.6751E+03	10	1.	0.36
158	2.5000E+01	1.6933E+01	1.6498E+03	48	3.	-1.15
159	2.5251E+01	1.6960E+01	1.6528E+03	82	3.	1.87
160	2.5270E+01	1.6100E+01	1.5690E+03	68	1.	-5.09
161	2.5270E+01	1.5640E+01	1.6216E+03	11	10.	0.16
162	2.5300E+01	1.5720E+01	1.6294E+03	19	2.	0.98
163	2.5300E+01	1.7110E+01	1.6674E+03	15	1.	3.34
164	2.6390E+01	1.4720E+01	1.4345E+03	19	2.	0.20
165	2.7490E+01	1.2980E+01	1.2649E+03	19	2.	-0.82
166	2.7700E+01	1.3200E+01	1.2864E+03	68	1.	3.05
167	2.8480E+01	1.1830E+01	1.1528E+03	11	10.	-0.11
168	2.8490E+01	1.2200E+01	1.1889E+03	68	1.	3.12
169	2.8620E+01	1.1690E+01	1.1392E+03	19	2.	0.09
170	2.9190E+01	1.1040E+01	1.0759E+03	11	10.	-0.08
171	3.0000E+01	1.0245E+01	9.9843E+02	10	1.	0.16
172	3.0040E+01	1.0210E+01	9.9497E+02	48	3.	0.20
173	3.0490E+01	9.7120E+00	9.4644E+02	11	10.	-0.51
174	3.0970E+01	9.1070E+00	8.8749E+02	19	2.	-2.40
175	3.0970E+01	9.6110E+00	9.3660E+02	15	1.	3.00
176	3.2000E+01	8.6550E+00	8.4295E+02	68	1.	1.67
177	3.2180E+01	8.2190E+00	8.0095E+02	19	2.	-1.63
178	3.3430E+01	7.4550E+00	7.2650E+02	19	2.	-0.45
179	3.4700E+01	6.7480E+00	6.5760E+02	19	2.	0.26
180	3.5900E+01	6.2210E+00	6.0624E+02	19	2.	1.86
181	3.7320E+01	5.5550E+00	5.4134E+02	19	2.	1.57
184	3.8700E+01	4.9300E+00	4.7751E+02	68	1.	-0.70
185	4.0000E+01	4.5200E+00	4.5033E+02	10	1.	2.79
184	4.0040E+01	4.3970E+00	4.4790E+02	48	3.	2.56
185	4.0070E+01	4.5270E+00	4.4116E+02	19	2.	1.21
186	4.0120E+01	4.5700E+00	4.4555E+02	28	5.	2.54
187	4.2980E+01	3.6800E+00	3.5862E+02	28	5.	0.44
188	4.5400E+01	3.2300E+00	3.1477E+02	28	5.	2.89
189	5.0000E+01	2.5800E+00	2.5142E+02	28	5.	7.51
190	5.0380E+01	2.4690E+00	2.4061E+02	48	3.	3.35
191	5.7465E+01	1.6300E+00	1.5884E+02	19	2.	-3.59
192	5.7520E+01	1.6800E+00	1.6372E+02	28	5.	2.75
193	5.9070E+01	1.5170E+00	1.4783E+02	19	2.	-0.37
194	6.0030E+01	1.5340E+00	1.4949E+02	40	5.	5.17
195	6.0750E+01	1.3660E+00	1.5312E+02	19	2.	-3.32
196	6.4640E+01	1.2110E+00	1.1810E+02	19	2.	0.35
197	6.6500E+01	1.1320E+00	1.1031E+02	19	2.	1.58
198	6.7870E+01	9.8700E-01	9.6184E+01	28	5.	-6.67
199	6.8520E+01	1.0500E+00	1.0333E+02	19	2.	2.71
200	6.9520E+01	1.0410E+00	1.0145E+02	15	1.	0.87
201	6.8840E+01	1.0300E+00	1.0037E+02	28	5.	0.99
202	7.0040E+01	1.0040E+00	9.7841E+01	40	5.	2.86
203	7.1390E+01	9.9540E-01	9.7063E+01	19	2.	3.23
204	7.0810E+01	9.8000E-01	9.5502E+01	28	5.	3.20
205	7.2440E+01	9.1750E-01	8.9411E+01	19	2.	2.28
206	7.4480E+01	8.6540E-01	8.4334E+01	19	2.	3.33
207	7.6540E+01	8.2270E-01	8.0173E+01	19	2.	4.98
208	7.6540E+01	8.0930E-01	7.8867E+01	15	1.	3.27
209	7.7500E+01	7.7100E-01	7.5135E+01	36	1.	1.39
210	8.4990E+01	6.3190E-01	5.1579E+01	40	5.	3.25
211	8.6540E+01	5.9000E-01	5.7496E+01	28	5.	0.44
212	9.1680E+01	5.0420E-01	4.9155E+01	19	2.	-2.43
213	9.5300E+01	4.9300E-01	4.7751E+01	36	1.	3.04
214	9.7130E+01	4.5540E-01	4.4379E+01	19	2.	-0.34

215	1.0000E+02	4.3879E-01	4.2760E+01	10	1.	1.95
216	1.0000E+02	4.3876E-01	4.2699E+01	89	1.	1.81
217	1.0000E+02	4.3540E-01	4.1943E+01	40	5.	0.13
218	1.0330E+02	4.2030E-01	4.0929E+01	36	1.	4.19
219	1.1270E+02	3.4930E-01	3.4010E+01	36	1.	2.29
220	1.1487E+02	3.2440E-01	3.1613E+01	40	5.	-1.55
221	1.2300E+02	2.8500E-01	2.7774E+01	28	5.	-2.56
222	1.2400E+02	2.9730E-01	2.8943E+01	36	1.	2.93
223	1.3031E+02	2.6580E-01	2.5902E+01	40	5.	-0.17
224	1.3800E+02	2.5000E-01	2.4365E+01	36	1.	2.46
225	1.4560E+02	2.2250E-01	2.1685E+01	48	3.	-1.59
226	1.5000E+02	2.1844E-01	2.1287E+01	10	1.	0.57
227	1.5800E+02	2.0100E-01	1.9588E+01	28	5.	-0.94
228	1.6500E+02	1.9500E-01	1.9003E+01	36	1.	1.38
229	2.0000E+02	1.5379E-01	1.5474E+01	90	1.	1.27
230	2.0830E+02	1.4990E-01	1.4608E+01	48	3.	-0.68
231	2.7910E+02	1.1870E-01	1.1567E+01	48	3.	-1.35
232	3.0000E+02	1.1518E-01	1.1225E+01	90	1.	0.22
233	4.0000E+02	9.7149E-02	9.4673E+00	10	1.	-0.21
234	4.1180E+02	9.4400E-02	9.1994E+00	48	3.	-1.49
235	5.0000E+02	8.6655E-02	8.4446E+00	89	1.	-0.09
236	6.0000E+02	7.9179E-02	7.7161E+00	89	1.	-0.02
237	6.6200E+02	7.5399E-02	7.3477E+00	89	1.	0.03
238	7.0000E+02	7.3355E-02	7.1485E+00	89	1.	0.05
239	8.0000E+02	6.8731E-02	6.6979E+00	89	1.	0.05
240	9.0000E+02	6.4772E-02	6.3121E+00	89	1.	0.07
241	1.0000E+03	6.1446E-02	5.9880E+00	89	1.	0.07

240 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR COPPER

Z • 29

CONVERSION CONSTANT IS 1.055E+02

K-EDGE	8.979	L-EDGES	1.100	0.952	0.932	0.002	0.002	KEY	CM2/GM	BARNs/AT	SOURCE	WEIGHT	DIFF
1	1.1700E+00	1.1000E+04	1.1605E+06	33	2.	13.74							
2	1.2340E+00	9.1900E+03	9.6950E+05	33	2.	9.25							
3	1.3590E+00	6.8300E+03	7.2059E+05	33	2.	4.53							
4	1.4870E+00	4.5800E+03	4.9376E+05	83	3.	-9.34							
5	1.4900E+00	5.4440E+03	5.7436E+05	33	2.	5.02							
6	1.5000E+00	5.0121E+03	5.2879E+05	10	1.	-0.67							
7	1.5000E+00	4.6957E+03	4.9541E+05	90	1.	-6.94							
8	1.5400E+00	4.7600E+03	5.0220E+05	33	2.	1.17							
9	1.7390E+00	3.3900E+03	3.5766E+05	33	2.	-0.49							
10	1.7400E+00	3.1900E+03	3.3656E+05	83	3.	-6.22							
11	1.9230E+00	2.5200E+03	2.6587E+05	83	3.	-3.37							
12	2.0000E+00	2.3448E+03	2.4738E+05	10	1.	-0.21							
13	2.0000E+00	2.2263E+03	2.3488E+05	90	1.	-5.25							
14	2.0420E+00	2.1700E+03	2.2894E+05	83	3.	-2.32							
15	2.1650E+00	1.8186E+03	1.9187E+05	82	3.	-4.12							
16	2.1660E+00	1.6226E+03	1.9750E+05	83	3.	-1.19							
17	2.2950E+00	1.6070E+03	1.6954E+05	83	3.	-1.06							
18	2.2930E+00	1.6940E+03	1.7872E+05	42	3.	4.29							
19	2.3080E+00	1.5630E+03	1.6490E+05	82	3.	-2.06							
20	2.6220E+00	1.1100E+03	1.1711E+05	82	3.	-1.87							
21	2.8590E+00	8.9500E+02	9.4532E+04	83	3.	-1.85							
22	2.8390E+00	8.9600E+02	9.4532E+04	42	3.	-1.85							
23	2.9840E+00	8.0100E+02	8.4509E+04	83	3.	0.35							
24	2.9840E+00	7.7300E+02	8.1555E+04	38	1.	-3.15							
25	3.0000E+00	7.7839E+02	8.2123E+04	10	1.	-1.06							
26	3.1510E+00	6.7300E+02	7.1004E+04	38	1.	-2.14							
27	3.2870E+00	6.3100E+02	6.6573E+04	83	3.	3.01							
28	3.2870E+00	6.3080E+02	5.6552E+04	42	3.	2.98							
29	3.3140E+00	5.9300E+02	6.2564E+04	82	3.	-1.00							
30	3.4440E+00	5.5300E+02	5.8344E+04	83	3.	2.58							
31	3.4440E+01	5.5340E+02	5.8386E+04	42	3.	2.65							
32	3.6910E+01	4.5900E+02	4.6316E+04	38	1.	-1.58							
33	3.6920E+00	4.5300E+02	4.7878E+04	82	3.	1.81							
34	4.0990E+00	3.1919E+02	3.3656E+04	38	1.	-5.26							
35	4.0910E+00	3.4200E+02	3.6308E+04	83	3.	1.64							
36	4.0910E+00	3.4190E+02	3.5372E+04	42	3.	1.61							
37	4.2210E+00	3.0640E+02	3.2326E+04	82	3.	0.72							
38	4.5100E+00	2.5600E+02	2.7009E+04	38	1.	-0.49							
39	4.5110E+00	2.6100E+02	2.7537E+04	83	3.	1.61							
40	4.5110E+00	2.6110E+02	2.7547E+04	42	3.	1.65							
41	4.5110E+00	2.5540E+02	2.6946E+04	82	3.	-0.57							
42	4.5120E+00	2.6140E+02	2.7579E+04	5	2.	1.83							
43	4.9510E+00	1.9900E+02	2.0995E+04	5	2.	0.15							
44	4.9520E+00	2.0250E+02	2.1365E+04	42	3.	1.95							
45	4.9520E+00	2.0300E+02	2.1417E+04	83	3.	2.20							
46	4.9520E+00	1.9900E+02	2.0890E+04	38	1.	-0.32							
47	4.9530E+00	1.9810E+02	2.0900E+04	82	3.	-0.21							
48	5.0000E+00	1.9253E+02	2.0513E+04	10	1.	-0.46							
49	5.4120E+00	1.5530E+02	1.6305E+04	5	2.	0.06							
50	5.4140E+00	1.5532E+02	1.6163E+04	82	3.	-1.19							
51	5.4140E+00	1.5500E+02	1.5353E+04	38	1.	-0.03							
52	5.4150E+00	1.5600E+02	1.6459E+04	83	3.	0.66							
53	5.4150E+00	1.5600E+02	1.6459E+04	42	3.	0.66							
54	5.4150E+00	1.5450E+02	1.6300E+04	65	2.	-0.30							
55	5.8980E+00	1.2190E+02	1.2861E+04	82	3.	-0.31							
56	5.8990E+00	1.2540E+02	1.3230E+04	83	3.	2.60							
57	5.8990E+00	1.2540E+02	1.3230E+04	42	3.	2.60							
58	5.9040E+00	1.2860E+02	1.3568E+04	12	2.	5.47							
59	5.9180E+00	1.2010E+02	1.2671E+04	19	2.	-0.86							
60	6.4010E+00	9.5330E+01	1.0153E+04	5	2.	-0.98							
61	6.4030E+00	9.6700E+01	1.0202E+04	38	1.	-0.52							
62	6.4040E+00	9.6500E+01	1.0192E+04	82	3.	-0.58							
63	6.4040E+00	9.8000E+01	1.0339E+04	68	1.	0.86							
64	6.4040E+00	9.5700E+01	1.0519E+04	42	3.	2.61							
65	6.4040E+00	9.9700E+01	1.0519E+04	83	3.	2.61							
66	6.4040E+00	9.6000E+01	1.0128E+04	65	2.	-1.19							
67	6.4270E+00	9.6140E+01	1.0143E+04	19	2.	-0.05							
68	6.4270E+00	9.6330E+01	1.0163E+04	15	1.	0.14							
69	6.9300E+00	8.0100E+01	8.4509E+03	83	3.	2.78							

70	6.9300E+01	7.7600E+01	8.1871E+03	82	3.	-0.43
71	6.9300E+01	8.0100E+01	8.4509E+03	42	3.	2.78
72	6.9300E+01	7.7200E+01	8.1449E+03	65	2.	-0.94
73	6.9520E+01	7.7700E+01	8.1977E+03	19	2.	0.58
74	7.0000E+00	7.3600E+01	7.7651E+03	17	2.	-2.08
75	7.0580E+00	7.4110E+01	7.8189E+03	39	5.	0.07
76	7.4770E+00	6.3000E+01	6.6468E+03	38	1.	-0.11
77	7.4780E+00	6.2200E+01	6.5623E+03	82	3.	-1.35
78	7.4780E+00	6.4500E+01	6.8156E+03	83	3.	2.46
79	7.4780E+00	6.4600E+01	6.8156E+03	42	3.	2.46
80	7.4780E+00	6.5000E+01	6.8578E+03	68	1.	3.09
81	7.5020E+00	6.2810E+01	6.6267E+03	15	1.	0.51
82	7.5020E+00	6.2650E+01	6.6098E+03	19	2.	-0.26
83	8.0000E+00	5.2170E+01	5.5041E+03	39	5.	-0.21
84	8.3000E+00	5.1339E+01	5.4165E+03	10	1.	-1.80
85	8.0000E+00	5.0500E+01	5.3069E+03	17	2.	-3.78
86	8.3400E+00	5.0870E+01	5.3670E+03	82	3.	-1.32
87	8.0470E+00	5.0000E+01	5.2752E+03	38	1.	-2.77
88	8.0470E+00	5.1200E+01	5.4018E+03	11	10.	-0.44
89	8.0480E+00	5.2200E+01	5.5073E+03	42	3.	1.54
90	8.0480E+00	4.9400E+01	5.2119E+03	68	1.	-3.91
91	8.0480E+00	5.2200E+01	5.5073E+03	83	3.	1.54
92	8.0480E+00	4.1840E+01	5.4693E+03	65	2.	0.84
93	8.0480E+00	5.3320E+01	5.5200E+03	37	2.	1.77
94	8.0720E+00	5.1490E+01	5.4324E+03	19	2.	1.00
95	8.0720E+00	5.1250E+01	5.4071E+03	15	1.	0.53
96	8.3350E+00	4.6400E+01	4.8954E+03	68	1.	-0.44
97	8.3960E+00	4.5180E+01	4.7667E+03	11	10.	-1.06
98	8.3980E+00	4.5400E+01	4.7899E+03	39	5.	-0.51
99	8.3980E+00	4.6400E+01	4.8954E+03	68	1.	1.68
100	8.5900E+00	4.0700E+01	4.2940E+03	17	2.	-4.99
101	8.6390E+00	4.2700E+01	4.5050E+03	42	3.	1.27
102	8.6390E+00	4.2700E+01	4.5050E+03	83	3.	1.27
103	8.6390E+00	4.1580E+01	4.3869E+03	82	3.	-1.38
104	8.6390E+00	4.2100E+01	4.4417E+03	68	1.	-0.15
105	8.6690E+00	4.1440E+01	4.3721E+03	19	2.	-0.76
106	8.6690E+00	4.1630E+01	4.3921E+03	15	1.	-0.30
107	9.7500E+00	4.0350E+01	4.2518E+03	17	2.	-0.95
108	8.8300E+00	3.9500E+01	4.1674E+03	17	2.	-0.42
109	8.9040E+00	3.8410E+01	4.0514E+03	11	10.	-0.91
110	8.9070E+00	3.7780E+01	3.9859E+03	5	2.	-2.42
111	9.0000E+00	2.9090E+02	3.0596E+04	77	2.	0.97
112	9.1200E+00	2.7800E+02	2.9330E+04	17	2.	0.13
113	9.2480E+00	2.8270E+02	2.9826E+04	5	2.	5.44
114	9.3000E+00	2.6200E+02	2.7642E+04	17	2.	-0.79
115	9.4420E+00	2.7040E+02	2.8528E+04	42	3.	6.45
116	9.4420E+00	2.7000E+02	2.8486E+04	83	3.	6.29
117	9.5000E+00	2.6310E+02	2.7758E+04	39	5.	5.21
118	9.6700E+00	2.4400E+02	2.5743E+04	11	10.	2.11
119	9.7150E+00	2.4570E+02	2.5922E+04	42	3.	3.99
120	9.7130E+00	2.4600E+02	2.5954E+04	83	3.	4.12
121	9.8850E+00	2.2700E+02	2.3949E+04	11	10.	0.50
122	9.9150E+00	2.1720E+02	2.2915E+04	19	2.	-3.09
123	9.9620E+00	2.2200E+02	2.3422E+04	39	5.	0.26
124	9.9620E+00	2.3100E+02	2.4371E+04	68	1.	4.32
125	1.0000E+01	2.2311E+02	2.3539E+04	10	1.	1.75
126	1.0000E+01	2.19R0E+02	2.319CE+04	39	5.	0.24
127	1.0550E+01	1.8900E+02	1.9940E+04	11	10.	-0.63
128	1.0550E+01	1.9400E+02	2.0468E+04	42	3.	1.99
129	1.0570E+01	1.8550E+02	1.9571E+04	19	2.	-1.98
130	1.0980E+01	1.7240E+02	1.8189E+04	11	10.	0.78
131	1.1210E+01	1.6270E+02	1.7166E+04	5	2.	0.50
132	1.1220E+01	1.6160E+02	1.7649E+04	82	3.	0.35
133	1.1220E+01	1.6920E+02	1.6992E+04	11	10.	-0.81
134	1.1250E+01	1.5910E+02	1.6786E+04	19	2.	-0.79
135	1.1920E+01	1.3930E+02	1.4697E+04	12	2.	1.28
136	1.1921E+01	1.3420E+02	1.4159E+04	82	3.	-2.41
137	1.1960E+01	1.4520E+02	1.5319E+04	19	2.	6.51
138	1.2490E+01	1.2040E+02	1.2703E+04	11	10.	-0.91
139	1.2500E+01	1.2132E+02	1.2800E+04	37	2.	0.06
140	1.3200E+01	9.8500E+01	1.0392E+04	17	2.	-6.14
141	1.3390E+01	9.9060E+01	1.0451E+04	11	10.	-1.96
142	1.3430E+01	9.8400E+01	1.0282E+04	15	1.	-1.84
143	1.3430E+01	9.9680E+01	1.0517E+04	19	2.	-0.56
144	1.4150E+01	8.7430E+01	9.2242E+03	5	2.	0.16
145	1.4180E+01	8.7070E+01	9.1862E+03	19	2.	0.31
146	1.4230E+01	8.3800E+01	8.8412E+03	17	2.	-2.55
147	1.4960E+01	7.5560E+01	7.9719E+03	11	10.	0.31

148	1.4980E+01	7.3300E+01	7.7334E+03	15	1.	-2.34
149	1.4980E+01	6.9980E+01	7.3032E+03	19	2.	-6.77
150	1.5000E+01	7.3558E+01	7.7607E+03	10	1.	-1.65
151	1.5000E+01	7.4440E+01	7.8557E+03	39	5.	-0.47
152	1.5000E+01	7.6680E+01	8.0900E+03	37	2.	2.52
153	1.5400E+01	6.7600E+01	7.1521E+03	17	2.	-2.81
154	1.5773E+01	6.4920E+01	6.8493E+03	82	3.	-0.29
155	1.5770E+01	6.4730E+01	6.8293E+03	11	1.	-0.61
156	1.5810E+01	6.3810E+01	6.7522E+03	19	2.	-1.36
157	1.5620E+01	5.5860E+01	5.8935E+03	5	2.	-0.90
158	1.6620E+01	5.3403E+01	5.6339E+03	17	2.	-5.27
159	1.6650E+01	5.4480E+01	5.7479E+03	15	1.	-2.87
160	1.6650E+01	5.5480E+01	5.8534E+03	19	2.	-1.09
161	1.7480E+01	4.8880E+01	5.1570E+03	65	2.	-0.36
162	1.7480E+01	4.8750E+01	5.1433E+03	11	10.	-0.62
163	1.7520E+01	4.8440E+01	5.1105E+03	19	2.	-0.63
164	1.8200E+01	4.1900E+01	4.4206E+03	17	2.	-4.55
165	1.9310E+01	3.6900E+01	3.8931E+03	19	2.	-1.09
166	1.9310E+01	3.8050E+01	3.0144E+03	15	1.	1.99
167	1.9610E+01	3.5660E+01	3.7623E+03	11	10.	-0.28
168	2.0000E+01	3.3680E+01	3.5534E+03	39	5.	-0.58
169	2.0000E+01	3.3458E+01	3.5300E+03	37	2.	-1.24
170	2.0600E+01	3.3570E+01	3.5417E+03	10	1.	-0.91
171	2.0210E+01	3.2800E+01	3.4605E+03	11	10.	-0.27
172	2.0250E+01	3.1961E+01	3.3739E+03	19	2.	-2.28
173	2.0390E+01	3.0500E+01	3.2179E+03	17	2.	-4.93
174	2.1210E+01	2.9080E+01	3.0687E+03	19	2.	1.38
175	2.2160E+01	2.5640E+01	2.7051E+03	65	2.	1.19
176	2.2166E+01	2.5250E+01	2.6640E+03	11	3.	-0.35
177	2.2179E+01	2.5390E+01	2.6787E+03	82	3.	0.44
178	2.2200E+01	2.5710E+01	2.7125E+03	55	1.	0.98
179	2.2200E+01	2.5180E+01	2.6565E+03	19	2.	-0.12
180	2.2340E+01	2.4100E+01	2.5426E+03	17	2.	-2.69
181	2.3174E+01	2.2460E+01	2.3696E+03	82	3.	0.58
182	2.3210E+01	2.2210E+01	2.3452E+03	19	2.	-0.10
183	2.4240E+01	9700E+00	2.0784E+03	19	2.	0.16
184	2.4500E+01	1.3600E+01	2.0679E+03	68	1.	2.69
185	2.4890E+01	1.7600E+01	1.8569E+03	17	2.	-3.59
186	2.4940E+01	1.8320E+01	1.9328E+03	11	10.	0.92
187	2.5000E+01	1.8672E+01	1.9700E+03	37	2.	3.56
188	2.5000E+01	1.8121E+01	1.9118E+03	10	1.	0.50
189	2.5000E+01	1.8260E+01	1.9265E+03	39	5.	1.27
190	2.5000E+01	1.8010E+01	1.9001E+03	48	3.	-0.11
191	2.5200E+01	1.6870E+01	1.7799E+03	44	1.	-4.31
192	2.5251E+01	1.7530E+01	1.8495E+03	82	3.	-0.03
193	2.5270E+01	1.7690E+01	1.8664E+03	11	10.	1.12
194	2.5300E+01	1.7430E+01	1.8389E+03	19	2.	-0.03
195	2.6390E+01	1.5510E+01	1.6364E+03	19	2.	0.16
196	2.7490E+01	1.3760E+01	1.4517E+03	19	2.	-0.35
197	2.7490E+01	1.3910E+01	1.4576E+03	15	1.	0.73
198	2.7990E+01	1.2800E+01	1.3505E+03	17	2.	-2.50
199	2.8480E+01	1.2560E+01	1.3251E+03	11	10.	0.43
200	2.8620E+01	1.2360E+01	1.3040E+03	19	2.	0.20
201	2.9190E+01	1.1720E+01	1.2365E+03	11	10.	0.40
202	3.0000E+01	1.0816E+01	1.1411E+03	10	1.	0.31
203	3.0000E+01	1.0840E+01	1.1437E+03	39	5.	0.23
204	3.0000E+01	1.0900E+01	1.1500E+03	37	2.	0.79
205	3.0000E+01	1.0840E+01	1.1437E+03	39	5.	0.23
206	3.0340E+01	1.0840E+01	1.1437E+03	48	3.	0.62
207	3.0490E+01	1.0340E+01	1.0990E+03	11	10.	0.15
208	3.0970E+01	9.9900E+00	1.0540E+03	15	1.	1.18
209	3.0970E+01	9.7540E+00	1.0291E+03	19	2.	-1.22
210	3.2180E+01	8.8140E+00	9.2991E+02	19	2.	-0.42
211	3.2640E+01	8.6000E+00	9.0733E+02	78	3.	1.17
212	3.3430E+01	7.8800E+00	8.3137E+02	19	2.	-0.77
213	3.4600E+01	7.0700E+00	7.4591E+02	44	1.	-1.84
214	3.4700E+01	7.1930E+00	7.5689E+02	19	2.	0.69
215	3.5000E+01	6.8054E+00	7.1800E+02	37	2.	-2.39
216	3.5900E+01	6.5950E+00	6.9590E+02	19	2.	1.64
217	3.7320E+01	5.8050E+00	6.1245E+02	19	2.	-0.19
218	3.8700E+01	5.2010E+00	5.4862E+02	68	1.	-0.98
219	3.9520E+01	5.0300E+00	5.3596E+02	28	5.	2.59
220	3.9700E+01	4.9100E+00	5.1802E+02	44	1.	0.42
221	4.0000E+01	4.9033E+00	5.1700E+02	37	2.	2.36
222	4.0000E+01	4.8875E+00	5.1565E+02	10	1.	2.09
223	4.0000E+01	4.8630E+00	5.1307E+02	39	5.	1.58
224	4.0040E+01	4.8576E+00	5.1235E+02	48	3.	1.74
225	4.0070E+01	4.7630E+00	5.0252E+02	19	2.	-0.02

226	4.0120E+01	4.7900E+00	5.0536E+02	28	5.	0.91
227	4.1530E+01	4.3300E+00	4.5683E+02	78	5.	0.58
228	4.1530E+01	4.3300E+00	4.5083E+02	28	5.	0.58
229	4.2800E+01	3.9000E+00	4.1147E+02	44	1.	-1.38
230	4.2980E+01	3.9300E+00	4.1463E+02	78	5.	0.56
231	4.2980E+01	3.9300E+00	4.1463E+02	28	5.	0.56
232	4.5400E+01	3.2700E+00	3.4500E+02	28	5.	-2.45
233	4.9300E+01	2.6600E+00	2.8064E+02	44	1.	-0.29
234	5.0000E+01	2.5300E+00	2.6693E+02	28	5.	-1.41
235	5.0080E+01	2.5920E+00	2.7347E+02	48	3.	1.45
236	5.1420E+01	2.3200E+00	2.4477E+02	78	3.	-2.32
237	5.7100E+01	1.7490E+00	1.8453E+02	44	1.	-2.13
238	5.7460E+01	1.7210E+00	1.8157E+02	19	2.	-1.95
239	5.7520E+01	1.7600E+00	1.8703E+02	28	5.	1.69
240	5.9070E+01	1.6020E+00	1.6902E+02	19	2.	-1.72
241	5.9300E+01	1.6300E+00	1.7197E+02	36	1.	1.04
242	6.0030E+01	1.5800E+00	1.6670E+02	40	5.	1.18
243	6.0750E+01	1.5380E+00	1.6227E+02	15	1.	1.68
244	6.0750E+01	1.4500E+00	1.5298E+02	19	2.	-4.14
245	6.4630E+01	1.2730E+00	1.3431E+02	19	2.	-0.83
246	6.5600E+01	1.2130E+00	1.2798E+02	44	1.	-1.79
247	6.6500E+01	1.1970E+00	1.2629E+02	19	2.	0.41
248	6.7400E+01	1.1700E+00	1.2344E+02	36	1.	1.62
249	6.7870E+01	1.1500E+00	1.2133E+02	28	5.	1.69
250	6.8170E+01	1.1750E+00	1.2397E+02	78	3.	5.09
251	6.8200E+01	1.1990E+00	1.1703E+02	44	1.	-0.70
252	6.8520E+01	1.1190E+00	1.1806E+02	19	2.	1.41
253	7.0440E+01	1.0550E+00	1.1131E+02	40	5.	1.12
254	7.0380E+01	1.0410E+00	1.0983E+02	19	2.	-1.02
255	7.0810E+01	1.0100E+00	1.0556E+02	28	5.	-0.46
256	7.2440E+01	9.6870E-01	1.0220E+02	19	2.	1.11
257	7.4200E+01	8.9900E-01	9.4848E+01	44	1.	-0.36
258	7.4480E+01	9.0920E-01	9.5924E+01	19	2.	1.71
259	7.6540E+01	8.6370E-01	9.1082E+01	19	2.	3.30
260	7.6540E+01	8.5200E-01	9.9889E+01	15	1.	1.95
261	7.7500E+01	8.3000E-01	8.7558E+01	36	1.	2.39
262	7.8500E+01	7.7700E-01	8.1977E+01	44	1.	-1.12
263	7.9500E+01	7.5200E-01	7.9339E+01	78	3.	-1.33
264	8.4990E+01	6.6049E-01	6.9675E+01	40	5.	1.55
265	8.5600E+01	6.6700E-01	7.0371E+01	44	1.	4.29
266	8.6540E+01	6.3000E-01	6.6458E+01	28	5.	1.03
267	8.8500E+01	6.0600E-01	6.3935E+01	36	1.	2.31
268	9.5300E+01	5.1300E-01	5.4124E+01	36	1.	2.13
269	9.7110E+01	4.8500E-01	5.1169E+01	78	3.	0.56
270	1.0000E+02	4.5399E-01	4.7898E+01	88	1.	3.16
271	1.0000E+02	4.5425E-01	4.7925E+01	10	1.	0.22
272	1.0006E+02	~5500E-01	4.8004E+01	40	5.	0.51
273	1.0330E+02	4.3400E-01	4.5789E+01	36	1.	2.46
274	1.0500E+02	4.1900E-01	4.4206E+01	28	5.	2.27
275	1.1270E+02	5.7100E-01	3.9142E+01	36	1.	4.15
276	1.1487E+02	5.4100E-01	3.5977E+01	40	5.	-0.74
277	1.2300E+02	3.0300E-01	3.1968E+01	28	5.	-0.08
278	1.2400E+02	3.0600E-01	3.2284E+01	36	1.	2.35
279	1.3031E+02	2.8020E-01	2.9562E+01	40	5.	2.01
280	1.3440E+02	2.6450E-01	2.7906E+01	57	1.	1.28
281	1.3800E+02	2.5900E-01	2.7326E+01	36	1.	3.40
282	1.4500E+02	2.3901E-01	2.5216E+01	34	2.	2.84
283	1.4560E+02	2.2979E-01	2.4234E+01	48	3.	-0.56
284	1.5000E+02	2.1988E-01	2.3198E+01	10	1.	-0.66
285	1.5500E+02	2.1500E-01	2.2683E+01	36	1.	1.74
286	1.5800E+02	2.0500E-01	2.1628E+01	28	5.	-0.41
287	1.7700E+02	1.8200E-01	1.9202E+01	56	1.	2.06
288	2.0700E+02	1.6000E-01	1.6881E+01	36	1.	6.11
289	2.0800E+02	1.5200E-01	1.6037E+01	28	5.	1.28
290	2.0830E+02	1.4730E-01	1.5541E+01	48	3.	-1.71
291	2.4800E+02	1.2909E-01	1.5610E+01	36	1.	0.49
292	2.5510E+02	1.3200E-01	1.3927E+01	59	1.	5.10
293	2.7900E+02	1.1580E-01	1.2217E+01	60	1.	-1.48
294	2.7910E+02	1.1650E-01	1.2291E+01	48	3.	-0.86
295	2.9700E+02	1.1550E-01	1.2186E+01	59	1.	2.51
296	3.0000E+02	1.1125E-01	1.1757E+01	88	1.	-0.62
297	3.2000E+02	1.0490E-01	1.1067E+01	51	1.	-2.25
298	3.2000E+02	1.0525E-01	1.1104E+01	56	1.	-1.87
299	3.2200E+02	1.0360E-01	1.0930E+01	59	1.	-3.02
300	3.2500E+02	1.0500E-01	1.1078E+01	60	1.	-1.13
301	4.0000E+02	9.3680E-02	9.8837E+00	10	1.	-0.37
302	4.1100E+02	9.1200E-02	9.6220E+00	50	1.	-1.52
303	4.1180E+02	9.1600E-02	9.6642E+00	42	3.	-0.98
304	4.1200E+02	9.1700E-02	9.6747E+00	28	5.	-0.84

305	4.3600E+02	8.6900E-02	9.1683E+00	59	1.	-3.07
306	4.9600E+02	8.1720E-02	8.6218E+00	60	1.	-2.48
307	5.0000E+02	8.3333E-02	8.7920E+00	88	1.	-0.15
308	5.0000E+02	8.3270E-02	8.7853E+00	90	1.	-0.22
309	5.0000E+02	8.3270E-02	8.7853E+00	90	1.	-0.22
310	5.1100E+02	8.1900E-02	8.6408E+00	49	1.	-0.74
311	5.1100E+02	8.2000E-02	8.6515E+00	57	1.	-0.62
312	5.3500E+02	8.1900E-02	8.5408E+00	59	1.	1.45
313	6.0000E+02	7.6084E-02	8.0272E+00	90	1.	0.03
314	6.0000E+02	7.6092E-02	8.0280E+00	90	1.	0.04
315	6.0000E+02	7.6029E-02	8.0214E+00	88	1.	-0.04
316	6.0400E+02	7.3500E-02	7.7545E+00	58	1.	-3.04
317	6.5000E+02	6.9100E-02	7.2903E+00	51	1.	-5.35
318	6.6160E+02	7.2700E-02	7.6701E+00	54	1.	0.47
319	6.6160E+02	7.2700E-02	7.6701E+00	57	1.	0.47
320	6.6200E+02	7.1890E-02	7.5752E+00	56	1.	-0.74
321	6.6200E+02	7.2351E-02	7.6353E+00	88	1.	0.02
322	6.6200E+02	7.2275E-02	7.6253E+00	31	2.	-0.08
323	6.6400E+02	7.2100E-02	7.6056E+00	50	1.	-0.17
324	7.0000E+02	7.0372E-02	7.4245E+00	88	1.	0.05
325	7.9600E+02	6.5300E-02	6.8894E+00	58	1.	-1.09
326	7.9600E+02	6.5600E-02	6.9211E+00	56	1.	-0.63
327	8.0000E+02	6.5889E-02	6.9515E+00	90	1.	0.35
328	8.0000E+02	6.5893E-02	6.9519E+00	90	1.	0.06
329	8.0000E+02	6.5897E-02	6.9524E+00	88	1.	0.06
330	8.4000E+02	6.4770E-02	6.8335E+00	52	1.	-3.84
331	8.8500E+02	6.2000E-02	6.5412E+00	58	1.	-3.87
332	9.0000E+02	6.2078E-02	6.5495E+00	88	1.	0.10
333	1.0000E+03	5.8845E-02	6.2084E+00	90	1.	0.06
334	1.0000E+03	5.8847E-02	6.2086E+00	90	1.	0.06
335	1.0000E+03	5.8875E-02	6.2116E+00	88	1.	0.11

317 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR ZINC

Z = 30

CONVERSION CONSTANT IS 1.086E+02

K-EDGE	9.659					
L-EDGES	1.19f	1.044	1.021			
M-EDGES	0.139	0.088	0.088	0.009	0.009	
KEV	CM2/GM	BARNs/AT	SOURCE	WEIGHT	DIFF	
1	9.0000E+01	1.7923E+03	1.9457E+05	90	1.	-0.05
2	1.0000E+00	1.6164E+03	1.7547E+05	90	1.	1.23
3	1.0001E+00	1.5989E+03	1.7357E+05	90	1.	0.15
4	1.0190E+00	1.5620E+03	1.6957E+05	90	1.	-0.13
5	1.5000E+00	5.4260E+03	5.8905E+05	90	1.	3.19
6	1.5000E+00	5.6898E+03	6.1768E+05	10	1.	8.21
7	2.0000E+00	2.4753E+03	2.6872E+05	90	1.	0.88
8	2.0400E+00	2.1530E+03	2.3573E+05	7	3.	-7.49
9	2.3100E+00	1.6480E+03	1.7891E+05	7	3.	-1.37
10	2.3120E+00	1.7540E+03	1.9041E+05	12	2.	5.21
11	2.6270E+00	1.270E+03	1.3212E+05	12	2.	2.59
12	2.9800E+00	8.4500E+02	9.1735E+04	7	3.	-0.57
13	3.0000E+00	8.6431E+02	9.3828E+04	10	1.	3.73
14	3.3180E+00	6.2440E+02	6.7784E+04	12	2.	-1.86
15	3.4400E+00	5.7000E+02	6.1879E+04	7	3.	-1.32
16	3.6970E+00	4.7550E+02	5.1620E+04	12	2.	-0.20
17	4.0100E+00	3.8700E+02	4.2012E+04	7	3.	0.92
18	4.5160E+00	2.7590E+02	2.9951E+04	12	2.	-1.06
19	4.9500E+00	2.1600E+02	2.3449E+04	7	3.	-0.98
20	5.0000E+00	2.1486E+02	2.3325E+04	10	1.	1.17
21	5.0000E+00	2.1410E+02	2.3243E+04	39	5.	0.82
22	5.9040E+00	1.4030E+02	1.5231E+04	12	2.	3.13
23	6.4040E+00	1.0910E+02	1.1844E+04	39	5.	-0.25
24	6.4040E+00	1.0600E+02	1.1507E+04	68	1.	-3.09
25	6.4090E+00	1.0300E+02	1.1182E+04	12	2.	-5.63
26	6.4100E+00	1.0500E+02	1.1399E+04	7	2.	-3.76
27	6.9300E+00	9.7000E+01	1.0550E+04	7	3.	9.58
28	7.0000E+00	8.8000E+01	9.5532E+03	17	2.	2.13
29	7.0580E+00	8.2900E+01	8.9996E+03	39	5.	-1.65
30	7.4780E+00	7.7000E+01	8.3591E+03	68	1.	6.62
31	7.4840E+00	7.1740E+01	7.7880E+03	12	2.	-0.45
32	8.0000E+00	5.7855E+01	6.2807E+03	10	1.	-4.10
33	8.0480E+00	5.8300E+01	6.3290E+03	68	1.	-1.80
34	8.0500E+00	6.2300E+01	6.7632E+03	7	3.	5.01
35	8.1500E+00	6.2000E+01	6.7307E+03	7	2.	4.50
36	8.0530E+00	5.8670E+01	6.3692E+03	12	2.	-1.01
37	8.3550E+00	5.4500E+01	5.9165E+03	68	1.	0.83
38	8.3980E+00	5.1150E+01	5.5528E+03	39	5.	-3.44
39	8.3980E+00	5.4130E+01	5.8731E+03	68	1.	2.13
40	8.6390E+00	5.0200E+01	5.4497E+03	68	1.	2.21
41	8.6440E+00	4.8440E+01	5.2586E+03	12	2.	-1.22
42	8.9200E+00	4.7800E+01	5.1891E+03	7	2.	6.01
43	9.5700E+00	3.7000E+01	4.0167E+03	7	3.	-1.02
44	9.5700E+00	3.8300E+01	4.1578E+03	17	2.	2.45
45	9.6280E+00	3.6900E+01	4.0058E+03	68	1.	0.31
46	9.6500E+00	3.4139E+01	3.7061E+03	90	1.	-6.63
47	9.6560E+00	3.4203E+01	3.7130E+03	90	1.	-6.30
48	9.6570E+00	3.4203E+01	3.7130E+03	90	1.	-6.28
49	9.6610E+00	2.5700E+02	2.7908E+04	90	1.	-3.25
50	9.6650E+00	2.5726E+02	2.7928E+04	90	1.	-3.08
51	9.6720E+00	2.6400E+02	2.8660E+04	68	1.	-0.36
52	9.7700E+00	2.7000E+02	2.9311E+04	17	2.	4.54
53	9.9620E+00	2.5100E+02	2.7248E+04	39	5.	2.10
54	1.0000E+01	2.4421E+02	2.6511E+04	10	1.	0.31
55	1.0000E+01	2.4770E+02	2.6890E+04	39	5.	1.74
56	1.0040E+01	2.4700E+02	2.6814E+04	17	2.	2.52
57	1.0550E+01	2.0700E+02	2.2472E+04	7	3.	-2.12
58	1.1000E+01	1.9300E+02	2.0952E+04	17	2.	1.85
59	1.1220E+01	1.9200E+02	2.0843E+04	7	3.	6.73
60	1.1290E+01	1.8600E+02	2.0192E+04	68	1.	5.10
61	1.1440E+01	1.7700E+02	1.9215E+04	68	1.	5.55
62	1.1580E+01	1.6560E+02	1.8021E+04	68	1.	0.27
63	1.1920E+01	1.4850E+02	1.6121E+04	12	2.	-3.22
64	1.5000E+01	8.0783E+01	8.7697E+03	10	1.	-3.78
65	1.5000E+01	8.0905E+01	8.7850E+03	90	1.	-3.63
66	7.5000E+01	7.8890E+01	8.5642E+03	39	5.	-6.03
67	1.5770E+01	7.7300E+01	8.3916E+03	7	3.	5.66
68	2.0000E+01	3.6942E+01	4.3104E+03	10	1.	-3.13
69	2.0000E+01	3.6670E+01	3.9809E+03	39	5.	-3.84

70	2.0000E+01	3.6704E+01	3.9846E+03	90	1.	-3.75
71	2.2160E+01	2.9609E+01	3.2134E+03	68	1.	3.80
72	2.4942E+01	2.0240E+01	2.1972E+03	39	5.	-0.67
73	2.5000E+01	1.9990E+01	2.1701E+03	10	1.	-1.45
74	2.5000E+01	1.9800E+01	2.1495E+03	48	5.	-2.38
75	2.8490E+01	1.4500E+01	1.5741E+03	68	1.	3.23
76	2.8620E+01	1.3080E+01	1.4200E+03	30	2.	-5.68
77	3.0000E+01	1.1949E+01	1.2972E+03	10	1.	-1.70
78	3.0000E+01	1.2020E+01	1.3049E+03	39	5.	-1.11
79	3.0040E+01	1.1950E+01	1.2975E+03	48	5.	-1.31
80	3.2640E+01	9.6100E+00	1.0435E+03	78	3.	0.70
81	3.5900E+01	7.1930E+00	7.8141E+02	30	2.	-1.04
82	3.7320E+01	6.4120E+00	6.9608E+02	30	2.	-1.59
83	4.0000E+01	5.4091E+00	5.8721E+02	10	1.	0.98
84	4.0000E+01	5.3890E+00	5.8505E+02	39	5.	0.60
85	4.0040E+01	5.3270E+00	5.7829E+02	48	5.	-0.27
86	4.0070E+01	5.4380E+00	5.9034E+02	30	2.	2.02
87	4.1530E+01	4.8700E+00	5.2666E+02	78	3.	1.19
88	5.0080E+01	2.8810E+00	5.1276E+02	48	3.	1.35
89	5.7460E+01	2.0360E+00	2.2103E+02	30	2.	4.71
90	5.9070E+01	1.8870E+00	2.0485E+02	30	2.	4.60
91	6.0000E+01	1.7080E+00	1.9410E+02	89	1.	3.38
92	6.0030E+01	1.7620E+00	1.9126E+02	40	5.	2.02
93	6.0750E+01	1.6560E+00	1.7977E+02	30	2.	-0.97
94	6.8170E+01	1.2050E+00	1.3081E+02	78	3.	-2.05
95	7.0040E+01	1.1630E+00	1.2625E+02	40	5.	1.44
96	7.9500E+01	8.4000E-01	9.1190E+01	78	3.	0.92
97	8.0000E+01	8.4624E-01	9.1867E+01	89	1.	3.24
98	8.4990E+01	7.0580E-01	7.6621E+01	40	5.	-0.27
99	8.8970E+01	6.5400E-01	7.0998E+01	78	3.	2.96
100	1.0000E+02	4.9362E-01	5.3587E+01	10	1.	1.04
101	1.0000E+02	5.0325E-01	5.4632E+01	89	1.	3.01
102	1.0006E+02	4.8590E-01	5.2749E+01	40	5.	-0.42
103	1.1487E+02	3.7210E-01	4.0395E+01	40	5.	1.34
104	1.5131E+02	2.9670E-01	3.2210E+01	40	5.	1.90
105	1.4560E+02	2.4220E-01	2.6293E+01	48	5.	-0.36
106	1.5000E+02	2.3456E-01	2.5464E+01	89	1.	0.90
107	1.5000E+02	2.3202E-01	2.5275E+01	10	1.	0.15
108	2.0000E+02	1.6155E-01	1.7537E+01	89	1.	0.09
109	2.0830E+02	1.5440E-01	1.6762E+01	48	5.	-0.17
110	2.7910E+02	1.1850E-01	1.2864E+01	48	5.	-1.25
111	3.0000E+02	1.1361E-01	1.2353E+01	89	1.	-0.41
112	4.0000E+02	9.4978E-02	1.0311E+01	10	1.	-0.34
113	4.1180E+02	9.2900E-02	1.0085E+01	48	5.	-0.87
114	5.0000E+02	8.4225E-02	9.1434E+00	89	1.	-0.17
115	6.0000E+02	7.6735E-02	8.3303E+00	89	1.	-0.06
116	6.6200E+02	7.2985E-02	7.9232E+00	89	1.	0.01
117	7.0000E+02	7.0964E-02	7.7038E+00	89	1.	0.03
118	6.0000E+02	6.6409E-02	7.2093E+00	89	1.	0.04
119	9.0000E+02	6.2535E-02	6.7887E+00	89	1.	0.08
120	1.0000E+03	5.9287E-02	6.4362E+00	89	1.	0.08

119 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR GERMANIUM

Z = 32

CONVERSION CONSTANT IS 1.205E+02

K-EDGE	11.104					
L-EDGES	1.476	1.249	1.218			
M-EDGES	0.181	0.126	0.122	0.031	0.030	
1	1.0000E+00	2.1802E+03	2.6278E+05	10	1.	6.51
2	1.0001E+00	2.0463E+03	2.4665E+05	90	1.	0.00
3	1.2160E+00	1.2497E+03	1.5063E+05	90	1.	0.00
4	1.5000E+00	6.9851E+03	8.4192E+05	10	1.	5.83
5	1.5000E+00	6.3246E+03	7.6231E+05	90	1.	-4.18
6	2.0000E+00	2.9747E+03	3.5854E+05	90	1.	-1.64
7	3.0000E+00	1.0005E+03	1.2066E+05	10	1.	-0.17
8	5.0000E+00	9.8597E+02	1.1884E+05	90	1.	-1.63
9	4.0000E+00	4.5856E+02	5.5273E+04	10	1.	0.38
10	4.5090E+00	3.3774E+02	4.0708E+04	10	1.	2.59
11	4.9320E+00	2.6209E+02	3.1590E+04	10	1.	1.70
12	5.0000E+00	2.5172E+02	3.0340E+04	10	1.	1.39
13	5.4120E+00	2.0552E+02	2.4747E+04	10	1.	2.69
14	5.4150E+00	1.8350E+02	2.2117E+04	91	1.	-8.08
15	5.8950E+00	1.6169E+02	1.9513E+04	10	1.	2.25
16	5.9460E+00	1.4410E+02	1.7369E+04	91	1.	-6.82
17	5.9470E+00	1.5797E+02	1.9040E+04	10	1.	2.19
18	6.4900E+00	1.2990E+02	1.5657E+04	10	1.	2.72
19	6.4900E+00	1.2487E+02	1.5051E+04	10	1.	2.58
20	6.9250E+00	1.0432E+02	1.2574E+04	10	1.	2.30
21	7.0580E+00	9.2200E+01	1.1113E+04	91	1.	-4.77
22	7.0580E+00	9.8157E+01	1.1831E+04	10	1.	1.38
23	7.4720E+00	8.4493E+01	1.0184E+04	10	1.	1.91
24	7.6490E+00	7.9330E+01	9.5617E+03	10	1.	1.97
25	8.0000E+00	6.8881E+01	8.3023E+03	10	1.	0.01
26	8.0410E+00	6.8590E+01	8.2672E+03	10	1.	0.99
27	8.2650E+00	6.3934E+01	7.7060E+03	10	1.	1.45
28	8.6510E+00	5.8141E+01	6.7667E+03	10	1.	0.24
29	8.9050E+00	5.1787E+01	6.2419E+03	10	1.	0.67
30	8.9080E+00	5.0400E+01	6.0748E+03	91	1.	-1.94
31	9.5720E+00	4.2838E+01	5.1635E+03	10	1.	1.29
32	9.6740E+00	4.0700E+01	4.9156E+03	91	1.	-0.96
33	9.9620E+00	3.7700E+01	4.5440E+03	91	1.	-0.69
34	1.0000E+01	3.5874E+01	4.3239E+03	10	1.	-4.52
35	1.0000E+01	3.5360E+01	4.2620E+03	89	1.	-5.89
36	1.0230E+01	3.5300E+01	4.2547E+03	91	1.	-0.07
37	1.0490E+01	3.5100E+01	3.9896E+03	91	1.	0.30
38	1.0670E+01	3.1600E+01	3.8088E+03	91	1.	0.26
39	1.0760E+01	3.0800E+01	3.7124E+03	91	1.	-0.03
40	1.0850E+01	3.0300E+01	3.6521E+03	91	1.	0.59
41	1.0950E+01	2.9690E+01	3.5677E+03	91	1.	0.73
42	1.1000E+01	2.9290E+01	3.5195E+03	91	1.	0.60
43	1.1020E+01	2.9000E+01	3.4954E+03	91	1.	3.40
44	1.1090E+01	2.7453E+01	3.3102E+03	90	1.	-3.28
45	1.1102E+01	3.0500E+01	3.6762E+03	75	1.	7.75
46	1.1105E+01	1.9100E-02	2.3021E+04	75	1.	-1.93
47	1.1110E+01	2.0076E+02	2.4198E+04	90	1.	3.29
48	1.1290E+01	1.8920E+02	2.2804E+04	91	1.	1.33
49	1.2370E+01	1.4830E+02	1.7875E+04	91	1.	0.26
50	1.4560E+01	9.6600E+01	1.1643E+04	91	1.	-1.07
51	1.5000E+01	9.1442E+01	1.1022E+04	89	1.	1.02
52	1.5000E+01	9.1666E+01	1.1049E+04	10	1.	1.27
53	1.5470E+01	8.2300E+01	9.9197E+03	91	1.	-1.25
54	1.7444E+01	6.0631E+01	7.3079E+03	10	1.	0.28
55	1.9608E+01	4.5115E+01	5.4377E+03	10	1.	1.93
56	1.9610E+01	4.3909E+01	5.2913E+03	91	1.	-6.79
57	2.0000E+01	4.2352E+01	5.0685E+03	10	1.	0.15
58	2.0000E+01	4.1312E+01	4.9793E+03	89	1.	-1.61
59	2.0169E+01	4.1317E+01	4.9800E+03	10	1.	0.74
60	2.1125E+01	3.6051E+01	4.3453E+03	10	1.	0.01
61	2.2105E+01	3.1857E+01	3.8398E+03	10	1.	0.26
62	2.2724E+01	3.0001E+01	3.6166E+03	10	1.	1.35
63	2.3819E+01	2.6403E+01	3.1824E+03	10	1.	2.26
64	2.4942E+01	2.3327E+01	2.8116E+03	10	1.	2.66
65	2.4550E+01	2.3200E+01	2.7963E+03	91	1.	2.19
66	2.5000E+01	2.2870E+01	2.7566E+03	10	1.	1.30
67	2.5200E+01	2.0520E+01	2.4733E+03	44	1.	-7.08
68	3.0000E+01	1.3715E+01	1.5530E+03	10	1.	0.53
69	3.0000E+01	1.3574E+01	1.6361E+03	89	1.	-0.50

70	3.4600E+01	8.7900E+00	1.0595E+03	44	1.	-3.42
71	3.9700E+01	6.0800E+00	7.5283E+02	44	1.	-1.66
72	4.0000E+01	6.2296E+00	7.5086E+02	10	1.	2.90
73	4.0000E+01	6.1611E+00	7.4260E+02	89	1.	1.77
74	4.2800E+01	4.8900E+00	5.8940E+02	44	1.	-2.12
75	4.9300E+01	3.2800E+00	3.9534E+02	44	1.	-2.58
76	5.0000E+01	3.3162E+00	3.9970E+02	89	1.	2.64
77	5.7100E+01	2.2100E+00	2.6637E+02	44	1.	-1.12
78	6.0000E+01	2.0252E+00	2.4410E+02	89	1.	3.72
79	6.5600E+01	1.4520E+00	1.7983E+02	44	1.	-2.65
80	6.8200E+01	1.3250E+00	1.5970E+02	44	1.	-4.09
81	7.4200E+01	1.1100E+00	1.3379E+02	44	1.	0.21
82	7.8500E+01	9.0700E-01	1.0932E+02	44	1.	-5.43
83	8.0000E+01	9.4582E-01	1.1400E+02	89	1.	3.43
84	8.5600E+01	7.7900E-01	9.3894E+01	44	1.	0.79
85	1.3000E+02	5.5315E-01	6.6472E+01	10	1.	3.15
86	1.0000E+02	5.5212E-01	6.6548E+01	89	1.	2.95
87	1.5000E+02	2.4918E-01	3.0034E+01	10	1.	1.84
88	1.5000E+02	2.4865E-01	2.9970E+01	89	1.	1.62
89	2.0000E+02	1.6577E-01	1.9980E+01	89	1.	0.59
90	3.0000E+02	1.1246E-01	1.3555E+01	89	1.	-0.22
91	4.0000E+02	9.3030E-02	1.1213E+01	10	1.	-0.26
92	5.0000E+02	8.1923E-02	9.8743E+00	89	1.	-0.16
93	6.0000E+02	7.4373E-02	8.9643E+00	89	1.	-0.08
94	6.6200E+02	7.1045E-02	8.5651E+00	89	1.	-0.01
95	7.0000E+02	6.9257E-02	8.3477E+00	89	1.	0.01
96	8.0000E+02	6.5231E-02	7.8623E+00	89	1.	0.01
97	9.0000E+02	6.0829E-02	7.3318E+00	89	1.	0.04
98	1.0000E+03	5.7174E-02	6.8912E+00	89	1.	0.05

98 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR ARSENIC

Z = 33

CONVERSION CONSTANT IS 1.244E+02

K-EDGE	11.868	L-EDGES	1.530	1.360	1.525			
M-EDGES	0.206		0.148	0.142	0.043	0.042		
1	1.0000E+00	2.3754E+03	2.9550E+05	10	1.	5.65		
2	1.0001E+00	2.2483E+03	2.7969E+05	90	1.	0.30		
3	1.3230E+00	1.1468E+03	1.4266E+05	90	1.	0.00		
4	2.0000E+00	3.1882E+03	3.9661E+05	90	1.	0.60		
5	3.0000E+00	1.0914E+03	1.3577E+05	10	1.	-0.34		
6	3.0000E+00	1.0895E+03	1.3554E+05	90	1.	-0.51		
7	4.0000E+00	5.0481E+02	6.2799E+04	90	1.	-0.64		
8	4.5090E+00	3.7078E+02	4.6125E+04	10	1.	0.90		
9	4.9320E+00	2.8776E+02	3.5797E+04	10	1.	-0.24		
10	5.0000E+00	2.7639E+02	3.4383E+04	10	1.	-0.58		
11	5.0000E+00	2.7486E+02	3.4192E+04	90	1.	-1.13		
12	5.4120E+00	2.2551E+02	2.8053E+04	10	1.	0.68		
13	5.8950E+00	1.7792E+02	2.2133E+04	10	1.	0.25		
14	5.9470E+00	1.7559E+02	2.1595E+04	10	1.	0.18		
15	6.0000E+00	1.6868E+02	2.0983E+04	90	1.	-0.28		
16	6.4000E+00	1.4294E+02	1.7782E+04	10	1.	0.95		
17	6.4500E+00	1.3741E+02	1.7094E+04	10	1.	0.86		
18	6.7250E+00	1.1481E+02	1.4282E+04	10	1.	0.73		
19	7.0580E+00	1.0806E+02	1.3443E+04	10	1.	-0.10		
20	7.1720E+00	9.2982E+01	1.1567E+04	10	1.	0.51		
21	7.6490E+00	8.7291E+01	1.0859E+04	10	1.	0.61		
22	8.0000E+00	7.6138E+01	9.4716E+03	10	1.	-0.78		
23	8.0000E+00	7.6640E+01	9.5340E+03	90	1.	-0.13		
24	8.0410E+00	7.5515E+01	9.4028E+03	10	1.	-0.09		
25	8.2650E+00	7.0481E+01	8.7678E+03	10	1.	0.55		
26	8.6310E+00	6.1937E+01	7.7049E+03	10	1.	-0.36		
27	8.9050E+00	5.7157E+01	7.1103E+03	10	1.	0.26		
28	9.5720E+00	4.7096E+01	5.8587E+03	10	1.	0.86		
29	1.0000E+01	4.0285E+01	5.0115E+03	10	1.	-2.68		
30	1.0000E+01	4.1924E+01	5.2154E+03	90	1.	1.28		
31	1.1869E+01	1.9373E+02	2.4103E+04	90	1.	10.24		
32	1.5000E+01	9.8340E+01	1.2233E+04	89	1.	0.34		
33	1.5000E+01	9.9087E+01	1.2326E+04	10	1.	1.10		
34	1.7444E+01	6.5277E+01	8.1295E+03	10	1.	-1.04		
35	1.9608E+01	4.8966E+01	6.0913E+03	10	1.	0.92		
36	2.0000E+01	4.5507E+01	5.6610E+03	10	1.	-1.32		
37	2.0000E+01	4.4496E+01	5.5352E+03	89	1.	-3.51		
38	2.0169E+01	4.4781E+01	5.5707E+03	10	1.	-0.61		
39	2.1125E+01	3.9021E+01	4.8542E+03	10	1.	-1.59		
40	2.2105E+01	3.4496E+01	4.2913E+03	10	1.	-1.42		
41	2.2724E+01	3.2474E+01	4.0397E+03	10	1.	0.14		
42	2.3819E+01	2.8590E+01	3.5566E+03	10	1.	0.35		
43	2.4942E+01	2.5532E+01	3.1499E+03	10	1.	0.88		
44	2.5000E+01	2.4813E+01	3.0867E+03	10	1.	-0.51		
45	3.0000E+01	1.4904E+01	1.8540E+03	10	1.	-1.56		
46	3.0000E+01	1.4692E+01	1.8277E+03	89	1.	-2.95		
47	3.2180E+01	1.1820E+01	1.4704E+03	30	2.	-4.73		
48	3.3430E+01	1.0810E+01	1.3448E+03	30	2.	-2.95		
49	3.4700E+01	9.9750E+00	1.2406E+03	30	2.	-0.52		
50	3.5900E+01	9.1740E+00	1.1412E+03	30	2.	0.72		
51	3.7520E+01	8.1730E+00	1.0167E+03	30	2.	0.07		
52	4.0000E+01	6.7796E+00	8.4358E+02	10	1.	0.80		
53	4.0000E+01	6.7050E+00	8.3410E+02	89	1.	-0.31		
54	4.0070E+01	7.0140E+00	8.7254E+02	30	2.	4.81		
55	5.0000E+01	3.5686E+00	4.4393E+02	90	1.	-0.35		
56	5.0000E+01	3.6088E+00	4.4893E+02	89	1.	0.78		
57	5.3000E+01	2.2043E+00	2.7421E+02	89	1.	2.29		
58	8.0000E+01	1.0185E+00	1.2670E+02	90	1.	2.06		
59	8.0000E+01	1.0250E+00	1.2750E+02	89	1.	2.71		
60	8.0000E+01	1.0233E+00	1.2730E+02	90	1.	2.55		
61	1.0000E+02	5.9560E-01	7.4093E+01	10	1.	3.04		
62	1.0030E+02	5.9680E-01	7.4242E+01	90	1.	3.24		
63	1.5000E+02	2.6285E-01	5.2698E+01	10	1.	2.41		
64	1.5000E+02	2.6247E-01	5.2651E+01	90	1.	2.26		
65	1.5000E+02	2.5279E-01	3.2691E+01	90	1.	2.39		
66	2.0000E+02	1.7240E-01	2.1447E+01	90	1.	1.50		
67	2.0000E+02	1.7273E-01	2.1488E+01	90	1.	1.69		
68	2.7910E+02	1.1810E-01	1.4692E+01	48	3.	-2.66		
69	3.0000E+12	1.1528E-01	1.4341E+01	90	1.	0.61		

70	3.0000E+02	1.1544E-01	1.4361E+01	90	1.	0.75
71	4.0000E+02	9.4224E-02	1.1721E+01	90	1.	0.27
72	4.0000E+02	9.3663E-02	1.1676E+01	10	1.	-0.12
73	4.1180E+02	9.2500E-02	1.1507E+01	48	3.	0.23
74	5.0000E+02	8.2563E-02	1.0271E+01	90	1.	0.12
75	6.0000E+02	7.4724E-02	9.2957E+00	90	1.	0.05
76	6.0000E+02	7.4660E-02	9.2877E+00	89	1.	-0.04
77	6.6200E+02	7.0862E-02	8.8152E+00	89	1.	0.01
78	7.0000E+02	6.8829E-02	8.5624E+00	89	1.	0.02
79	8.0000E+02	6.4259E-02	7.9938E+00	90	1.	-0.01
80	8.0000E+02	6.4273E-02	7.9956E+00	89	1.	0.01
81	9.0000E+02	6.0440E-02	7.5187E+00	89	1.	0.04
82	1.0000E+03	5.7202E-02	7.1159E+00	90	1.	-0.03
83	1.0000E+03	5.7240E-02	7.1206E+00	89	1.	0.04

83 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR SELENIUM

Z = 34

CONVERSION CONSTANT IS 1.311E+02

K-EDGE	12.658					
L-EDGES	1.053	1.477	1.436			
M-EDGES	0.232	0.169	0.162	0.058	0.057	
1	1.0000E+00	2.5358E+03	3.3246E+05	10	1.	3.54
2	1.0001E+00	2.4486E+03	3.2105E+05	90	1.	0.00
3	1.4340E+00	1.0350E+03	1.3570E+05	90	1.	0.00
4	1.7470E+00	4.8970E+03	6.4204E+05	4	1.	3.54
5	2.0000E+00	3.1704E+03	4.1566E+05	10	1.	-6.03
6	2.0230E+00	3.3411E+03	4.3803E+05	4	1.	1.99
7	2.3170E+00	2.3160E+03	3.1020E+05	4	1.	2.42
8	2.6320E+00	1.7020E+03	2.2315E+05	4	1.	2.28
9	3.0000E+00	1.1608E+03	1.5219E+05	10	1.	-2.34
10	3.0000E+00	1.1606E+03	1.5217E+05	90	1.	-2.35
11	5.0330E+00	1.1606E+03	1.5217E+05	90	1.	-2.35
12	3.3260E+00	9.2300E+02	1.2101E+05	4	1.	1.99
13	3.7050E+00	7.1000E+02	9.3087E+04	4	1.	3.32
14	4.0000E+00	5.3922E+02	7.0695E+04	90	1.	-3.03
15	4.1050E+00	5.3400E+02	7.0012E+04	4	1.	2.97
16	4.5090E+00	3.9693E+02	5.2037E+04	10	1.	-1.58
17	4.5270E+00	4.1600E+02	5.4541E+04	4	1.	4.36
18	4.9320E+00	3.0816E+02	4.0402E+04	10	1.	-2.70
19	4.9690E+00	3.2200E+02	4.2217E+04	4	1.	3.73
20	5.0000E+00	2.9600E+02	3.8807E+04	10	1.	-3.04
21	5.0000E+00	2.9674E+02	3.8905E+04	90	1.	-2.80
22	5.0000E+00	2.9568E+02	3.8765E+04	90	1.	-3.15
23	5.4120E+00	2.4149E+02	3.1661E+04	10	1.	-1.85
24	5.4340E+00	2.4910E+02	3.2646E+04	25	2.	2.32
25	5.4340E+00	2.4910E+02	3.2646E+04	4	1.	2.32
26	5.8950E+00	1.9062E+02	2.4992E+04	10	1.	-2.25
27	5.9180E+00	2.0100E+02	2.6553E+04	4	1.	4.17
28	5.9470E+00	1.8598E+02	2.4384E+04	10	1.	-2.32
29	6.0000E+00	1.8149E+02	2.3795E+04	90	1.	-2.36
30	6.0000E+00	1.8126E+02	2.3765E+04	90	1.	-2.48
31	6.4000E+00	1.5335E+02	2.0106E+04	10	1.	-1.38
32	6.4900E+00	1.4741E+02	1.9327E+04	10	1.	-1.47
33	6.4940E+00	1.5690E+02	2.0571E+04	25	2.	5.05
34	6.9250E+00	1.2320E+02	1.6159E+04	10	1.	-1.53
35	7.0580E+00	1.1602E+02	1.5211E+04	10	1.	-2.26
36	7.4720E+00	9.9750E+01	1.3978E+04	10	1.	-1.68
37	7.5020E+00	1.0470E+02	1.3727E+04	25	2.	4.34
38	7.6490E+00	9.3640E+01	1.2277E+04	10	1.	-1.57
39	8.0000E+00	8.2023E+01	1.0754E+04	10	1.	-2.48
40	8.0000E+00	8.2557E+01	1.0824E+04	90	1.	-1.84
41	8.0410E+00	8.1208E+01	1.0647E+04	10	1.	-2.05
42	8.2650E+00	7.5705E+01	9.9255E+03	10	1.	-1.39
43	8.6310E+00	6.6600E+01	8.731BE+03	10	1.	-2.07
44	8.6690E+00	7.0800E+01	9.2824E+03	25	2.	5.39
45	8.9050E+00	6.1481E+01	8.0507E+03	10	1.	-1.36
46	9.5720E+00	5.0503E+01	6.6213E+03	10	1.	-0.91
47	1.0000E+01	4.5921E+01	5.7584E+03	10	1.	-2.69
48	1.0000E+01	4.4282E+01	5.8057E+03	90	1.	-1.89
49	1.0570E+01	4.0900E+01	5.3623E+03	25	2.	5.98
50	1.2640E+01	2.2667E+01	2.9718E+03	90	1.	-2.95
51	1.2656E+01	2.2642E+01	2.9685E+03	90	1.	-2.72
52	1.5000E+01	1.0315E+02	1.3524E+04	89	1.	2.28
53	1.5600E+01	1.3449E+02	1.3700E+04	10	1.	5.61
54	1.5770E+01	9.4170E+01	1.2386E+04	79	1.	6.34
55	1.7444E+01	6.8531E+01	8.9849E+03	10	1.	-0.41
56	1.7480E+01	7.2880E+01	9.5551E+03	79	1.	6.47
57	1.9508E+01	5.1838E+01	6.7964E+03	10	1.	1.25
58	2.0100E+01	4.8036E+01	6.2979E+03	10	1.	-1.36
59	2.0000E+01	4.6739E+01	6.1278E+03	89	1.	-4.03
60	2.0169E+01	4.7332E+01	6.2056E+03	10	1.	-0.59
61	2.0210E+01	4.8170E+01	6.3155E+03	79	1.	1.73
62	2.1125E+01	4.1187E+01	5.4000E+03	10	1.	-2.05
63	2.1180E+01	4.4100E+01	5.7819E+03	79	1.	5.63
64	2.2105E+01	3.6426E+01	4.7757E+03	10	1.	-2.14
65	2.2724E+01	3.4280E+01	4.4944E+03	10	1.	-0.82
66	2.3170E+01	3.4580E+01	4.5337E+03	79	1.	5.40
67	2.3819E+01	3.0190E+01	3.9581E+03	10	1.	-0.91
68	2.4942E+01	2.6799E+01	3.5136E+03	10	1.	-0.49
69	2.5000E+01	2.6259E+01	3.4427E+03	10	1.	-1.89

70	2.5270E+01	2.7760E+01	3.6596E+03	79	1.	6.74
71	2.7470E+01	2.1760E+01	2.8529E+03	79	1.	4.58
72	3.0000E+01	1.5619E+01	2.0335E+03	89	1.	-5.75
73	3.0000E+01	1.5739E+01	2.0713E+03	10	1.	-3.98
74	3.0000E+01	1.5756E+01	2.0657E+03	90	1.	-4.24
75	3.0000E+01	1.5695E+01	2.0577E+03	90	1.	-4.61
76	3.0000E+01	1.5695E+01	2.0577E+03	90	1.	-4.61
77	3.0970E+01	1.4940E+01	1.9588E+03	79	1.	-0.78
78	3.4700E+01	1.2790E+01	1.3622E+03	30	2.	-5.55
79	3.4720E+01	1.1270E+01	1.4776E+03	79	1.	2.83
80	3.5900E+01	9.3780E+00	1.2295E+03	30	2.	-6.13
81	3.7320E+01	8.5660E+00	1.1231E+03	30	2.	-4.56
82	3.7360E+01	9.5770E+00	1.2556E+03	79	1.	7.02
83	4.0000E+01	7.1951E+00	9.4346E+02	10	1.	-2.95
84	4.0000E+01	7.2921E+00	9.5605E+02	89	1.	-1.66
85	4.0070E+01	7.2470E+00	9.5014E+02	30	2.	-1.78
86	4.0120E+01	7.7200E+00	1.0122E+03	79	1.	5.00
87	5.0000E+01	3.7893E+00	4.9681E+02	90	1.	-4.68
88	5.0000E+01	3.7954E+00	4.9761E+02	90	1.	-4.53
89	5.0000E+01	3.9250E+00	5.1460E+02	89	1.	-1.27
90	5.2360E+01	3.7320E+00	4.8929E+02	79	1.	6.82
91	5.7460E+01	2.7580E+00	3.6160E+02	30	2.	2.15
92	5.7520E+01	2.7295E+00	3.5779E+02	79	1.	1.37
93	5.9070E+01	2.6100E+00	3.4744E+02	30	2.	5.89
94	6.0000E+01	2.2954E+00	3.0094E+02	90	1.	-4.27
95	6.0000E+01	2.3068E+00	3.0244E+02	90	1.	-3.80
96	6.0000E+01	2.3760E+00	3.1151E+02	89	1.	-0.91
97	6.0750E+01	2.4640E+00	3.2305E+02	30	2.	6.36
98	6.1130E+01	2.3010E+00	3.0168E+02	79	1.	1.05
99	6.6590E+01	1.9460E+00	2.5514E+02	30	2.	7.68
100	6.6820E+01	1.8790E+00	2.4635E+02	79	1.	5.34
101	7.0020E+01	1.5960E+00	2.0925E+02	79	1.	4.67
102	7.7100E+01	1.3050E+00	1.7110E+02	79	1.	7.19
103	8.0000E+01	1.0774E+00	1.4126E+02	90	1.	-2.58
104	8.0000E+01	1.0836E+00	1.4206E+02	90	1.	-2.03
105	8.0000E+01	1.1049E+00	1.4486E+02	89	1.	-0.10
106	1.0000E+02	6.2651E-01	8.2141E+01	10	1.	-1.15
107	1.0000E+02	6.3773E-01	8.3611E+01	89	1.	0.61
108	1.5000E+02	2.7133E-01	3.5573E+01	10	1.	-0.23
109	1.5000E+02	2.7079E-01	3.5503E+01	89	1.	-0.43
110	2.0000E+02	1.7427E-01	2.2848E+01	89	1.	-0.45
111	3.0000E+02	1.1379E-01	1.4918E+01	89	1.	-0.53
112	4.0000E+02	9.2727E-02	1.2157E+01	10	1.	-0.39
113	5.0000E+02	8.1082E-02	1.0650E+01	89	1.	-0.22
114	6.0000E+02	7.3342E-02	9.6157E+00	89	1.	-0.09
115	6.6200E+02	7.0127E-02	9.1811E+00	89	1.	-0.02
116	7.0000E+02	6.8257E-02	8.9490E+00	89	1.	0.01
117	8.0000E+02	6.4285E-02	8.4282E+00	89	1.	0.92
118	9.0000E+02	5.9789E-02	7.8388E+00	89	1.	0.06
119	1.0000E+03	5.6970E-02	7.3512E+00	89	1.	0.07

119 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR BRACHINE

Z = 35

CONVERSION CONSTANT S = 1.327E+02

K-EDGES	13.574					
L-EDGES	1.392	1.596	1.550			
M-EDGES	0.237	0.189	0.185	0.070	0.070	
KEV	CM2/GM	BARNs/AT	SOURCE	WEIGHT	DIFF	
1	1.0000E+00	2.8193E+03	3.7413E+05	10	1.	7.13
2	1.0001E+00	2.6433E+03	3.5078E+05	90	1.	0.47
3	1.5000E+00	9.4968E+02	1.2523E+05	10	1.	-6.29
4	1.5480E+00	9.6406E+02	1.2793E+05	90	1.	-3.14
5	1.5480E+00	9.6255E+02	1.2773E+05	90	1.	-2.98
6	2.0000E+00	3.4645E+03	4.5974E+05	10	1.	-5.15
7	2.0000E+00	3.8905E+03	5.1628E+05	90	1.	6.51
8	3.0000E+00	1.2934E+03	1.5991E+05	10	1.	-0.13
9	3.0000E+00	1.2830E+03	1.7026E+05	90	1.	0.07
10	4.0000E+00	5.7346E+02	7.6099E+04	90	1.	-4.40
11	4.5590E+00	4.4056E+02	5.8463E+04	10	1.	-1.26
12	4.9320E+00	3.4230E+02	4.5424E+04	10	1.	0.03
13	5.0000E+00	3.2878E+02	4.3630E+04	10	1.	-0.34
14	5.4120E+00	2.6817E+02	3.5687E+04	10	1.	0.76
15	5.8950E+00	2.1178E+02	2.8104E+04	10	1.	0.28
16	5.9470E+00	2.0565E+02	2.7420E+04	10	1.	0.20
17	6.0000E+00	1.9861E+02	2.6356E+04	90	1.	-1.35
18	6.4010E+00	1.7059E+02	2.2637E+04	10	1.	1.15
19	6.4900E+00	1.6398E+02	2.1761E+04	10	1.	1.03
20	6.9250E+00	1.3710E+02	1.8194E+04	10	1.	0.91
21	7.0580E+00	1.2918E+02	1.7145E+04	10	1.	0.16
22	7.4720E+00	1.1396E+02	1.4725E+04	10	1.	0.54
23	7.6490E+00	1.0413E+02	1.3820E+04	10	1.	0.59
24	8.0000E+00	9.1604E+01	1.2156E+04	10	1.	-0.01
25	8.0000E+00	9.2975E+01	1.2338E+04	90	1.	1.49
26	8.0410E+00	9.0458E+01	1.2004E+04	10	1.	0.16
27	8.2650E+00	8.4279E+01	1.1184E+04	10	1.	0.70
28	8.6310E+00	7.4242E+01	9.8521E+03	10	1.	0.02
29	8.9050E+00	6.5955E+01	9.0974E+03	10	1.	0.70
30	9.5720E+00	5.6180E+01	7.4552E+03	10	1.	0.73
31	1.0000E+01	4.9474E+01	6.5653E+03	10	1.	0.06
32	1.0000E+01	4.7520E+01	6.5063E+03	89	1.	-3.89
33	1.5000E+01	1.1435E+02	1.5175E+04	10	1.	4.47
34	1.5000E+01	1.1223E+02	1.4234E+04	89	1.	2.54
35	1.5770E+01	1.0280E+02	1.3642E+04	79	1.	6.62
36	1.7444E+01	7.4612E+01	9.9012E+03	10	1.	-0.09
37	1.7480E+01	7.5700E+01	1.0046E+04	79	1.	1.90
38	1.9600E+01	5.6952E+01	7.5550E+03	10	1.	2.47
39	2.0000E+01	5.2474E+01	6.9634E+03	90	1.	-0.71
40	2.0000E+01	5.2601E+01	6.9802E+03	10	1.	-0.47
41	2.0000E+01	5.0921E+01	6.7573E+03	89	1.	-3.65
42	2.0169E+01	5.1891E+01	6.8850E+03	10	1.	0.43
43	2.0210E+01	5.2070E+01	6.9098E+03	79	1.	1.33
44	2.1125E+01	4.5088E+01	5.9833E+03	10	1.	-1.19
45	2.1180E+01	4.5850E+01	6.0844E+03	79	1.	1.19
46	2.2105E+01	3.9892E+01	5.2938E+03	10	1.	-1.27
47	2.2724E+01	3.7532E+01	4.9806E+03	10	1.	0.03
48	2.3170E+01	3.6120E+01	4.7932E+03	79	1.	1.41
49	2.3819E+01	3.3061E+01	4.3873E+03	10	1.	-0.05
50	2.4942E+01	2.9414E+01	3.9035E+03	10	1.	0.59
51	2.5000E+01	2.8830E+01	3.8257E+03	10	1.	-0.80
52	2.5270E+01	2.7960E+01	3.7103E+03	79	1.	-0.99
53	2.7470E+01	2.2610E+01	3.0004E+03	79	1.	0.06
54	3.0000E+01	1.3750E+01	2.3057E+03	10	1.	-2.78
55	3.0000E+01	1.6979E+01	2.2531E+03	89	1.	-5.00
56	3.0000E+01	1.7355E+01	2.3031E+03	90	1.	-2.89
57	3.0000E+01	1.7265E+01	2.2911E+03	90	1.	-3.39
58	3.6370E+01	1.7070E+01	2.2652E+03	79	1.	4.36
59	3.3430E+01	1.2770E+01	1.6946E+03	30	2.	-3.46
60	3.4700E+01	1.1860E+01	1.5738E+03	30	2.	-0.98
61	3.4720E+01	1.2100E+01	1.6057E+03	79	1.	1.66
62	3.5900E+01	1.0800E+01	1.4332E+03	30	2.	-0.54
63	3.7320E+01	9.7000E+00	1.2872E+03	30	2.	-0.57
64	3.7360E+01	9.8250E+00	1.3038E+03	79	1.	1.01
65	4.0000E+01	7.7820E+00	1.0527E+03	90	1.	-3.46
66	4.0000E+01	7.9228E+00	1.0514E+03	10	1.	-1.71
67	4.0000E+01	8.0209E+00	1.0544E+03	89	1.	-0.50
68	4.0120E+01	8.1770E+00	1.0851E+03	79	1.	2.30
69	4.0070E+01	8.0060E+00	1.0624E+03	30	2.	-0.19

70	5.0000E+01	4.1783E+00	5.5447E+02	91	1.	-3.36
71	5.0000E+01	4.1874E+00	5.5567E+02	92	1.	-3.15
72	5.0000E+01	4.525E+00	5.7358E+02	89	1.	-0.03
73	5.7520E+01	3.3060E+00	4.0686E+02	79	1.	4.72
74	6.0000E+01	2.5316E+00	3.3595E+02	90	1.	-2.91
75	6.0000E+01	2.5436E+00	3.3755E+02	90	1.	-2.45
76	6.0000E+01	2.6161E+00	3.4717E+02	89	1.	0.33
77	6.0750E+01	2.6520E+00	3.5193E+02	39	2.	5.27
78	6.1130E+01	2.6000E+00	3.4503E+02	79	1.	5.01
79	6.6820E+01	2.0570E+00	2.7297E+02	79	1.	6.09
80	7.0820E+01	1.7820E+00	2.3647E+02	79	1.	7.57
81	7.7100E+01	1.3900E+00	1.8446E+02	79	1.	5.17
82	8.0000E+01	1.2134E+00	1.6101E+02	89	1.	1.11
83	8.0000E+01	1.1846E+00	1.5719E+02	90	1.	-1.29
84	8.0000E+01	1.1831E+00	1.5699E+02	90	1.	-1.42
85	8.0000E+01	1.1898E+00	1.5789E+02	90	1.	-0.85
86	8.0000E+01	1.1891E+00	1.5779E+02	90	1.	-0.92
87	1.0000E+02	6.8451E-01	9.0836E+01	10	1.	-0.05
88	1.0000E+02	6.9637E-01	9.2410E+01	89	1.	1.68
89	1.0000E+02	6.8141E-01	9.0425E+01	90	1.	-0.50
90	1.5000E+02	2.9125E-01	3.8649E+01	10	1.	0.58
91	1.5000E+02	2.8905E-01	3.8464E+01	89	1.	0.10
92	1.5000E+02	2.9014E-01	3.8502E+01	90	1.	0.20
93	1.5000E+02	2.9232E-01	3.8792E+01	90	1.	0.95
94	2.0000E+02	1.8367E-01	2.4373E+01	89	1.	-0.16
95	2.0000E+02	1.8426E-01	2.4452E+01	90	1.	0.16
96	3.0000E+02	1.1793E-01	1.5649E+01	89	1.	-0.44
97	4.5000E+02	9.5520E-02	1.2649E+01	10	1.	-0.35
98	5.0000E+02	8.2977E-02	1.1011E+01	90	1.	-0.25
99	5.0000E+02	8.2998E-02	1.1014E+01	89	1.	-0.21
100	6.0000E+02	7.4957E-02	9.9470E+00	89	1.	-0.08
101	6.3200E+02	7.1409E-02	9.4761E+00	89	1.	-0.01
102	7.0000E+02	6.9519E-02	9.2254E+00	89	1.	0.02
103	8.0000E+02	6.5292E-02	8.6644E+00	89	1.	0.02
104	9.0000E+02	6.4934E-02	8.0728E+00	89	1.	0.07
105	1.0000E+03	5.1145E-02	7.5832E+00	89	1.	0.07

105 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR KRYPTON

Z = 36

CONVERSION CONSTANT IS 1.591E+02

K-EDGE	14.322					
L-EDGES	1.926	1.726	1.675			
M-EDGES	0.288	0.220	0.211	0.087	0.087	
KEY	CM2/GM	PARN/SAT	SOURCE	WEIGHT	DIFF	
1	3.9230E-01	2.1500E+04	2.9916E+06	47	5.	-8.95
2	5.2490E-01	1.2300E+04	1.7115E+06	47	5.	0.57
3	6.7670E-01	7.2700E+03	1.0116E+06	47	5.	5.51
4	7.7800E-01	5.4500E+03	7.5834E+05	47	5.	8.38
5	9.2900E-01	3.5500E+03	4.9396E+05	47	5.	5.35
6	1.0000E+00	3.0259E+03	4.2103E+05	10	1.	6.03
7	1.2540E+00	1.7100E+03	2.3794E+05	47	5.	-0.19
8	1.4870E+00	1.0900E+03	1.5167E+05	47	5.	-6.62
9	1.5000E+00	1.0573E+03	1.4711E+05	10	1.	-7.33
10	1.5000E+00	1.0793E+03	1.5018E+05	90	1.	-5.70
11	2.0000E+00	3.6411E+03	5.0664E+05	10	1.	-6.04
12	2.0000E+00	4.1521E+03	5.7504E+05	90	1.	6.64
13	3.0000E+00	1.3568E+03	1.8899E+05	10	1.	-0.39
14	3.0000E+00	1.3643E+03	1.8984E+05	90	1.	0.06
15	4.0000E+00	6.3809E+02	8.8785E+04	90	1.	-0.22
16	4.5590E+00	4.7015E+02	6.5419E+04	10	1.	1.26
17	4.9520E+00	3.6567E+02	5.0881E+04	10	1.	0.04
18	5.0000E+00	3.5121E+02	4.8869E+04	10	1.	-0.34
19	5.0000E+00	3.4645E+02	4.8206E+04	90	1.	-1.69
20	5.4120E+00	2.8637E+02	3.9847E+04	10	1.	0.63
21	5.8950E+00	2.2626E+02	3.1483E+04	10	1.	0.12
22	5.9470E+00	2.2076E+02	3.0717E+04	10	1.	-0.02
23	6.0000E+00	2.1409E+02	2.9790E+04	90	1.	-0.65
24	6.4900E+00	1.8244E+02	2.5305E+04	10	1.	0.99
25	6.4900E+00	1.7537E+02	2.4402E+04	10	1.	0.85
26	6.9250E+00	1.4672E+02	2.0415E+04	10	1.	0.71
27	7.0580E+00	1.3833E+02	1.9248E+04	10	1.	0.01
28	7.1720E+00	1.1869E+02	1.6515E+04	10	1.	0.22
29	7.6490E+00	1.1137E+02	1.5497E+04	10	1.	0.22
30	8.0000E+00	9.8725E+01	1.3681E+04	10	1.	-0.06
31	8.0000E+00	9.7515E+01	1.3592E+04	90	1.	-0.71
32	8.0410E+00	9.2885E+01	1.3481E+04	10	1.	-0.12
33	8.2650E+00	9.0180E+01	1.2548E+04	10	1.	0.29
34	8.6310E+00	7.9558E+01	1.1870E+04	10	1.	-0.29
35	8.9050E+00	7.3485E+01	1.0225E+04	10	1.	0.37
36	9.5720E+00	6.0113E+01	8.3644E+03	10	1.	0.13
37	1.0000E+01	5.3425E+01	7.4538E+03	10	1.	0.33
38	1.0000E+01	5.2967E+01	7.3701E+03	90	1.	-0.55
39	1.5000E+01	1.1746E+02	1.6344E+04	89	1.	0.87
40	1.5000E+01	1.2040E+02	1.6753E+04	10	1.	3.40
41	1.7444E+01	7.8120E+01	1.0871E+04	10	1.	-1.22
42	1.7480E+01	7.9900E+01	1.1118E+04	8	4.	1.56
43	1.7480E+01	7.9900E+01	1.1118E+04	76	2.	1.56
44	1.9600E+01	6.0145E+01	8.3688E+03	10	1.	2.58
45	2.0000E+01	5.5407E+01	7.7095E+03	10	1.	-0.60
46	2.9000E+01	5.3356E+01	7.4241E+03	89	1.	-4.28
47	2.0169E+01	5.4711E+01	7.6127E+03	10	1.	0.41
48	2.1125E+01	4.7468E+01	6.6049E+03	10	1.	-1.26
49	2.2105E+01	4.2014E+01	5.8460E+03	10	1.	-1.22
50	2.2724E+01	3.9521E+01	5.4991E+03	10	1.	0.11
51	2.3819E+01	3.4819E+01	4.8448E+03	10	1.	0.14
52	2.4942E+01	3.1041E+01	4.3192E+03	10	1.	1.08
53	2.5000E+01	3.0446E+01	4.2364E+03	10	1.	-0.24
54	3.0000E+01	1.7877E+01	2.4875E+03	89	1.	-4.39
55	5.0000E+01	1.8381E+01	2.5576E+03	10	1.	-1.70
56	4.0000E+01	8.3900E+00	1.1674E+03	10	1.	-0.19
57	4.0000E+01	8.3151E+00	1.1570E+03	89	1.	-1.09
58	5.0000E+01	4.4860E+00	6.2420E+02	89	1.	-0.34
59	6.0000E+01	2.7432E+00	3.8170E+02	89	1.	1.17
60	8.0000E+01	1.2634E+00	1.7580E+02	89	1.	1.47
61	1.0000E+02	7.2029E-01	1.0022E+02	10	1.	1.70
62	1.0000E+02	7.1902E-01	1.0005E+02	89	1.	1.52
63	1.5000E+02	3.0159E-01	4.1965E+01	10	1.	1.82
64	1.5000E+02	2.9962E-01	4.1690E+01	89	1.	1.15
65	2.0000E+02	1.8693E-01	2.6010E+01	89	1.	0.41
66	5.0000E+02	1.1811E-01	1.6434E+01	89	1.	-0.34
67	4.0000E+02	9.4524E-02	1.3152E+01	10	1.	-0.30
68	5.0000E+02	8.2036E-02	1.1415E+01	89	1.	-0.21
69	6.0000E+02	7.3906E-02	1.0284E+01	89	1.	-0.10

70	5.6200E+02	6.9979E-02	9.7572E+00	89	1.	-0.03
71	7.0000E+02	6.7896E-02	9.4475E+00	89	1.	-0.00
72	8.0000E+02	6.3253E-02	8.8015E+00	89	1.	0.01
73	9.0000E+02	5.9390E-02	8.2638E+00	89	1.	0.06
74	1.0000E+03	5.6181E-02	7.8175E+00	89	1.	0.06

74 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR STRONTIUM

Z = 38

CONVERSION CONSTANT IS 1.455E+02

X-EDGES	16.105					
L-EDGES	2.216	2.007	1.940			
M-EDGES	0.358	0.279	0.269	0.136	0.134	
KEY	CM2/GM	EPRNS/AT	SOURCE	WEIGHT	DIFF	
1	1.0000E+00	3.6620E+03	5.5289E+05	10	1.	2.83
2	1.0001E+00	3.5804E+03	5.2090E+05	90	1.	0.54
3	1.5000E+00	1.5492E+03	1.9629E+05	10	1.	-1.37
4	1.9380E+00	7.5468E+02	1.0980E+05	90	1.	0.85
5	3.0000E+00	1.6278E+03	2.3683E+05	90	1.	2.02
6	3.0000E+00	1.5905E+03	2.3136E+05	10	1.	-0.33
7	4.0000E+00	7.5200E+02	1.0941E+05	90	1.	-0.79
8	4.5090E+00	5.5661E+02	8.0979E+04	10	1.	0.84
9	4.9320E+00	4.3418E+02	6.3167E+04	10	1.	-0.50
10	5.0000E+00	4.1684E+02	6.0645E+04	10	1.	-0.75
11	5.0000E+00	4.1015E+02	5.9673E+04	90	1.	-2.34
12	5.4120E+00	3.3376E+02	4.9431E+04	10	1.	0.12
13	5.8950E+00	2.6870E+02	3.9093E+04	10	1.	-0.35
14	5.9470E+00	2.6217E+02	3.8143E+04	10	1.	-0.45
15	6.0000E+00	2.5399E+02	3.6952E+04	90	1.	-1.24
16	6.4030E+00	2.1697E+02	3.1566E+04	10	1.	0.72
17	6.4900E+00	2.0856E+02	3.0343E+04	10	1.	0.60
18	6.9250E+00	1.7479E+02	2.5429E+04	10	1.	3.70
19	7.0580E+00	1.6502E+02	2.4008E+04	10	1.	0.16
20	7.4720E+00	1.4126E+02	2.0552E+04	10	1.	0.20
21	7.6490E+00	1.3249E+02	1.9275E+04	10	1.	0.18
22	8.0000E+00	1.1770E+02	1.7124E+04	10	1.	0.60
23	8.0000E+00	1.1629E+02	1.6918E+04	90	1.	-0.62
24	8.0410E+00	1.1558E+02	1.6816E+04	10	1.	0.20
25	8.2650E+00	1.0732E+02	1.5614E+04	10	1.	0.46
26	8.6310E+00	9.4998E+01	1.3821E+04	10	1.	0.34
27	8.9050E+00	8.7760E+01	1.2768E+04	10	1.	1.13
28	9.5720E+00	7.1656E+01	1.0425E+04	10	1.	0.93
29	1.0000E+01	6.4524E+01	9.3583E+03	10	1.	2.29
30	1.0000E+01	6.3624E+01	9.1692E+03	90	1.	0.22
31	1.5000E+01	2.0572E+01	2.9930E+03	10	1.	2.89
32	1.5000E+01	1.8493E+01	2.6905E+03	90	1.	-7.51
33	1.6103E+01	1.6774E+01	2.4404E+03	90	1.	2.67
34	1.6106E+01	1.1137E+02	1.6202E+04	90	1.	3.44
35	1.7444E+01	8.9094E+01	1.2962E+04	10	1.	1.19
36	1.9608E+01	6.9896E+01	1.0159E+04	90	1.	6.56
37	2.0000E+01	6.4301E+01	9.3136E+03	10	1.	2.58
38	2.0000E+01	6.0974E+01	8.8709E+03	89	1.	-2.30
39	2.0000E+01	6.4465E+01	9.4067E+03	90	1.	3.60
40	2.0169E+01	6.3299E+01	9.2092E+03	10	1.	3.71
41	2.1125E+01	5.4745E+01	7.9647E+03	10	1.	1.40
42	2.2105E+01	4.8492E+01	7.0550E+03	10	1.	1.27
43	2.2724E+01	4.5603E+01	6.6346E+03	10	1.	2.45
44	2.3819E+01	4.0182E+01	5.8460E+03	10	1.	2.22
45	2.4942E+01	3.5959E+01	5.2316E+03	10	1.	3.31
46	2.5000E+01	3.5364E+01	5.1450E+03	10	1.	2.23
47	3.0000E+01	2.1428E+01	3.1175E+03	10	1.	0.11
48	3.0000E+01	1.9374E+01	2.8107E+03	90	1.	-9.48
49	3.0000E+01	2.0628E+01	3.0011E+03	89	1.	-3.63
50	3.3430E+01	1.4630E+01	2.1269E+03	30	2.	-8.02
51	5.4700E+01	1.5560E+01	1.9728E+03	30	2.	-5.60
52	3.5900E+01	1.2540E+01	1.8244E+03	30	2.	-4.20
53	3.7320E+01	1.1280E+01	1.6411E+03	30	2.	-4.21
54	4.0000E+01	9.7962E+00	1.4252E+03	10	1.	9.45
55	4.0000E+01	9.0835E+00	1.4379E+03	89	1.	1.35
56	4.0070E+01	9.5449E+00	1.3893E+03	30	2.	-1.61
57	5.0000E+01	4.6108E+00	6.9953E+02	90	1.	-8.57
58	5.0000E+01	5.3478E+00	7.7803E+02	89	1.	1.58
59	5.7460E+01	3.7790E+00	5.4980E+02	30	2.	5.40
60	5.9070E+01	3.4980E+00	5.0891E+02	30	2.	5.23
61	6.0000E+01	2.9318E+00	4.2654E+02	30	2.	-7.97
62	6.0000E+01	3.2384E+00	4.7114E+02	89	1.	1.66
63	6.0750E+01	3.0360E+00	4.4170E+02	30	2.	-1.37
64	6.6500E+01	2.5180E+00	3.5634E+02	30	2.	4.84
65	6.8320E+01	2.3540E+00	3.4248E+02	30	2.	6.32
66	7.0380E+01	2.2030E+00	3.2051E+02	30	2.	6.37
67	7.2440E+01	2.0520E+00	2.9854E+02	30	2.	7.68
68	8.0000E+01	1.3676E+00	1.9896E+02	90	1.	-6.61
69	8.0000E+01	1.4953E+00	2.1754E+02	89	1.	2.11

70	1.0000E+02	8.3385E-01	1.2131E+02	10	1.	0.73
71	1.0000E+02	7.8109E-01	1.1564E+02	90	1.	-5.64
72	1.0000E+02	8.3264E-01	1.2114E+02	89	1.	0.59
73	1.5000E+02	3.3474E-01	4.8701E+01	89	1.	-0.30
74	1.5000E+02	3.3345E-01	4.9386E+01	10	1.	1.10
75	2.0000E+02	2.0320E-01	2.9563E+01	89	1.	-0.62
76	3.0000E+02	1.2413E-01	1.8059E+01	89	1.	-0.76
77	4.0000E+02	9.7727E-02	1.4218E+01	10	1.	-0.50
78	5.0000E+02	8.4113E-02	1.2237E+01	89	1.	-0.33
79	6.0000E+02	7.5448E-02	1.0977E+01	89	1.	-0.14
80	6.6200E+02	7.1312E-02	1.0375E+01	89	1.	-0.06
81	7.0000E+02	6.9131E-02	1.0056E+01	89	1.	-0.01
82	8.0000E+02	6.4292E-02	9.3537E+00	89	1.	0.03
83	9.0000E+02	6.0297E-02	8.7724E+00	89	1.	0.09
84	1.0000E+03	5.6990E-02	8.2914E+00	89	1.	0.11

84 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR ZIRCONIUM

Z = 40

CONVERSION CONSTANT IS 1.515E+02

	K-EDGES	17.698	L-EDGES	2.552	2.307	M-EDGES	0.331	0.344	2.223	0.330	0.183	0.180	
	KEY			CM2/GM					BARNs/AT		SOURCE	WEIGHT	DIFF
1	1.0000E+00		4.4457E+03		6.7336E+05				10		1.	-3.17	
2	1.0001E+00		4.3416E+03		6.5760E+05				90		1.	-5.42	
3	1.4870E+00		1.7460E+03		2.6446E+05				83		3.	2.39	
4	1.5000E+00		1.6706E+03		2.5304E+05				10		1.	0.12	
5	1.7400E+00		1.1850E+03		1.7949E+05				83		3.	2.80	
6	1.9230E+00		9.1200E+02		1.3814E+05				83		3.	1.48	
7	2.0000E+00		7.7357E+02		1.1717E+05				10		1.	-5.10	
8	2.0000E+00		7.6175E+02		1.1538E+05				90		1.	-6.55	
9	2.0420E+00		7.8300E+02		1.1860E+05				83		3.	1.15	
10	2.1660E+00		6.5500E+02		9.9361E+04				83		3.	-1.89	
11	3.0000E+00		1.8467E+03		2.7971E+05				10		1.	-1.91	
12	3.4440E+00		1.3290E+03		2.0130E+05				83		3.	1.17	
13	4.0910E+00		8.4200E+02		1.2753E+05				83		3.	0.46	
14	4.5160E+00		6.7120E+02		1.0166E+05				12		2.	4.04	
15	4.5160E+00		6.4900E+02		9.8301E+04				83		3.	0.31	
16	5.0000E+01		4.9023E+02		7.4255E+04				10		1.	-0.52	
17	5.4150E+00		4.0300E+02		6.1040E+04				83		3.	1.26	
18	5.9040E+00		3.0080E+02		4.5561E+04				12		2.	-4.75	
19	6.4040E+00		2.5700E+02		3.8926E+04				83		3.	1.44	
20	6.4040E+00		2.5200E+02		3.8169E+04				82		3.	-0.53	
21	6.4090E+00		2.3310E+02		3.5306E+04				12		2.	-7.80	
22	6.9500E+00		1.9990E+02		3.0278E+04				82		3.	-2.26	
23	7.0570E+00		1.9610E+02		2.9702E+04				87		2.	0.72	
24	7.4780E+00		1.6860E+02		2.5537E+04				83		3.	1.30	
25	7.4780E+00		1.6470E+02		2.4946E+04				82		3.	-1.04	
26	7.4842E+00		1.6460E+02		2.4931E+04				12		2.	-0.88	
27	8.0000E+00		1.3950E+02		2.1129E+04				10		1.	0.59	
28	8.0000E+00		1.3430E+02		2.1357E+04				39		5.	1.67	
29	8.0400E+00		1.3400E+02		2.0296E+04				26		5.	-2.04	
30	8.0400E+00		1.3480E+02		2.0417E+04				82		3.	-1.46	
31	8.0470E+00		1.3700E+02		2.0751E+04				66		3.	0.39	
32	8.0480E+00		1.3780E+02		2.0872E+04				93		3.	1.01	
33	8.0530E+00		1.3410E+02		2.0311E+04				12		2.	-1.53	
34	8.3980E+00		1.2520E+02		1.8963E+04				39		5.	3.16	
35	8.6340E+00		1.1180E+02		1.6934E+04				26		5.	-0.60	
36	8.6390E+00		1.1060E+02		1.5752E+04				82		3.	-1.51	
37	8.6440E+00		1.1300E+02		1.7116E+04				12		2.	0.79	
38	9.4420E+00		8.8200E+01		1.3359E+04				83		3.	0.19	
39	9.5740E+00		8.7300E+01		1.3223E+04				26		5.	3.01	
40	9.9620E+00		7.7350E+01		1.1716E+04				39		5.	1.73	
41	1.0000E+01		7.6261E+01		1.1551E+04				10		1.	1.35	
42	1.0268E+01		6.9600E+01		1.0542E+04				83		3.	-0.42	
43	1.0530E+01		6.6100E+01		1.0012E+04				26		5.	-1.45	
44	1.0552E+01		6.4500E+01		9.7695E+03				83		3.	-0.43	
45	1.0839E+01		6.0300E+01		9.1335E+03				83		3.	0.31	
46	1.1220E+01		5.4120E+01		8.1973E+03				11		10.	-0.89	
47	1.1220E+01		5.4260E+01		8.2185E+03				82		3.	-0.63	
48	1.1910E+01		4.8200E+01		7.3006E+03				26		5.	4.17	
49	1.1920E+01		4.7490E+01		7.1931E+03				12		2.	2.88	
50	1.1921E+01		4.5850E+01		6.9447E+03				82		3.	-0.65	
51	1.2000E+01		4.5150E+01		6.8386E+03				87		2.	-0.36	
52	1.2490E+01		4.0180E+01		6.0859E+03				11		10.	-0.94	
53	1.3290E+01		3.5900E+01		5.4376E+03				26		5.	5.06	
54	1.3390E+01		3.2800E+01		4.9680E+03				11		10.	-2.01	
55	1.4960E+01		2.4830E+01		3.7609E+03				11		10.	0.58	
56	1.5000E+01		2.4412E+01		3.6976E+03				10		1.	-0.39	
57	1.5000E+01		2.4340E+01		3.5857E+03				39		5.	-0.68	
58	1.5750E+01		2.1700E+01		3.2866E+03				26		5.	1.47	
59	1.5770E+01		2.1050E+01		3.1883E+03				11		10.	-1.22	
60	1.5775E+01		2.1450E+01		3.2459E+03				82		3.	0.62	
61	1.6570E+01		1.8500E+01		2.8021E+03				26		5.	-0.37	
62	1.7466E+01		1.6400E+01		2.4840E+03				26		5.	2.12	
63	1.7480E+01		1.6010E+01		2.4250E+03				11		10.	0.00	
64	1.7497E+01		1.6290E+01		2.4674E+03				82		3.	1.86	
65	1.7670E+01		1.5330E+01		2.5220E+03				11		10.	-1.34	
66	1.8640E+01		8.6200E+01		1.3056E+04				26		5.	1.19	
67	1.2644E+01		8.9000E+01		1.3460E+04				82		3.	4.52	
68	1.9620E+01		7.5400E+01		1.1420E+04				26		5.	0.41	
69	1.9711E+01		7.5600E+01		1.1451E+04				82		3.	1.83	

70	2.0000E+01	7.3421E+01	1.1121E+04	10	1.	2.50
71	2.0000E+01	7.4600E+01	1.1299E+04	39	5.	4.15
72	2.0000E+01	7.3170E+01	1.1083E+04	87	2.	2.15
73	2.1120E+01	6.2900E+01	9.5271E+03	26	5.	1.16
74	2.2100E+01	5.6300E+01	8.5729E+03	26	5.	2.39
75	2.2160E+01	5.4980E+01	8.3124E+03	11	10.	-0.02
76	2.2179E+01	5.5740E+01	8.4426E+03	82	3.	1.77
77	2.3174E+01	4.9620E+01	7.5157E+03	82	3.	1.52
78	2.3220E+01	4.8160E+01	7.2945E+03	11	10.	-0.96
79	2.4940E+01	4.0090E+01	6.0722E+03	11	10.	-0.79
80	2.4942E+01	4.1180E+01	6.2373E+03	39	5.	1.92
81	2.5000E+01	4.0776E+01	6.1762E+03	10	1.	1.53
82	2.5000E+01	4.0830E+01	6.1843E+03	48	3.	1.67
83	2.5200E+01	3.8800E+01	5.8768E+03	26	5.	1.37
84	2.5251E+01	3.9830E+01	6.0328E+03	82	3.	1.78
85	2.8480E+01	2.8420E+01	4.3046E+03	11	10.	-0.88
86	2.9190E+01	2.6580E+01	4.0259E+03	11	10.	-1.22
87	3.0000E+01	2.4800E+01	3.7563E+03	10	1.	-1.09
88	3.0040E+01	2.5000E+01	3.7866E+03	48	3.	0.07
89	3.0490E+01	2.3790E+01	3.6033E+03	11	10.	-0.83
90	3.4700E+01	1.6110E+01	2.4401E+03	30	2.	-4.69
91	3.5900E+01	1.4960E+01	2.2659E+03	30	2.	-2.73
92	3.7320E+01	1.3580E+01	2.0569E+03	30	2.	-1.91
93	4.0000E+01	1.1349E+01	1.7190E+03	10	1.	-1.11
94	4.0000E+01	1.1420E+01	1.7297E+03	39	5.	-0.49
95	4.0040E+01	1.1490E+01	1.7403E+03	48	3.	0.40
96	4.0070E+01	1.1530E+01	1.7161E+03	30	2.	-0.79
97	4.4000E+01	9.1890E+00	1.3918E+03	87	2.	4.36
98	5.0000E+01	6.1560E+00	9.3242E+02	48	3.	-0.04
99	6.0030E+01	3.7790E+00	5.7239E+02	40	5.	1.53
100	6.0750E+01	3.3910E+00	5.5906E+02	30	2.	2.53
101	7.0040E+01	2.4470E+00	3.7063E+02	40	5.	0.83
102	8.4990E+01	1.4420E+00	2.1841E+02	40	5.	0.16
103	1.0000E+02	9.6148E-01	1.4565E+02	10	1.	1.90
104	1.3300E+02	9.6082E-01	1.4553E+02	89	1.	1.83
105	1.0000E+02	9.4560E-01	1.4323E+02	40	5.	0.36
106	1.1487E+02	6.7980E-01	1.0297E+02	40	5.	1.49
107	1.3031E+02	5.1790E-01	7.8444E+01	40	5.	3.63
108	1.4560E+02	3.9950E-01	6.0510E+01	48	3.	1.60
109	1.5000E+02	3.8225E-01	5.7898E+01	10	1.	3.34
110	2.0830E+02	2.0600E-01	3.1202E+01	48	3.	-0.06
111	2.7910E+02	1.3920E-01	2.1084E+01	48	3.	-1.27
112	3.0000E+02	1.3115E-01	1.9865E+01	89	1.	0.34
113	4.0000E+02	1.0140E-01	1.5358E+01	10	1.	0.18
114	4.1180E+02	9.7500E-02	1.4768E+01	48	3.	-1.51
115	5.0000E+02	8.6489E-02	1.3100E+01	89	1.	0.05
116	6.0000E+02	7.7201E-02	1.1693E+01	89	1.	0.10
117	6.6200E+02	7.2454E-02	1.0974E+01	89	1.	0.11
118	7.0000E+02	6.9967E-02	1.0597E+01	89	1.	0.13
119	8.0000E+02	6.4483E-02	9.7568E+00	89	1.	0.12
120	9.0000E+02	6.0892E-02	9.2230E+00	89	1.	0.14
121	1.0000E+03	5.7924E-02	8.7735E+00	89	1.	0.15

121 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR NICKEL

Z = 41

CONVERSION CONSTANT IS 1.543E+02

K-EDGE	18.946	L-EDGES	2.698	2.465	2.371	0.362	0.208	0.205	
KEV	CM2/GM			BARNs/AT	SOURCE	WEIGHT	DIFF		
1	1.0000E+00	4.9023E+03		7.5625E+05	10	1.	-0.06		
2	1.0001E+00	4.7893E+03		7.3866E+05	90	1.	-3.14		
3	1.5000E+00	1.8440E+03		2.0446E+05	10	1.	2.59		
4	1.7400E+00	1.2760E+03		1.9684E+05	82	3.	2.76		
5	2.0000E+00	8.6783E+02		1.3308E+05	10	1.	-1.18		
6	2.0140E+00	8.7190E+02		1.3450E+05	82	3.	1.02		
7	2.1650E+00	7.1550E+02		1.1053E+05	82	3.	-0.64		
8	2.1660E+00	6.9500E+02		1.0783E+05	83	3.	-2.96		
9	2.2930E+00	6.1800E+02		9.5395E+04	83	3.	-1.17		
10	2.3080E+00	6.0120E+02		9.2744E+04	82	3.	-2.29		
11	2.5450E+00	5.9900E+02		9.2404E+04	83	3.	1.38		
12	2.3680E+01	6.0087E+02		9.2693E+04	90	1.	4.08		
13	2.3680E+01	6.0029E+02		9.2603E+04	90	1.	3.98		
14	3.0000E+00	1.9851E+03		3.0623E+05	10	1.	0.57		
15	3.5140E+00	1.5248E+03		2.3522E+05	82	3.	-0.56		
16	3.6920E+00	1.1642E+03		1.7959E+05	82	3.	-0.16		
17	4.5110E+00	6.9440E+02		1.0712E+05	82	3.	-0.26		
18	4.5110E+00	7.1600E+02		1.1045E+05	83	3.	2.84		
19	4.5110E+00	6.9700E+02		1.0752E+05	67	3.	0.11		
20	4.9320E+00	5.4870E+02		8.4645E+04	67	3.	-0.62		
21	4.9520E+00	5.4500E+02		8.4374E+04	83	3.	-0.25		
22	4.9530E+00	5.4580E+02		8.4197E+04	82	3.	-0.05		
23	5.0000E+01	5.3010E+02		8.1775E+04	10	1.	-0.51		
24	5.4140E+01	4.2980E+02		6.6303E+04	82	3.	-0.39		
25	5.4150E+00	4.1400E+02		6.8493E+04	83	3.	2.95		
26	5.4150E+00	4.3670E+02		6.6133E+04	67	3.	-0.60		
27	5.8980E+00	3.1290E+02		5.2897E+04	82	3.	-0.30		
28	5.8990E+00	3.4700E+02		5.3530E+04	83	3.	0.94		
29	6.4040E+00	2.7590E+02		4.2255E+04	92	3.	-0.57		
30	6.4040E+00	2.7800E+02		4.2885E+04	83	3.	0.92		
31	6.4040E+00	2.7570E+02		4.2531E+04	67	3.	0.08		
32	6.9300E+00	2.2400E+02		3.4555E+04	83	3.	0.68		
33	7.0580E+00	2.0980E+02		3.2365E+04	67	3.	-0.92		
34	7.4780E+00	1.8240E+02		2.8138E+04	83	3.	0.70		
35	7.4780E+00	1.8040E+02		2.7829E+04	82	3.	-0.40		
36	8.0000E+00	1.5140E+02		2.3355E+04	10	1.	0.27		
37	8.3400E+00	1.4720E+02		2.2708E+04	26	5.	-1.16		
38	8.3400E+00	1.4680E+02		2.2646E+04	82	3.	-1.43		
39	8.0480E+00	1.4970E+02		2.3093E+04	83	3.	0.80		
40	8.0480E+00	1.4730E+02		2.2723E+04	67	3.	-0.82		
41	8.6390E+00	1.2300E+02		1.8975E+04	82	3.	0.73		
42	8.6390E+00	1.2230E+02		1.8867E+04	83	3.	0.16		
43	8.6340E+00	1.2240E+02		1.8882E+04	26	5.	0.08		
44	8.9050E+00	1.1270E+02		1.7386E+04	67	3.	0.35		
45	9.2520E+00	1.0170E+02		1.5681E+04	83	3.	0.62		
46	9.4420E+00	9.4400E+01		1.4563E+04	67	3.	-1.23		
47	9.5740E+00	9.2100E+01		1.4208E+04	26	5.	0.12		
48	1.0000E+01	8.2677E+01		1.2754E+04	10	1.	1.30		
49	1.0530E+01	7.1000E+01		1.0953E+04	26	5.	0.70		
50	1.0544E+01	7.1700E+01		1.1061E+04	83	3.	2.08		
51	1.0550E+01	6.8500E+01		1.0567E+04	67	3.	-2.32		
52	1.1079E+01	6.1900E+01		9.5490E+03	67	3.	1.13		
53	1.1220E+01	5.8600E+01		9.0399E+03	82	3.	-0.55		
54	1.1910E+01	5.0700E+01		7.8212E+03	26	5.	1.81		
55	1.3290E+01	3.7300E+01		5.7541E+03	26	5.	1.91		
56	1.4169E+01	3.1000E+01		4.7822E+03	82	3.	1.31		
57	1.5000E+01	2.6539E+01		4.0940E+03	90	1.	1.64		
58	1.5000E+01	2.6536E+01		4.0938E+03	10	1.	1.64		
59	1.5750E+01	2.2600E+01		3.4064E+03	26	5.	-0.44		
60	1.6570E+01	1.9100E+01		2.9464E+03	26	5.	-2.72		
61	1.7450E+01	1.6900E+01		2.6071E+03	26	5.	-0.10		
62	1.8960E+01	1.3834E+01		2.1341E+03	90	1.	3.27		
63	1.8970E+01	1.3820E+01		2.1320E+03	90	1.	3.33		
64	1.8988E+01	8.7239E+01		1.3458E+04	90	1.	-0.87		
65	1.9000E+01	8.7951E+01		1.3568E+04	90	1.	0.10		
66	1.9010E+01	8.7526E+01		1.3518E+04	90	1.	-0.14		
67	1.9620E+01	8.1800E+01		1.2619E+04	26	5.	0.86		
68	2.0000E+01	7.9325E+01		1.2237E+04	90	1.	2.59		
69	2.0000E+01	7.9066E+01		1.2197E+04	90	1.	2.26		

70	2.0000E+01	7.8463E+01	1.2104E+04	10	1.	1.49
71	2.1120E+01	6.9100E+01	1.0660E+04	26	5.	2.55
72	2.2100E+01	6.1900E+01	9.5490E+03	25	5.	3.74
73	2.5000E+01	4.3693E+01	6.7403E+03	11	1.	0.79
74	2.5000E+01	4.2700E+01	6.6596E+03	48	3.	0.42
75	2.5200E+01	4.2000E+01	6.5717E+03	26	5.	0.31
76	3.0000E+01	2.6625E+01	4.1073E+03	10	1.	-1.62
77	3.0340E+01	2.5920E+01	3.9985E+03	48	5.	-3.88
78	4.0000E+01	1.2134E+01	1.8718E+03	90	1.	-2.46
79	4.0000E+01	1.2190E+01	1.8805E+03	10	1.	-2.01
80	4.0040E+01	1.2130E+01	1.8712E+03	48	5.	-2.22
81	4.0120E+01	1.2100E+01	1.9566E+03	26	5.	-1.93
82	4.2980E+01	1.0000E+01	1.5426E+03	78	5.	-1.98
83	4.5400E+01	8.6030E+00	1.3267E+03	28	5.	-1.59
84	5.0000E+01	6.6700E+00	1.0289E+03	28	5.	-0.98
85	5.0000E+01	6.5593E+00	1.0119E+03	90	1.	-2.63
86	5.0000E+01	6.5652E+00	1.0128E+03	90	1.	-2.54
87	5.0080E+01	6.5510E+00	1.0106E+03	48	5.	-2.32
88	5.7520E+01	4.5400E+00	7.0036E+02	28	5.	-0.74
89	6.0000E+01	3.9822E+00	5.1435E+02	90	1.	-2.26
90	6.0030E+01	4.0720E+00	6.2816E+02	48	5.	0.09
91	6.7870E+01	2.9100E+00	4.4891E+02	28	5.	0.37
92	7.3040E+01	2.6880E+00	4.1466E+02	40	5.	1.04
93	7.0810E+01	2.5400E+00	3.9183E+02	28	5.	-1.64
94	8.0000E+01	1.6238E+00	2.8135E+02	90	1.	-1.99
95	8.4990E+01	1.5820E+00	2.4405E+02	40	5.	0.03
96	8.6540E+01	1.5400E+00	2.3757E+02	28	5.	2.15
97	1.0000E+02	1.0251E+00	1.5783E+02	90	1.	-1.29
98	1.0000E+02	1.0221E+00	1.5921E+02	10	1.	-0.43
99	1.0000E+02	1.0459E+00	1.6134E+02	89	1.	0.90
100	1.0000E+02	1.0420E+00	1.6074E+02	40	5.	0.68
101	1.1487E+02	7.4540E-01	1.1499E+02	40	5.	1.52
102	1.2500E+02	6.8200E-01	1.0521E+02	28	5.	9.52
103	1.3031E+02	5.7620E-01	8.8887E+01	40	5.	5.53
104	1.4560E+02	4.2610E-01	6.5732E+01	48	5.	-0.39
105	1.5000E+02	3.9689E-01	6.1226E+01	89	1.	-1.23
106	1.5000E+02	3.6252E-01	6.2670E+01	10	1.	1.10
107	2.0000E+02	2.3464E-01	3.6196E+01	90	1.	0.11
108	2.0000E+02	2.3200E-01	3.5790E+01	89	1.	-1.02
109	2.0930E+02	2.1510E-01	3.3182E+01	48	5.	-2.02
110	2.7910E+02	1.4560E-01	2.2451E+01	48	5.	-1.17
111	3.0000E+02	1.3597E-01	2.0975E+01	90	1.	-0.03
112	3.0000E+02	1.3502E-01	2.0828E+01	89	1.	-0.73
113	4.0000E+02	1.0350E-01	1.5966E+01	10	1.	-0.32
114	4.1180E+02	9.9800E-02	1.5396E+01	48	5.	-1.61
115	5.0000E+02	8.7930E-02	1.3549E+01	89	1.	-0.20
116	6.0000E+02	7.8216E-02	1.2074E+01	89	1.	-0.01
117	6.6200E+02	7.3506E-02	1.1309E+01	89	1.	0.36
118	7.0000E+02	7.0717E-02	1.0909E+01	89	1.	0.11
119	8.0000E+02	5.5020E-02	1.0130E+01	99	1.	0.15
120	9.0000E+02	4.1429E-02	9.4763E+00	89	1.	0.21
121	1.0000E+03	5.8467E-02	9.0194E+00	99	1.	0.22

121 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR MOLYBDENUM

Z = 42

CONVERSION CONSTANT IS 1.593E+02

K-EDGE	19.533					
L-EDGES	2.866	2.625	2.520	0.230	0.227	
M-EDGES	0.505	0.409	0.392			
	KEV	CM2/GM	BARNs/AT	SOURCE	WEIGHT	DIFF
1	1.0000E+00	5.3273E+03	8.4874E+05	10	1.	-0.66
2	1.0001E+00	5.2794E+03	8.4111E+05	90	1.	-1.53
3	1.5000E+00	1.9965E+03	3.1807E+05	10	1.	1.75
4	2.0000E+00	9.5367E+02	1.5194E+05	10	1.	-0.97
5	2.0140E+00	9.5580E+02	1.5355E+05	82	3.	1.83
6	2.1650E+00	7.8910E+02	1.2572E+05	82	3.	-0.53
7	2.3080E+00	6.6800E+02	1.0642E+05	82	3.	-1.21
8	3.0000E+00	2.0188E+03	3.3438E+05	10	1.	-0.10
9	3.3140E+00	1.6180E+03	2.5778E+05	82	3.	-0.72
10	3.5920E+00	1.2403E+03	1.9760E+05	82	3.	0.24
11	4.5110E+00	7.4980E+02	1.1946E+05	82	3.	1.67
12	4.9550E+00	5.8050E+02	9.2484E+04	82	3.	0.40
13	5.0000E+01	5.6355E+02	8.9784E+04	10	1.	-0.11
14	5.4140E+00	4.5940E+02	7.3191E+04	82	3.	0.53
15	5.8980E+00	3.6470E+02	5.8104E+04	82	3.	0.10
16	6.4090E+00	2.8420E+02	4.5278E+04	12	2.	-2.49
17	7.0580E+00	2.3040E+02	3.6707E+04	39	5.	2.5*
18	7.4840E+00	1.8399E+02	2.9299E+04	12	2.	-4.21
19	8.0000E+00	1.6153E+02	2.5734E+04	10	1.	0.64
20	8.0000E+00	1.6300E+02	2.5969E+04	39	5.	1.55
21	8.0400E+00	1.5520E+02	2.4726E+04	26	5.	-1.97
22	8.0470E+00	1.5200E+02	2.4216E+04	66	3.	-3.77
23	8.0470E+00	1.5670E+02	2.4955E+04	11	10.	-0.79
24	8.0530E+00	1.5820E+02	2.5204E+04	12	2.	0.36
25	8.3980E+00	1.4590E+02	2.2783E+04	39	5.	1.78
26	8.6340E+00	1.2970E+02	2.0520E+04	26	5.	-1.09
27	8.6390E+00	1.2390E+02	2.0500E+04	82	3.	-0.55
28	8.6440E+00	1.5410E+02	2.1365E+04	12	2.	3.31
29	8.9040E+00	1.1930E+02	1.9007E+04	11	10.	-0.33
30	9.0000E+00	1.1930E+02	1.8959E+04	39	5.	2.38
31	9.5000E+00	1.0430E+02	1.6617E+04	39	5.	4.03
32	9.5740E+00	9.7700E+01	1.5565E+04	26	5.	-0.47
33	9.6850E+00	8.8940E+01	1.4170E+04	11	10.	-1.13
34	9.9620E+00	8.8810E+01	1.4149E+04	39	5.	0.83
35	1.0000E+01	8.8984E+01	1.4033E+04	10	1.	1.05
36	1.0000E+01	8.7930E+01	1.4009E+04	39	5.	0.87
37	1.0539E+01	7.4800E+01	1.1917E+04	25	5.	-0.83
38	1.0984E+01	6.7280E+01	1.0719E+04	11	10.	0.27
39	1.1220E+01	6.3250E+01	1.0077E+04	11	10.	0.13
40	1.1220E+01	5.3810E+01	1.0166E+04	82	3.	1.02
41	1.1910E+01	5.3700E+01	8.5554E+03	26	5.	0.40
42	1.1923E+01	5.6190E+01	8.9521E+03	12	2.	5.33
43	1.2490E+01	4.6960E+01	7.4816E+03	11	10.	0.22
44	1.5290E+01	3.9000E+01	6.2134E+03	26	5.	-1.12
45	1.3390E+01	3.8720E+01	6.1680E+03	11	10.	0.22
46	1.4169E+01	5.3520E+01	5.0407E+03	82	3.	1.45
47	1.4960E+01	2.8730E+01	4.5772E+03	11	10.	0.99
48	1.5000E+01	2.8600E+01	4.5565E+03	39	5.	1.27
49	1.5000E+01	2.8376E+01	4.5208E+03	10	1.	0.48
50	1.5750E+01	2.3800E+01	3.7918E+03	26	5.	-3.22
51	1.5770E+01	2.4680E+01	3.9320E+03	11	10.	0.72
52	1.6570E+01	2.0500E+01	3.2660E+03	26	5.	-3.79
53	1.7460E+01	1.8100E+01	2.8937E+03	26	5.	-1.57
54	1.7480E+01	1.8410E+01	2.5331E+03	11	10.	0.44
55	1.7670E+01	1.8040E+01	2.8741E+03	11	10.	1.46
56	1.8640E+01	1.5530E+01	2.4376E+03	26	5.	-0.05
57	1.9610E+01	1.3410E+01	2.1365E+03	11	10.	0.92
58	1.9620E+01	1.3300E+01	2.1108E+03	26	5.	0.23
59	2.0000E+01	8.2186E+01	1.3142E+04	10	1.	1.77
60	2.0210E+01	7.9500E+01	1.2666E+04	11	10.	0.78
61	2.1120E+01	7.1800E+01	1.1439E+04	26	5.	2.04
62	2.2100E+01	6.4000E+01	1.0196E+04	26	5.	2.31
63	2.2150E+01	6.2460E+01	9.9510E+03	11	10.	0.55
64	2.2720E+01	5.8560E+01	9.3297E+03	11	10.	0.58
65	2.4540E+01	4.9400E+01	7.8703E+03	68	1.	3.15
66	2.4940E+01	4.6000E+01	7.3287E+03	11	10.	0.58
67	2.4942E+01	4.6010E+01	7.3305E+03	39	5.	0.63
68	2.5000E+01	4.6010E+01	7.3305E+03	39	5.	1.23
69	2.5000E+01	4.6056E+01	7.3376E+03	10	1.	1.33

70	2.5000E+01	4.4350E+01	7.0568E+03	48	3.	-2.42
71	2.5200E+01	4.4500E+01	7.0897E+03	26	5.	-0.05
72	2.5270E+01	4.4580E+01	7.1024E+03	11	10.	0.85
73	2.7700E+01	3.5400E+01	5.6399E+03	68	1.	1.54
74	2.8480E+01	3.2320E+01	5.1492E+03	11	10.	-0.40
75	2.9190E+01	3.0180E+01	4.8082E+03	11	10.	-0.89
76	3.0000E+01	2.8121E+01	4.4802E+03	10	1.	-0.90
77	3.0000E+01	2.6430E+01	4.5574E+03	39	5.	0.37
78	3.0040E+01	2.3300E+01	4.3494E+03	48	3.	-3.44
79	3.0490E+01	2.0990E+01	4.3000E+03	11	10.	-0.64
80	3.2000E+01	2.3000E+01	3.6643E+03	68	1.	-3.55
81	3.2640E+01	2.2200E+01	3.5356E+03	78	3.	-1.81
82	3.3430E+01	2.0590E+01	3.2804E+03	30	2.	-2.89
83	3.4700E+01	1.9150E+01	3.0570E+03	30	2.	-0.16
84	3.5900E+01	1.7660E+01	2.8136E+03	30	2.	0.87
85	3.7320E+01	1.5780E+01	2.5140E+03	30	2.	0.01
86	3.8700E+01	1.4000E+01	2.2305E+03	68	1.	-2.22
87	3.9520E+01	1.3900E+01	2.2145E+03	28	5.	2.68
88	4.0000E+01	1.2880E+01	2.0520E+03	10	1.	-1.74
89	4.1000E+01	1.3040E+01	2.0775E+03	39	5.	-0.52
90	4.0040E+01	1.2910E+01	2.0568E+03	48	3.	-1.24
91	4.0070E+01	1.3130E+01	2.0919E+03	30	2.	0.65
92	4.0120E+01	1.3100E+01	2.0871E+03	28	5.	0.77
93	4.11530E+01	1.1680E+01	1.8608E+03	78	3.	-1.25
94	4.1530E+01	1.2200E+01	1.9437E+03	28	5.	3.15
95	4.2980E+01	1.0800E+01	1.7206E+03	28	5.	0.29
96	4.5400E+01	9.4500E+00	1.5056E+03	28	5.	1.89
97	5.0000E+01	7.4400E+00	1.1855E+03	28	5.	4.24
98	5.0080E+01	7.0340E+00	1.1206E+03	48	3.	-1.01
99	5.7520E+01	4.9500E+00	7.8855E+02	28	5.	1.74
100	6.0000E+01	4.2592E+00	6.7857E+02	90	1.	-1.83
101	6.0030E+01	4.3200E+00	6.8826E+02	40	5.	-0.29
102	6.0750E+01	4.2780E+00	6.8157E+02	30	2.	2.03
103	6.7060E+01	3.1130E+00	5.0879E+02	55	2.	-0.25
104	6.7870E+01	3.0700E+00	4.8911E+02	28	5.	-0.91
105	6.8170E+01	3.1450E+00	5.0106E+02	78	3.	2.73
106	6.8520E+01	2.9200E+00	4.6521E+02	15	1.	-3.29
107	7.0130E+01	2.8040E+00	4.4673E+02	40	5.	-1.45
108	7.0810E+01	2.8100E+00	4.4769E+02	28	5.	1.72
109	7.6540E+01	2.2250E+00	3.5448E+02	15	1.	-0.77
110	7.7300E+01	2.1680E+00	3.3584E+02	55	2.	-3.48
111	7.9500E+01	2.0200E+00	3.2102E+02	78	3.	-0.36
112	8.0000E+01	1.9309E+00	3.0765E+02	90	1.	-3.16
113	8.0000E+01	1.9566E+00	3.1173E+02	90	1.	-1.87
114	8.4990E+01	1.6660E+00	2.6542E+02	48	5.	-1.91
115	8.6540E+01	1.6400E+00	2.6128E+02	28	5.	1.26
116	8.8400E+01	1.5130E+00	2.4105E+02	55	2.	-1.23
117	8.8970E+01	1.5350E+00	2.4455E+02	78	3.	1.90
118	9.5200E+01	1.2430E+00	1.9803E+02	55	2.	-1.69
119	9.7130E+01	1.1520E+00	1.8354E+02	15	1.	-4.09
120	1.0000E+02	1.0949E+00	1.7380E+02	10	1.	-2.20
121	1.0000E+02	1.1025E+00	1.7562E+02	90	1.	-1.18
122	1.0000E+02	1.0364E+00	1.7372E+02	88	1.	-2.25
123	1.0006E+02	0.9970E+00	1.7477E+02	40	5.	-1.51
124	1.0310E+02	1.0360E+00	1.6505E+02	55	2.	0.33
125	1.0500E+02	1.0100E+00	1.6091E+02	28	5.	2.40
126	1.1250E+02	8.2100E-01	1.3060E+02	55	2.	-1.26
127	1.1487E+02	7.8400E-01	1.2491E+02	40	5.	-0.80
128	1.2300E+02	6.8400E-01	1.0897E+02	28	5.	1.92
129	1.2370E+02	6.5000E-01	1.0356E+02	55	2.	-1.05
130	1.3031E+02	6.2990E-01	1.0035E+02	40	5.	7.33
131	1.3750E+02	5.3500E-01	8.5235E+01	55	2.	2.92
132	1.45560E+02	4.5330E-01	7.2219E+01	48	3.	-1.16
133	1.5000E+02	4.1837E-01	5.6654E+01	90	1.	-2.80
134	1.5000E+02	4.2556E-01	6.7799E+01	10	1.	-1.13
135	1.5000E+02	4.2766E-01	6.8134E+01	90	1.	-3.64
136	1.5470E+02	4.1200E-01	6.5639E+01	55	2.	2.13
137	1.5800E+02	3.8900E-01	6.1175E+01	28	5.	0.73
138	1.7670E+02	3.1900E-01	5.0823E+01	55	2.	3.02
139	2.0000E+02	2.4593E-01	3.9181E+01	90	1.	-0.76
140	2.0620E+02	2.2700E-01	3.6165E+01	55	2.	-5.57
141	2.0800E+02	2.3100E-01	3.6803E+01	28	5.	-0.46
142	2.0800E+02	2.3000E-01	3.6803E+01	28	5.	-0.46
143	2.0830E+02	2.2270E-01	3.5480E+01	48	3.	-3.80
144	2.7910E+02	1.4850E-01	2.3659E+01	48	3.	-2.52
145	3.0000E+02	1.3851E-01	2.2068E+01	90	1.	-1.04
146	3.0000E+02	1.3847E-01	2.2061E+01	90	1.	-1.07
147	3.0000E+02	1.3681E-01	2.1797E+01	88	1.	-2.26
148	4.0000E+02	1.0420E-01	1.6601E+01	10	1.	-1.24

149	4.0000E+02	1.0419E-01	1.6600E+01	90	1.	-1.24
150	4.0000E+02	1.0431E-01	1.6619E+01	90	1.	-1.13
151	4.1180E+02	1.0080E-01	1.6059E+01	48	3.	-2.09
152	4.1200E+02	1.0900E-01	1.7366E+01	28	5.	5.92
153	5.0000E+02	8.7818E-02	1.3991E+01	90	1.	-1.03
154	5.1000E+02	8.8019E-02	1.4023E+01	88	1.	-0.81
155	6.0000E+02	7.8183E-02	1.2456E+01	88	1.	-0.39
156	6.6200E+02	7.3575E-02	1.1722E+01	88	1.	-0.25
157	6.6300E+02	7.3355E-02	1.1687E+01	31	2.	-0.55
158	7.0000E+02	7.1201E-02	1.1344E+01	88	1.	-0.13
159	8.0000E+02	6.5950E-02	1.0507E+01	88	1.	-0.01
160	9.0000E+02	6.1561E-02	9.8270E+00	88	1.	0.10
161	1.0000E+03	5.8179E-02	9.2690E+00	88	1.	0.15

161 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR RHODIUM

Z = 45

CONVERSION CONSTANT IS 1.709E+02

	K-EDGE	23.120	3.146	3.003	0.311	0.307	
	L-EDGES	3.412	0.627	0.521	0.496		
	M-EDGES						
	KEV	CM2/GM	BARNs/AT	SOURCE	WEIGHT	DIFF	
1	1.0000E+00	6.9875E+03	1.1940E+06	10	1.	-3.86	
2	1.0001E+00	7.0302E+03	1.2015E+06	90	1.	-3.25	
3	1.5000E+00	2.5415E+03	4.3428E+05	10	1.	0.70	
4	2.0000E+00	1.2565E+03	2.171E+05	10	1.	5.28	
5	2.0000E+00	1.2275E+03	2.0975E+05	90	1.	2.94	
6	2.9900E+00	4.0000E+02	6.8350E+04	20	2.	-4.96	
7	2.9930E+00	3.9000E+02	6.6641E+04	20	2.	-7.10	
8	2.9950E+00	4.0000E+02	6.8350E+04	20	2.	-4.55	
9	3.0000E+00	4.4440E+02	7.6107E+04	10	1.	6.74	
10	3.0000E+00	4.4930E+02	7.6076E+04	90	1.	7.02	
11	3.0010E+00	4.5031E+02	7.6946E+04	90	1.	7.92	
12	3.0012E+00	4.4843E+02	7.5626E+04	90	1.	7.56	
13	3.0120E+01	1.3500E+03	2.3068E+05	20	2.	-11.48	
14	3.0120E+01	1.2400E+03	2.1189E+05	20	2.	-18.56	
15	3.0150E+00	1.2400E+03	2.1189E+05	20	2.	-18.36	
16	3.1340E+03	1.1700E+03	1.9992E+05	20	2.	-15.15	
17	3.1380E+00	1.1900E+03	2.0534E+05	20	2.	-13.43	
18	3.1400E+00	1.1900E+03	2.0334E+05	20	2.	-13.29	
19	3.1540E+00	1.4800E+03	2.5290E+05	20	2.	-22.56	
20	3.1580E+00	1.5500E+03	2.6486E+05	20	2.	-18.64	
21	3.4000E+00	1.3300E+03	2.2726E+05	20	2.	-15.96	
22	3.4040E+00	1.3400E+03	2.2897E+05	20	2.	-15.09	
23	4.0000E+00	1.1878E+03	2.0297E+05	90	1.	-2.21	
24	4.5090E+01	8.9908E+02	1.5363E+05	10	1.	0.82	
25	4.9322E+02	7.1456E+02	1.2211E+05	10	1.	0.97	
26	5.0000E+00	6.8350E+02	1.1661E+05	10	1.	0.06	
27	5.0000E+00	6.6212E+02	1.1666E+05	90	1.	-0.07	
28	5.4120E+00	5.6-6.8E+02	9.5978E+04	10	1.	1.18	
29	5.8950E+00	4.-6.07E+02	7.6222E+04	10	1.	0.53	
30	5.9470E+00	4.3530E+02	7.4382E+04	10	1.	0.38	
31	6.0000E+00	4.2374E+02	7.2477E+04	90	1.	0.01	
32	6.4000E+03	3.5833E+02	6.1230E+04	10	1.	0.48	
33	6.4930E+00	3.4446E+02	5.8953E+04	10	1.	0.26	
34	6.9250E+00	2.9206E+02	4.9905E+04	10	1.	0.06	
35	7.0580E+00	2.7651E+02	4.7249E+04	10	1.	0.56	
36	7.4720E+00	2.3572E+02	4.0278E+04	10	1.	-0.12	
37	7.6490E+00	2.2972E+02	3.7716E+04	10	1.	-0.46	
38	8.0030E+00	1.9804E+02	3.3841E+04	10	1.	0.63	
39	8.0000E+00	1.9699E+02	3.3661E+04	90	1.	0.10	
40	8.0410E+00	1.9365E+02	3.3091E+04	10	1.	-1.22	
41	8.2650E+00	1.7862E+02	3.0522E+04	10	1.	-0.84	
42	8.5310E+00	1.5959E+02	2.7270E+04	10	1.	-0.35	
43	8.9050E+00	1.4736E+02	2.5180E+04	10	1.	0.15	
44	9.5720E+00	1.2064E+02	2.0514E+04	10	1.	-0.29	
45	1.0000E+01	1.0746E+02	1.8362E+04	10	1.	-0.04	
46	1.0000E+01	1.0842E+02	1.9527E+04	90	1.	0.86	
47	1.0000E+01	1.0440E+02	1.7840E+04	89	1.	-2.88	
48	1.5000E+01	3.5114E+01	6.0002E+03	10	1.	-0.19	
49	1.5000E+01	3.5725E+01	6.1042E+03	90	1.	1.54	
50	1.7444E+01	2.3175E+01	3.9600E+03	10	1.	0.57	
51	1.9608E+01	1.6754E+01	2.8595E+03	10	1.	0.51	
52	2.0000E+01	1.5284E+01	2.6116E+03	10	1.	-3.04	
53	2.0000E+01	1.6013E+01	2.7363E+03	90	1.	1.59	
54	2.0000E+01	1.5803E+01	2.7140E+03	89	1.	0.76	
55	2.0169E+01	1.5369E+01	2.6761E+03	10	1.	-0.17	
56	2.1125E+01	1.3447E+01	2.2978E+03	10	1.	-0.51	
57	2.2105E+01	1.1977E+01	2.0465E+03	10	1.	0.59	
58	2.2724E+01	1.1042E+01	1.8868E+03	10	1.	0.17	
59	2.3240E+01	6.3919E+01	1.0922E+04	90	1.	2.93	
60	2.3819E+01	6.6137E+01	1.0276E+04	10	1.	3.00	
61	2.4942E+01	5.4330E+01	9.2836E+03	10	1.	4.43	
62	2.5000E+01	5.4645E+01	9.3577E+03	10	1.	5.65	
63	2.5700E+01	4.8220E+01	8.2396E+03	15	1.	-3.95	
64	2.8620E+01	3.5900E+01	5.7927E+03	15	1.	-8.09	
65	3.0000E+01	3.3564E+01	5.7352E+03	10	1.	2.35	
66	3.0000E+01	3.3296E+01	5.6894E+03	90	1.	1.53	
67	3.0990E+01	3.0990E+01	5.2954E+03	89	1.	-5.50	
68	3.0970E+01	2.9520E+01	5.0442E+03	15	1.	-2.13	
69	4.0000E+01	1.5366E+01	2.6257E+03	10	1.	-0.45	

70	4.0000E+01	1.5460E+01	2.6418E+03	90	1.	0.17
71	4.0000E+01	1.5326E+01	2.6108E+03	89	1.	-0.71
72	5.0000E+01	8.5041E+00	1.4531E+03	90	1.	0.61
73	5.0000E+01	8.3940E+00	1.4345E+03	89	1.	-0.69
74	6.0000E+01	5.1036E+00	8.7208E+02	89	1.	-0.63
75	6.0000E+01	5.1810E+00	8.8530E+02	90	1.	0.88
76	8.0000E+01	2.3641E+00	4.0396E+02	89	1.	0.95
77	1.0000E+02	1.3015E+00	2.2239E+02	10	1.	0.63
78	1.0000E+02	1.1566E+00	2.2481E+02	89	1.	1.72
79	1.5000E+02	4.9559E-01	8.4684E+01	10	1.	2.85
80	1.5000E+02	4.7854E-01	8.1770E+01	89	1.	-0.68
81	2.0000E+02	2.6811E-01	4.5814E+01	99	1.	-0.44
82	3.0000E+02	1.4609E-01	2.4963E+01	89	1.	-0.36
83	4.0000E+02	1.0865E-01	1.8562E+01	10	1.	-0.05
84	5.0000E+02	9.0458E-02	1.5457E+01	89	1.	-0.19
85	6.0000E+02	7.9710E-02	1.3620E+01	89	1.	-0.07
86	6.6200E+02	7.4883E-02	1.2796E+01	89	1.	-0.06
87	7.0000E+02	7.2400E-02	1.2371E+01	89	1.	-0.02
88	8.0000E+02	6.6900E-02	1.1445E+01	89	1.	0.01
89	9.0000E+02	6.2387E-02	1.0660E+01	89	1.	0.04
90	1.0000E+03	5.8645E-02	1.0021E+01	89	1.	0.05

90 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR PALLADIUM

Z = 46

CONVERSION CONSTANT IS 1.767E+02

K-EDGE	24.550					
L-EDGES	3.445	3.330	3.173			
M-EDGES	0.070	0.059	0.031	0.340	0.334	
	KEV	CM2/GH	BARNs/AT	SOURCE	WEIGHT	DIFF
1	1.0000E+00	7.5590E+03	1.3355E+06	10	1.	-3.48
2	1.0001E+00	7.8100E+03	1.3814E+06	90	1.	-0.14
3	1.5000E+00	2.7118E+03	4.7909E+05	10	1.	-1.92
4	2.0000E+00	1.3513E+03	2.3873E+05	10	1.	2.17
5	2.0000E+00	1.3314E+03	2.3522E+05	90	1.	0.67
6	2.4230E+00	8.1000E+02	1.4310E+05	83	3.	0.35
7	2.8390E+00	5.4400E+02	9.6109E+04	83	3.	0.64
8	2.9840E+00	4.7300E+02	8.5565E+04	83	3.	-0.67
9	3.0000E+00	4.8023E+02	8.4841E+04	10	1.	2.23
10	3.0000E+00	4.8095E+02	8.4969E+04	90	1.	2.38
11	3.1340E+00	4.1300E+02	7.2965E+04	83	3.	-1.74
12	3.1732E+00	3.3500E+03	2.3850E+05	16	3.	-1.63
13	3.1750E+00	1.3300E+03	2.3497E+05	16	3.	-2.19
14	3.2190E+00	1.2350E+03	2.1819E+05	16	3.	-6.77
15	3.3512E+00	1.7000E+03	3.0034E+05	16	3.	-0.83
16	3.3530E+00	1.6200E+03	2.8621E+05	16	3.	-3.95
17	3.5590E+00	1.4800E+03	2.6147E+05	16	3.	4.61
18	3.6165E+00	1.6200E+03	2.8621E+05	16	3.	-0.03
19	3.6340E+00	1.6000E+03	2.8267E+05	16	3.	-0.07
20	4.0000E+00	1.2392E+03	2.1893E+05	90	1.	-1.57
21	5.0000E+00	7.1792E+02	1.2688E+05	10	1.	0.62
22	5.0000E+00	7.1944E+02	1.2710E+05	90	1.	0.83
23	5.4150E+00	5.8100E+02	1.0265E+05	83	3.	0.14
24	5.8990E+00	4.6900E+02	8.2858E+04	83	3.	0.91
25	6.0000E+00	4.4668E+02	7.8915E+04	90	1.	0.43
26	6.4040E+00	3.7900E+02	6.6958E+04	83	3.	1.26
27	6.9300E+00	3.2600E+02	5.4444E+04	83	3.	1.41
28	7.4780E+00	2.9200E+02	4.4521E+04	83	3.	1.46
29	8.0000E+00	2.3875E+02	3.6879E+04	10	1.	0.43
30	8.0000E+00	2.0795E+02	3.6758E+04	90	1.	0.05
31	8.0470E+00	1.9990E+02	3.5316E+04	11	10.	-2.29
32	8.0480E+00	2.0800E+02	3.6747E+04	83	3.	1.71
33	8.6390E+00	1.7280E+02	3.0529E+04	83	3.	2.32
34	8.9040E+00	1.5600E+02	2.7561E+04	11	10.	0.22
35	9.8860E+00	1.1980E+02	2.1165E+04	83	3.	2.02
36	1.0000E+01	1.1314E+02	1.9988E+04	10	1.	-0.64
37	1.0000E+01	1.1467E+02	2.0259E+04	90	1.	0.71
38	1.0980E+01	8.7790E+01	1.5510E+04	11	10.	-0.13
39	1.1220E+01	8.2140E+01	1.4512E+04	11	10.	-0.81
40	1.2490E+01	6.1410E+01	1.0849E+04	11	10.	-0.34
41	1.3390E+01	5.0920E+01	8.9960E+03	11	10.	2.04
42	1.4960E+01	3.7950E+01	6.7046E+03	11	10.	0.95
43	1.5000E+01	3.7159E+01	6.5649E+03	10	1.	-0.42
44	1.5770E+01	3.2810E+01	5.7966E+03	11	10.	1.25
45	1.7480E+01	2.4320E+01	4.2966E+03	11	10.	0.18
46	1.7670E+01	2.3810E+01	4.2065E+03	11	10.	1.09
47	1.9610E+01	1.7720E+01	3.1306E+03	11	10.	0.57
48	2.0000E+01	1.6391E+01	2.8959E+03	10	1.	-1.75
49	2.0210E+01	1.6310E+01	2.8815E+03	11	10.	0.70
50	2.0800E+01	1.4500E+01	2.5617E+03	68	1.	-2.88
51	2.2160E+01	1.2446E+01	2.1978E+03	11	10.	-0.38
52	2.2300E+01	1.2500E+01	2.2084E+03	68	1.	1.89
53	2.2720E+01	1.1540E+01	2.0388E+03	11	10.	-0.87
54	2.4940E+01	5.7740E+01	1.0201E+04	11	10.	1.22
55	2.5000E+01	5.7059E+01	1.0077E+04	10	1.	0.63
56	2.5270E+01	5.6110E+01	9.9130E+03	11	10.	1.82
57	2.7700E+01	4.4300E+01	7.8265E+03	68	1.	2.28
58	2.8480E+01	3.9980E+01	7.0635E+03	11	10.	-0.73
59	2.9190E+01	3.7550E+01	6.5986E+03	11	10.	-1.08
60	3.0000E+01	3.2199E+01	5.6886E+03	89	1.	-8.38
61	3.0000E+01	3.5104E+01	6.2019E+03	10	1.	-0.12
62	3.0490E+01	3.3420E+01	5.9043E+03	11	10.	-0.65
63	3.2000E+01	2.9600E+01	5.2294E+03	68	1.	0.27
64	3.8700E+01	1.7700E+01	5.1271E+03	68	1.	0.06
65	4.0000E+01	1.6068E+01	2.8387E+03	10	1.	-0.74
66	4.0000E+01	1.5994E+01	2.8257E+03	89	1.	-1.19
67	5.0000E+01	6.7772E+00	1.5507E+03	89	1.	0.02
68	6.0000E+01	5.5410E+00	9.4559E+02	89	1.	0.63
69	9.0000E+01	2.4779E+00	4.3776E+02	89	1.	2.62

70	1.0000E+02	1.3631E+00	2.4082E+02	10	1.	2.15
71	1.0000E+02	1.5772E+00	2.4531E+02	89	1.	3.21
72	1.5000E+02	5.1573E-01	9.1114E+01	10	1.	3.68
73	1.5000E+02	4.9668E-01	8.7749E+01	89	1.	-0.15
74	2.0000E+02	2.7576E-01	4.8719E+01	89	1.	-0.44
75	3.0000E+02	1.4811E-01	2.6166E+01	89	1.	-9.68
76	4.0000E+02	1.0917E-01	1.9287E+01	10	1.	-0.29
77	5.0000E+02	9.0411E-02	1.5973E+01	89	1.	-0.57
78	6.0000E+02	7.9451E-02	1.4037E+01	89	1.	-0.17
79	6.6200E+02	7.4443E-02	1.3152E+01	89	1.	-0.12
80	7.0000E+02	7.1875E-02	1.2698E+01	89	1.	-0.05
81	8.0000E+02	6.6285E-02	1.1711E+01	89	1.	0.02
82	9.0000E+02	6.1817E-02	1.0921E+01	89	1.	0.09
83	1.0000E+03	5.8183E-02	1.0279E+01	89	1.	0.12

83 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR SILVER

Z = 47

CONVERSION CONSTANT IS 1.791E+02

	K-EDGE	26.514	L-EDGES	5.806	5.524	3.351	0.371	0.367						
									KEV	CM2/GM	BARNs/AT	SOURCE	WEIGHT	DIFF
1		8.8560E-01		9.6800E+03		1.7340E+06			33		2.	-9.84		
2		9.5740E-01		8.2600E+03		1.4796E+06			33		2.	-6.66		
3		1.0000E+00		8.3310E+03		1.4923E+06			10		1.	4.87		
4		1.0330E+00		6.9300E+03		1.2414E+06			33		2.	-5.46		
5		1.1270E+00		5.8100E+03		1.0437E+06			33		2.	-1.65		
6		1.2340E+00		4.6300E+03		8.2936E+05			33		2.	-1.88		
7		1.2590E+00		4.7110E+03		8.4387E+05			4		1.	4.93		
8		1.3850E+00		3.6000E+03		6.4486E+05			33		2.	1.54		
9		1.4870E+00		3.0970E+03		5.5476E+05			82		3.	4.15		
10		1.4870E+00		3.0700E+03		5.4992E+05			38		1.	3.25		
11		1.4950E+00		3.1450E+03		5.6356E+05			4		1.	6.83		
12		1.5000E+00		2.9450E+03		5.2753E+05			10		1.	1.20		
13		1.5400E+00		2.8100E+03		5.0355E+05			33		2.	3.06		
14		1.7590E+00		2.0800E+03		3.7259E+05			33		2.	3.64		
15		1.7400E+00		2.1061E+03		3.7726E+05			82		3.	4.48		
16		1.7400E+01		2.1450E+03		3.8423E+05			38		1.	6.41		
17		1.7470E+00		2.1320E+03		3.8190E+05			4		1.	6.82		
18		2.0000E+00		1.4759E+03		2.6438E+05			10		1.	3.29		
19		2.0140E+00		1.4700E+03		2.6332E+05			82		3.	4.66		
20		2.0230E+00		1.4993E+03		2.6851E+05			4		1.	7.51		
21		2.0420E+00		1.3800E+03		2.4720E+05			38		1.	1.66		
22		2.1650E+00		1.2054E+03		2.1592E+05			82		3.	2.60		
23		2.2570E+00		1.0720E+03		1.9202E+05			82		3.	1.11		
24		2.2930E+00		1.0120E+03		1.8128E+05			38		1.	-0.75		
25		2.3080E+00		1.0195E+03		1.8262E+05			82		3.	1.61		
26		2.3120E+00		9.4190E+02		1.6872E+05			12		2.	-5.73		
27		2.3170E+00		1.0150E+03		1.8146E+05			4		1.	1.93		
28		2.3950E+00		9.2000E+02		1.5211E+05			38		1.	-1.19		
29		2.6220E+00		7.1400E+02		1.3685E+05			38		1.	4.26		
30		2.6220E+00		7.3800E+02		1.3220E+05			82		3.	0.71		
31		2.6270E+00		5.9750E+02		1.2494E+05			12		2.	-4.37		
32		2.6320E+00		7.2800E+02		1.3240E+05			4		1.	0.28		
33		2.8210E+00		5.2900E+02		1.1267E+05			38		1.	2.76		
34		2.8390E+00		6.0600E+02		1.0855E+05			83		3.	0.57		
35		2.9840E+00		5.2500E+02		9.4442E+04			83		3.	-1.53		
36		2.9840E+00		5.1700E+02		9.2619E+04			38		1.	-3.03		
37		3.0000E+00		5.2668E+02		9.4343E+04			10		1.	0.09		
38		3.1340E+00		4.6000E+02		8.2399E-04			83		3.	-2.60		
39		3.1510E+00		4.5900E+02		8.2220E+04			38		1.	-1.59		
40		3.2870E+00		3.9800E+02		7.1293E+04			83		3.	-5.35		
41		3.3140E+00		3.8230E+02		6.9811E+04			82		3.	-7.24		
42		3.5260E+00		4.1400E+02		7.4159E+04			4		1.	1.35		
43		3.3442E+00		4.1500E+02		7.4338E+04			16		3.	2.96		
44		3.3470E+00		4.0000E+02		7.1651E+04			16		3.	-0.56		
45		3.3770E+00		1.2150E+03		2.1764E+25			16		3.	-3.27		
46		3.4000E+00		1.2250E+03		2.1943E+05			16		3.	-0.81		
47		3.5170E+00		1.0600E+03		1.8988E+05			16		3.	-6.61		
48		5.5710E+00		1.4300E+03		2.5615E+05			16		3.	-7.10		
49		3.6920E+00		1.4046E+03		2.5160E+05			82		3.	-0.72		
50		3.6970E+00		1.2700E+03		2.2749E+05			12		2.	-9.93		
51		3.8030E+00		1.2500E+03		2.2391E+05			15		3.	-4.93		
52		3.8440E+00		1.4030E+03		2.5152E+05			16		3.	-5.33		
53		4.0120E+00		1.3490E+03		2.4164E+05			82		3.	1.41		
54		4.0900E+00		1.5200E+03		2.3645E+05			38		1.	4.23		
55		4.1050E+00		1.2610E+03		2.2508E+05			4		1.	0.51		
56		4.5100E+00		1.0070E+03		1.8038E+05			38		1.	2.66		
57		4.5110E+00		9.8660E+02		1.7673E+05			82		3.	0.05		
58		4.5270E+00		9.9500E+02		1.7823E+05			4		1.	1.82		
59		4.9520E+00		7.7900E+02		1.3954E+05			38		1.	0.23		
60		4.9690E+00		7.7400E+02		1.3064E+05			4		1.	0.46		
61		5.0000E+00		7.6684E+02		1.3736E+05			10		1.	1.12		
62		5.4140E+00		6.3450E+02		1.1366E+05			82		3.	2.86		
63		5.4140E+00		6.1200E+02		1.0963E+05			38		1.	-0.79		
64		5.4540E+00		6.2200E+02		1.1142E+05			25		2.	1.62		
65		5.4740E+00		6.2200E+02		1.1142E+05			4		1.	1.80		
66		5.8980E+00		4.9090E+02		8.7934E+04			82		3.	-0.63		
67		5.8990E+00		4.9800E+02		8.9206E+04			83		3.	0.85		
68		5.9040E+00		4.5760E+02		8.1969E+04			12		2.	-7.13		
69		5.9180E+00		4.9300E+02		8.8310E+04			4		1.	0.67		

70	6.4030E+00	3.9400E+02	7.0576E+04	38	1.	-0.99
71	6.4040E+00	3.9370E+02	7.0523E+04	82	3.	-1.02
72	6.4040E+00	4.0100E+02	7.2090E+04	83	3.	1.05
73	6.4090E+00	4.0160E+02	7.1759E+04	12	2.	0.92
74	6.4940E+00	3.9730E+02	7.1114E+04	25	2.	3.56
75	6.9300E+00	3.2700E+02	5.8575E+04	83	3.	1.27
76	7.4770E+00	2.6400E+02	4.7295E+04	38	1.	-0.10
77	7.4780E+00	2.6600E+02	4.7648E+04	83	3.	0.69
78	7.4780E+00	2.6180E+02	4.6896E+04	82	3.	-0.90
79	7.4840E+00	2.5880E+02	4.6358E+04	12	2.	-1.02
80	8.0000E+00	2.2380E+02	4.0089E+04	19	1.	1.21
81	8.0000E+00	2.2500E+02	5.9945E+04	39	5.	0.84
82	8.0470E+00	2.1700E+02	3.8871E+04	38	1.	-0.31
83	8.0480E+00	2.2000E+02	5.9408E+04	83	3.	1.10
84	8.0470E+00	2.1580E+02	3.8656E+04	11	10.	-0.86
85	8.0530E+00	2.1960E+02	3.9355E+04	12	2.	1.99
86	8.6390E+00	1.8090E+02	3.2404E+04	82	3.	0.58
87	8.6390E+00	1.9300E+02	3.4572E+04	68	1.	7.31
88	8.6390E+00	1.8250E+02	3.2691E+04	83	3.	1.47
89	8.6440E+00	1.7290E+02	3.0971E+04	12	2.	-3.72
90	8.9040E+00	1.6580E+02	2.9693E+04	11	10.	-0.02
91	9.6280E+00	1.4400E+02	2.5794E+04	68	1.	7.10
92	9.7130E+00	1.3600E+02	2.4361E+04	68	1.	3.56
93	9.8850E+00	1.2670E+02	2.2695E+04	11	10.	1.12
94	9.8869E+00	1.2780E+02	2.2893E+04	83	3.	2.03
95	9.9620E+00	1.2660E+02	2.2570E+04	68	1.	2.68
96	9.9620E+00	1.2150E+02	2.1764E+04	39	5.	-0.99
97	1.0000E+01	1.2120E+02	2.1711E+04	10	1.	-0.22
98	1.0570E+01	1.0150E+02	1.8181E+04	25	2.	-2.73
99	1.0980E+01	9.3150E+01	1.6686E+04	11	10.	-0.87
100	1.1000E+01	9.4380E+01	1.6906E+04	87	2.	0.94
101	1.1220E+01	8.8400E+01	1.5855E+04	82	3.	-0.18
102	1.1220E+01	8.8540E+01	1.5860E+04	11	10.	-0.02
103	1.1440E+01	8.9000E+01	1.5942E+04	68	1.	5.99
104	1.1580E+01	8.3300E+01	1.4868E+04	68	1.	2.19
105	1.1920E+01	7.8730E+01	1.4103E+04	12	2.	4.92
106	1.1960E+01	7.4220E+01	1.3295E+04	19	2.	-0.18
107	1.1960E+01	7.2760E+01	1.3033E+04	15	1.	-2.14
108	1.1960E+01	7.3200E+01	1.3112E+04	25	2.	-1.55
109	1.2490E+01	6.5880E+01	1.1801E+04	11	10.	-0.25
110	1.3380E+01	5.7000E+01	1.0210E+04	68	1.	4.12
111	1.3390E+01	5.4470E+01	9.7571E+03	11	10.	-0.30
112	1.3430E+01	5.4000E+01	9.6729E+03	19	2.	-0.35
113	1.4180E+01	4.4710E+01	8.0388E+03	15	1.	-4.35
114	1.4180E+01	4.6720E+01	8.3688E+03	19	2.	-0.66
115	1.4250E+01	4.6990E+01	8.4172E+03	43	1.	1.48
116	1.4570E+01	4.5299E+01	8.1127E+03	43	1.	4.28
117	1.4900E+01	4.1693E+01	7.4678E+03	43	1.	2.00
118	1.4900E+01	4.0000E+01	7.1651E+03	11	10.	-1.07
119	1.4980E+01	3.8790E+01	5.9484E+03	19	2.	-3.71
120	1.5000E+01	3.9220E+01	7.0254E+03	39	5.	-2.29
121	1.5000E+01	4.2700E+01	7.1665E+03	10	1.	-0.33
122	1.5250E+01	3.7260E+01	7.0326E+03	43	1.	2.45
123	1.5600E+01	3.3980E+01	6.6241E+03	43	1.	2.78
124	1.5770E+01	3.4640E+01	6.2050E+03	11	10.	-0.78
125	1.5810E+01	3.4750E+01	6.2247E+03	19	2.	0.24
126	1.5810E+01	3.3590E+01	6.0169E+03	15	1.	-3.10
127	1.6000E+01	3.5080E+01	6.2838E+03	43	1.	4.62
128	1.6300E+01	3.2360E+01	5.7966E+03	43	1.	1.62
129	1.6650E+01	3.0100E+01	5.3917E+03	19	2.	0.27
130	1.7100E+01	2.8760E+01	5.1517E+03	43	1.	3.17
131	1.7480E+01	2.8403E+01	5.0872E+03	68	1.	8.28
132	1.7480E+01	2.6260E+01	4.7039E+03	11	10.	0.12
133	1.7487E+01	2.6240E+01	4.7033E+03	82	3.	0.15
134	1.7520E+01	2.6560E+01	4.7576E+03	19	2.	1.90
135	1.7670E+01	2.5560E+01	4.5785E+03	11	10.	0.41
136	1.7900E+01	2.4830E+01	4.4477E+03	43	1.	1.09
137	1.8800E+01	2.1650E+01	3.8745E+03	43	1.	0.84
138	1.9310E+01	2.0120E+01	3.6040E+03	19	2.	0.97
139	1.9610E+01	2.0600E+01	3.6900E+03	68	1.	7.86
140	1.9610E+01	1.9140E+01	3.4285E+03	11	10.	0.21
141	2.0000E+01	1.7810E+01	3.1903E+03	59	5.	-1.57
142	2.0000E+01	1.8240E+01	3.2673E+03	87	2.	0.81
143	2.0000E+01	1.7851E+01	3.1976E+03	10	1.	-1.34
144	2.0210E+01	1.7650E+01	3.1616E+03	11	10.	0.45
145	2.0250E+01	1.7820E+01	3.1921E+03	19	2.	1.98
146	2.0800E+01	1.7000E+01	3.0452E+03	68	1.	4.89
147	2.1210E+01	1.5920E+01	2.8517E+03	19	2.	3.74
148	2.2160E+01	1.4100E+01	2.5794E+03	68	1.	6.05
149	2.2160E+01	1.3560E+01	2.4290E+03	11	10.	-0.14

150	2.2200E+01	1.3400E+01	2.4003E+03	25	2.	-0.82
151	2.2200E+01	1.3140E+01	2.3537E+03	19	2.	-2.74
152	2.2200E+01	1.3400E+01	2.4003E+03	15	1.	-0.82
153	2.2300E+01	1.4200E+01	2.5436E+03	68	1.	6.43
154	2.2720E+01	1.2650E+01	2.2660E+03	11	10.	-0.13
155	2.3200E+01	1.1600E+01	2.0779E+03	25	2.	-2.94
156	2.3200E+01	1.1600E+01	2.0779E+03	15	1.	-2.94
157	2.3210E+01	1.1960E+01	2.1424E+03	19	2.	0.19
158	2.4000E+01	1.0940E+01	1.9597E+03	48	3.	0.56
159	2.4240E+01	1.0610E+01	1.9005E+03	19	2.	0.25
160	2.4940E+01	1.0000E+01	1.7913E+03	68	1.	2.21
161	2.4942E+01	9.6400E+00	1.7268E+03	39	5.	-1.44
162	2.4942E+01	9.7220E+00	1.7415E+03	87	2.	-0.61
163	2.4940E+01	9.8240E+00	1.7598E+03	11	10.	0.41
164	2.5000E+01	9.6375E+00	1.7263E+03	16	1.	-0.84
165	2.5000E+01	9.8130E+00	1.7587E+03	48	3.	1.02
166	2.5300E+01	9.6250E+00	1.7062E+03	19	2.	1.28
167	2.5300E+01	9.8340E+00	1.6720E+03	15	1.	-0.75
168	2.5330E+01	9.5330E+00	1.6713E+03	25	2.	-0.79
169	2.6010E+01	5.3950E+01	9.6639E+03	48	3.	2.63
170	2.6390E+01	5.1220E+01	9.1749E+03	19	2.	1.10
171	2.7490E+01	4.5110E+01	8.0804E+03	19	2.	-1.20
172	2.8000E+01	4.4680E+01	8.0134E+03	87	2.	2.55
173	2.8480E+01	4.2330E+01	7.5825E+03	11	10.	1.45
174	2.8620E+01	4.0600E+01	7.2726E+03	19	2.	-1.48
175	2.9190E+01	3.9500E+01	7.0755E+03	11	10.	0.78
176	3.0000E+01	3.7568E+01	6.6956E+03	10	1.	2.22
177	3.0040E+01	3.6330E+01	6.5017E+03	48	3.	-0.27
178	3.0490E+01	3.5350E+01	6.5322E+03	11	10.	0.91
179	3.0970E+01	3.2570E+01	5.8342E+03	19	2.	-3.13
180	3.2160E+01	2.9820E+01	5.3416E+03	19	2.	-1.91
181	3.3430E+01	2.6760E+01	4.7935E+03	19	2.	-2.71
182	3.4700E+01	2.4570E+01	4.4012E+03	19	2.	-1.49
183	3.5900E+01	2.2720E+01	4.0698E+03	19	2.	-0.41
184	3.7320E+01	2.0390E+01	3.6524E+03	19	2.	-1.06
185	3.9520E+01	1.7800E+01	3.1885E+03	28	5.	0.53
186	4.0000E+01	1.7098E+01	3.0627E+03	10	1.	-0.54
187	4.0000E+01	1.6700E+01	2.9914E+03	39	5.	-2.85
188	4.0040E+01	1.7090E+01	3.0613E+03	48	3.	-1.31
189	4.0070E+01	1.6830E+01	3.0147E+03	19	2.	-1.63
190	4.0120E+01	1.6900E+01	3.0273E+03	28	5.	-0.89
191	4.1530E+01	1.5530E+01	2.7407E+03	28	5.	-1.52
192	4.2980E+01	1.4200E+01	2.5436E+03	28	5.	0.25
193	4.4000E+01	1.3600E+01	2.4361E+03	87	2.	2.27
194	4.5500E+01	1.2200E+01	2.1854E+03	28	5.	-0.20
195	5.0000E+01	9.6300E+00	1.7250E+03	28	5.	2.03
196	5.0080E+01	9.2310E+00	1.6535E+03	48	3.	-1.77
197	5.7460E+01	6.4610E+00	1.1573E+03	19	2.	-0.11
198	5.7520E+01	6.5100E+00	1.1661E+03	28	5.	0.94
199	5.9070E+01	5.9870E+00	1.0724E+03	19	2.	-0.25
200	6.0030E+01	5.7080E+00	1.0225E+03	40	5.	-0.67
201	6.0750E+01	5.3900E+00	9.6550E+02	19	2.	-3.09
202	6.4640E+01	4.5900E+00	8.2220E+02	19	2.	-2.19
203	6.6510E+01	4.3120E+00	7.7240E+02	19	2.	-0.73
204	6.7870E+01	4.1500E+00	7.4338E+02	28	5.	0.99
205	6.8520E+01	4.0690E+00	7.1812E+02	19	2.	0.12
206	6.8840E+01	3.9800E+00	7.1293E+02	29	5.	0.66
207	7.0440E+01	3.7960E+00	6.7818E+02	40	5.	0.34
208	7.0380E+01	3.7780E+00	6.6958E+02	19	2.	0.38
209	7.0380E+01	3.5570E+00	6.3895E+02	15	1.	-4.21
210	7.0810E+01	3.7300E+00	6.6277E+02	28	5.	1.01
211	7.2440E+01	3.4610E+00	6.1996E+02	19	2.	0.48
212	7.4480E+01	3.2520E+00	5.8252E+02	19	2.	1.75
213	7.6540E+01	3.0560E+00	5.4741E+02	19	2.	2.89
214	7.6540E+01	2.7810E+00	4.9815E+02	15	1.	-6.37
215	7.9960E+01	2.6360E+00	4.7218E+02	41	5.	-0.25
216	8.6540E+01	2.1500E+00	3.8572E+02	28	5.	0.60
217	8.8400E+01	2.0380E+00	3.6506E+02	55	2.	0.92
218	8.9220E+01	1.9340E+00	3.4643E+02	40	5.	0.20
219	9.1680E+01	1.7610E+00	3.1544E-02	19	2.	-3.96
220	9.5200E+01	1.6560E+00	2.9664E+02	55	2.	-0.28
221	9.7130E+01	1.5520E+00	2.7801E+02	19	2.	-1.50
222	1.0000E+02	1.4536E+00	2.6038E+02	10	1.	-0.48
223	1.0000E+02	1.4582E+00	2.6121E+02	80	1.	-3.17
224	1.0000E+02	1.4540E+00	2.6045E+02	40	5.	-0.30
225	1.0310E+02	1.3620E+00	2.4397E+02	55	2.	0.96
226	1.0500E+02	1.3000E+00	2.3287E+02	28	5.	1.02
227	1.1250E+02	1.0810E+00	1.9364E+02	55	2.	0.23
228	1.1487E+02	1.1560E+00	1.8558E+02	40	5.	1.25
229	1.2500E+02	8.5900E-01	1.5387E+02	28	5.	-0.45

230	1.2370E+02	9.0000E-01	1.6121E+02	55	2.	5.77
231	1.3031E+02	7.5240E-01	1.3478E+02	40	5.	0.37
232	1.4560E+02	5.9752E-01	1.0703E+02	34	2.	2.53
233	1.4560E+02	5.7690E-01	1.0334E+02	48	3.	-0.07
234	1.5000E+02	5.4685E-01	9.7956E+01	10	1.	1.37
235	1.5800E+02	4.8100E-01	8.6160E+01	28	5.	0.16
236	1.7570E+02	4.0000E-01	7.1651E+01	55	2.	5.81
237	2.0620E+02	2.8300E-01	5.0693E+01	55	2.	1.25
238	2.0800E+02	2.7800E-01	4.9797E+01	28	5.	1.05
239	2.0830E+02	2.7660E-01	4.8472E+01	48	3.	-1.38
240	2.7910E+02	1.6970E-01	3.0398E+01	48	3.	-0.85
241	3.0000E+02	1.5546E-01	2.7489E+01	88	1.	-1.19
242	3.2000E+02	1.3996E-01	2.5070E+01	34	2.	-2.28
243	3.2500E+02	1.3990E-01	2.5060E+01	60	1.	-0.48
244	4.0000E+02	1.1187E-01	2.0039E+01	10	1.	-0.49
245	4.1180E+02	1.0750E-01	1.9256E+01	48	3.	-1.69
246	4.1200E+02	1.1100E-01	1.9883E+01	28	5.	1.56
247	5.0000E+02	9.2147E-02	1.6506E+01	88	1.	-0.38
248	6.0000E+02	8.0752E-02	1.4465E+01	88	1.	-0.04
249	6.6200E+02	7.5562E-02	1.3535E+01	88	1.	0.05
250	6.6200E+02	7.4948E-02	1.3425E+01	34	2.	-0.77
251	6.6200E+02	7.5384E-02	1.3503E+01	31	2.	-0.19
252	7.0000E+02	7.2895E-02	1.3557E+01	88	1.	0.11
253	8.0000E+02	6.7159E-02	1.2030E+01	88	1.	0.23
254	9.0000E+02	6.2576E-02	1.1209E+01	88	1.	0.32
255	1.0000E+03	5.8857E-02	1.0543E+01	88	1.	0.35

255 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR CADMIUM

Z = 48

CONVERSION CONSTANT IS 1.066E+02

K-EDGE	26.711					
L-EDGES	4.018	3.727	3.537	0.411	0.404	
M-EDGES	0.770	0.651	0.617			
	KEV	CM2/GF	BARNs/AT	SOURCE	WEIGHT	DIFF
1	1.0000E+00	8.9251E+03	1.6659E+06	10	1.	-2.44
2	1.0000E+00	8.9765E+03	1.6755E+06	90	1.	-1.88
3	1.0001E+00	8.9926E+03	1.6785E+06	90	1.	-1.68
4	1.2590E+00	5.3520E+03	9.9895E+05	4	1.	4.65
5	1.4930E+00	3.5760E+03	6.6746E+05	4	1.	7.50
6	1.5000E+00	3.1776E+03	5.9310E+05	90	1.	-5.54
7	1.5000E+00	3.1803E+03	5.9360E+05	90	1.	-3.26
8	1.5000E+00	3.1077E+03	5.8005E+05	10	1.	-5.47
9	1.7470E+00	2.2910E+03	4.2761E+05	4	1.	2.34
10	2.0000E+00	1.5463E+03	2.8862E+05	90	1.	-2.89
11	2.0000E+00	1.5635E+03	2.9178E+05	10	1.	-1.82
12	2.0230E+00	1.5920E+03	2.9715E+05	4	1.	2.90
13	2.3170E+00	1.1579E+03	2.1222E+05	4	1.	3.39
14	2.5320E+00	9.2600E+02	1.5417E+05	4	1.	3.46
15	3.0000E+00	5.6073E+02	1.0466E+05	10	1.	-2.49
16	3.0000E+00	5.5216E+02	1.0306E+05	90	1.	-3.99
17	3.3260E+00	4.3800E+02	8.1752E+04	4	1.	-1.40
18	3.5220E+00	3.9000E+02	7.2793E+04	16	3.	1.30
19	3.5260E+00	3.9700E+02	7.4100E+04	16	3.	3.41
20	3.5330E+00	3.6278E+02	6.7713E+04	90	1.	-5.03
21	3.5340E+00	3.6080E+02	6.7543E+04	90	1.	-5.49
22	3.5578E+00	1.1650E+03	2.1745E+05	16	3.	-3.51
23	3.5730E+00	1.2100E+03	2.2585E+05	16	3.	1.34
24	3.5910E+00	1.1400E+03	2.1278E+05	16	3.	-3.28
25	3.5960E+00	1.1300E+03	2.1091E+05	16	3.	-3.78
26	3.7530E+00	1.3950E+03	2.6038E+05	16	3.	-5.79
27	3.7617E+00	1.3800E+03	2.5758E+05	15	3.	-6.24
28	3.7700E+00	1.4100E+03	2.6318E+05	15	3.	-5.65
29	3.7890E+00	1.3450E+03	2.5478E+05	16	3.	-5.50
30	4.0030E+00	1.2650E+03	2.5611E+05	16	3.	0.97
31	4.0140E+00	1.2550E+03	2.3425E+05	16	3.	0.89
32	4.0250E+00	1.4450E+03	2.6971E+05	16	3.	0.92
33	4.0300E+00	1.4270E+03	2.6635E+05	16	3.	-0.01
34	4.6640E+00	1.3800E+03	2.5758E+05	15	3.	-1.15
35	4.0900E+00	1.3750E+03	2.5564E+05	16	3.	0.14
36	4.1050E+00	1.3720E+03	2.5608E+05	4	1.	0.89
37	4.5270E+00	1.0550E+03	1.9692E+05	4	1.	0.20
38	4.9690E+00	8.3800E+02	1.5641E+05	4	1.	1.53
39	5.0000E+00	7.9508E+02	1.484CE+05	10	1.	-2.09
40	5.4340E+00	6.6500E+02	1.2412E+05	25	2.	2.05
41	5.4340E+00	6.6500E+02	1.2412E+05	4	1.	2.05
42	5.9180E+00	5.3300E+02	9.9484E+04	4	1.	2.27
43	6.4940E+00	4.1000E+02	7.6526E+04	25	2.	.03
44	7.5020E+00	2.7890E+02	5.2057E+04	25	2.	1.57
45	8.0000E+00	2.3292E+02	4.3474E+04	10	1.	0.20
46	8.0470E+00	2.2540E+02	4.2071E+04	11	10.	-1.48
47	8.6690E+00	1.9330E+02	3.6079E+04	25	2.	3.35
48	8.9040E+00	1.7310E+02	3.2309E+04	11	10.	-0.51
49	9.0850E+00	1.2960E+02	2.4190E+04	11	10.	-1.23
50	1.0000E+01	1.2611E+02	2.3559E+04	10	1.	-0.84
51	1.0570E+01	1.1240E+02	2.0979E+04	25	2.	2.91
52	1.0980E+01	9.6940E+01	1.8034E+04	11	10.	-1.49
53	1.1220E+01	9.2680E+01	1.7299E+04	11	10.	-0.07
54	1.1960E+01	7.8800E+01	1.4708E+04	25	2.	1.19
55	1.1960E+01	8.0380E+01	1.5003E+04	19	2.	3.22
56	1.2000E+01	8.0000E+01	1.4932E+04	45	2.	3.67
57	1.2490E+01	6.9110E+01	1.2899E+04	11	10.	-0.10
58	1.3390E+01	5.7370E+01	1.0798E+04	11	10.	0.25
59	1.3430E+01	5.9240E+01	1.1057E+04	19	2.	4.36
60	1.4000E+01	5.1800E+01	9.66B4E+03	45	2.	2.17
61	1.4180E+01	5.1020E+01	9.5229E+03	19	2.	4.19
62	1.4560E+01	4.2080E+01	7.8542E+03	11	10.	-0.64
63	1.4980E+01	4.3200E+01	8.0635E+03	25	2.	2.57
64	1.4980E+01	4.2180E+01	7.8729E+03	19	2.	-0.75
65	1.5010E+01	4.1827E+01	7.8070E+03	10	1.	-0.52
66	1.5770E+01	3.6480E+01	6.8090E+03	11	10.	-0.35
67	1.5810E+01	3.8150E+01	7.1207E+03	19	2.	4.94
68	1.6000E+01	3.6000E+01	6.7194E+03	45	2.	2.35
69	1.6650E+01	3.2670E+01	6.0978E+03	19	2.	3.66

70	1.7480E+01	2.7520E+01	5.1366E+03	11	10.	-0.17
71	1.7520E+01	2.7410E+01	5.1161E+03	15	1.	0.06
72	1.7520E+01	2.6650E+01	5.3288E+03	19	2.	4.22
73	1.7520E+01	2.8130E+01	5.2448E+03	25	2.	2.58
74	1.7670E+01	2.6550E+01	4.9555E+03	11	2.	-0.78
75	1.9310E+01	2.1770E+01	4.0634E+03	19	2.	3.74
76	1.9610E+01	2.0000E+01	3.7330E+03	11	10.	-0.59
77	2.0000E+01	1.8843E+01	3.5171E+03	10	1.	-1.18
78	2.0000E+01	1.8500E+01	3.4530E+03	45	2.	-2.98
79	2.0210E+01	1.8440E+01	3.4416E+03	11	10.	-0.45
80	2.0250E+01	1.9340E+01	3.6098E+03	19	2.	4.99
81	2.1210E+01	1.6920E+01	3.1581E+03	19	2.	4.44
82	2.2000E+01	1.4400E+01	2.6878E+03	45	2.	-1.66
83	2.2160E+01	1.4120E+01	2.6355E+03	11	10.	-1.62
84	2.2200E+01	1.4700E+01	2.7437E+03	25	2.	2.93
85	2.2220E+01	1.5000E+01	2.7997E+03	19	2.	5.03
86	2.2260E+01	1.4680E+01	2.7400E+03	15	1.	2.79
87	2.2720E+01	1.5240E+01	2.4712E+03	11	10.	-1.19
88	2.3210E+01	1.3080E+01	2.4414E+03	19	2.	3.52
89	2.4200E+01	1.1000E+01	2.0531E+03	15	1.	-2.36
90	2.4240E+01	1.1520E+01	2.1502E+03	19	2.	2.72
91	2.4940E+01	1.0270E+01	1.9169E+03	11	10.	-1.01
92	2.5000E+01	1.0115E+01	1.8879E+03	10	1.	-1.87
93	2.5270E+01	9.8500E+00	1.8385E+03	11	10.	-1.59
94	2.5300E+01	1.0130E+01	1.8908E+03	19	2.	1.53
95	2.6390E+01	9.1800E+00	1.7134E+03	25	2.	3.21
96	2.6390E+01	9.2830E+00	1.7327E+03	19	2.	4.37
97	2.6590E+01	9.1830E+00	1.7142E+03	15	1.	3.26
98	2.7490E+01	4.8450E+01	9.0452E+03	19	2.	2.02
99	2.8610E+01	4.4220E+01	8.2556E+03	79	1.	2.96
100	2.8480E+01	4.3300E+01	8.1752E+03	11	10.	0.82
101	2.8620E+01	4.3760E+01	8.1715E+03	19	2.	2.02
102	2.9190E+01	4.1780E+01	7.6116E+03	11	10.	-0.14
103	3.0000E+01	3.8955E+01	7.2111E+03	10	1.	1.35
104	3.0490E+01	3.6500E+01	6.8127E+03	11	10.	-0.12
105	3.0970E+01	3.5570E+01	6.6391E+03	79	1.	1.38
106	3.0570E+01	3.4380E+01	6.4170E+03	19	2.	-2.01
107	3.2180E+01	3.1320E+01	5.8459E+03	19	2.	-1.56
108	3.3430E+01	2.8800E+01	5.3755E+03	19	2.	0.16
109	3.4700E+01	2.6230E+01	4.8958E+03	19	2.	0.51
110	3.4720E+01	2.6780E+01	4.9985E+03	79	1.	2.78
111	3.5900E+01	2.4450E+01	4.5636E+03	19	2.	2.35
112	3.7520E+01	2.1960E+01	4.0988E+03	19	2.	1.67
113	3.7360E+01	2.1980E+01	4.1026E+03	79	1.	2.05
114	4.0000E+01	1.7671E+01	3.2982E+03	10	1.	-2.07
115	4.0370E+01	1.8150E+01	3.3877E+03	19	2.	1.07
116	4.0120E+01	1.8400E+01	3.4343E+03	79	1.	2.89
117	4.0120E+01	1.7600E+01	3.2850E+03	28	5.	-1.67
118	4.1530E+01	1.6250E+01	3.0331E+03	78	3.	-0.37
119	4.2980E+01	1.4600E+01	2.7251E+03	29	5.	-1.84
120	4.5400E+01	1.2500E+01	2.3331E+03	28	5.	-2.66
121	5.0000E+01	9.7300E+00	1.8151E+03	28	5.	-1.92
122	5.2560E+01	9.1440E+00	1.7067E+03	79	1.	4.54
123	5.7460E+01	6.7950E+00	1.2664E+03	19	2.	-0.13
124	5.7520E+01	7.1980E+00	1.3435E+03	79	1.	6.25
125	5.7520E+01	6.6000E+00	1.2319E+03	28	5.	-2.58
126	5.9070E+01	6.3120E+00	1.1718E+03	19	2.	0.13
127	6.0750E+01	5.6540E+00	1.0553E+03	19	2.	-3.17
128	6.4640E+01	4.9360E+00	9.2130E+02	19	2.	0.26
129	6.6500E+01	4.6200E+00	8.6232E+02	19	2.	1.43
130	6.6820E+01	4.7100E+00	8.7912E+02	79	1.	4.78
131	6.7870E+01	4.5300E+00	8.3819E+02	28	5.	0.52
132	6.8170E+01	4.2200E+00	7.8766E+02	78	3.	-0.85
133	6.8520E+01	4.3000E+00	8.0259E+02	19	2.	2.45
134	7.0380E+01	4.0230E+00	7.5089E+02	19	2.	3.11
135	7.0810E+01	3.7900E+00	7.0740E+02	28	5.	-1.23
136	7.0820E+01	4.0380E+00	7.5369E+02	79	1.	5.27
137	7.2440E+01	3.7040E+00	6.9135E+02	19	2.	2.69
138	7.4480E+01	3.4450E+00	6.4301E+02	19	2.	2.97
139	7.6540E+01	3.2720E+00	6.1072E+02	19	2.	5.29
140	7.7100E+01	3.4030E+00	6.3517E+02	79	1.	11.68
141	8.0000E+01	2.7403E+00	5.1148E+02	89	1.	-0.68
142	8.6540E+01	2.2200E+00	4.1436E+02	28	5.	-0.46
143	8.8970E+01	2.0350E+00	3.7985E+02	78	3.	-1.71
144	9.1680E+01	1.8840E+00	3.5165E+02	19	2.	-1.40
145	9.7130E+01	1.6440E+00	3.0685E+02	19	2.	0.27
146	1.0000E+02	1.5062E+00	2.8113E+02	10	1.	-0.82
147	1.0000E+02	1.5202E+00	2.8375E+02	89	1.	0.10
148	1.0000E+02	1.4986E+00	2.7971E+02	90	1.	-1.32
149	1.0500E+02	1.3660E+00	2.5384E+02	28	5.	1.79

150	1.2500E+02	8.9700E-01	1.6742E+02	28	5.	0.61
151	1.5000E+02	5.5460E-01	1.0351E+02	90	1.	0.20
152	1.5000E+02	5.6377E-01	1.0523E+02	10	1.	1.86
153	1.5000E+02	5.4037E-01	1.0086E+02	89	1.	-2.37
154	1.5800E+02	4.9100E-01	9.1645E+01	28	5.	-0.17
155	1.9925E+02	2.9900E-01	5.5808E+01	78	3.	-1.18
156	2.0800E+02	2.7900E-01	5.2075E+01	28	5.	0.01
157	3.0000E+02	1.5396E-01	2.6736E+01	89	1.	-1.08
158	3.0000E+02	1.3628E-01	2.9169E+01	90	1.	0.41
159	4.0000E+02	1.1190E-01	2.0887E+01	90	1.	-0.02
160	4.0000E+02	1.1158E-01	2.0826E+01	10	1.	-0.31
161	4.1200E+02	1.0900E-01	2.0345E+01	28	5.	0.22
162	5.0000E+02	9.1407E-02	1.7061E+01	89	1.	-0.39
163	6.0000E+02	7.9834E-02	1.4901E+01	89	1.	-0.17
164	6.6200E+02	7.4605E-02	1.3925E+01	89	1.	-0.13
165	7.0000E+02	7.1944E-02	1.3428E+01	89	1.	-0.06
166	7.9600E+02	6.4300E-02	1.2002E+01	58	1.	-3.13
167	8.0000E+02	6.6179E-02	1.2352E+01	89	1.	0.01
168	8.0500E+02	6.0500E-02	1.1292E+01	58	1.	-2.72
169	9.0000E+02	6.1610E-02	1.1499E+01	89	1.	0.07
170	1.0000E+03	5.7913E-02	1.0809E+01	89	1.	0.10

168 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR INDIUM

Z = 49

CONVERSION CONSTANT IS 1.907E+02

K-EDGE	27.240					
L-EDGES	4.279	3.938	3.730			
M-EDGES	0.825	0.702	0.664	0.451	0.443	
1	1.0000E+00	9.7441E+03	1.0577E+06	10	1.	2.27
2	1.0001E+00	9.9758E+03	1.9015E+06	90	1.	4.71
3	1.5000E+00	3.3421E+03	6.3717E+05	10	1.	-3.70
4	2.0000E+00	1.6839E+03	3.2104E+05	10	1.	-0.77
5	2.0000E+00	1.6699E+03	3.1837E+05	90	1.	-1.60
6	3.0000E+00	6.0756E+02	1.1583E+05	10	1.	-2.17
7	5.0000E+00	6.0216E+02	1.1480E+05	90	1.	-3.04
8	3.7210E+00	3.9000E+02	7.4354E+04	16	3.	6.87
9	3.7260E+00	3.4091E+02	6.4975E+04	90	1.	-6.30
10	3.7260E+00	3.4049E+02	6.4915E+04	90	1.	-6.39
11	3.450L+00	1.1100E+03	2.1162E+05	16	3.	-4.01
12	3.7500E+00	1.1200E+03	2.1353E+05	16	3.	-2.80
13	3.7635E+00	1.1200E+03	2.1353E+05	16	3.	-1.49
14	3.9300E+00	1.0400E+03	1.9828E+05	16	3.	2.20
15	3.9517E+00	1.3500E+03	2.5738E+05	16	3.	-4.37
16	4.2290E+00	1.2100E+03	2.3069E+05	16	3.	2.67
17	4.2390E+00	1.3900E+03	2.6501E+05	16	3.	2.38
18	4.2470E+00	1.3800E+03	2.6310E+05	16	3.	2.16
19	4.2750E+00	1.3400E+03	2.5547E+05	16	3.	0.96
20	4.5090E+00	1.0904E+03	2.0788E+05	10	1.	-5.27
21	4.9320E+00	8.8340E+02	1.6785E+05	10	1.	-2.79
22	5.0000E+00	8.3890E+02	1.5994E+05	10	1.	-3.92
23	5.0000E+00	8.4352E+02	1.6082E+05	90	1.	-3.39
24	5.4120E+00	6.9971E+02	1.3340E+05	16	1.	-0.84
25	5.8950E+00	5.5756E+02	1.0630E+05	10	1.	-0.57
26	5.9470E+00	5.4428E+02	1.0373E+05	10	1.	-0.66
27	6.0000E+00	5.2875E+02	1.0081E+05	90	1.	-1.13
28	6.4000E+00	4.4288E+02	8.4455E+04	10	1.	-1.35
29	6.4900E+00	4.2575E+02	8.1169E+04	10	1.	-1.51
30	6.9250E+00	3.6479E+02	6.9547E+04	10	1.	0.60
31	7.0580E+00	3.4505E+02	6.5781E+04	10	1.	0.19
32	7.4720E+00	2.9496E+02	5.6234E+04	10	1.	-0.07
33	7.6490E+00	2.7611E+02	5.2541E+04	10	1.	-0.34
34	8.0000E+00	2.4761E+02	4.7207E+04	90	1.	0.89
35	8.0000E+00	2.4671E+02	4.7036E+04	10	1.	0.52
36	8.0410E+00	2.4230E+02	4.6137E+04	10	1.	-0.01
37	8.2650E+00	2.2357E+02	4.2624E+04	10	1.	-0.43
38	8.6310E+00	2.0000E+02	3.8130E+04	10	1.	0.24
39	8.9050E+00	1.8448E+02	3.5172E+04	10	1.	0.68
40	9.5720E+00	1.5171E+02	2.8924E+04	10	1.	0.79
41	1.0000E+01	1.3365E+02	2.5480E+04	10	1.	-0.00
42	1.0000E+01	1.3712E+02	2.6142E+04	90	1.	2.60
43	1.0000E+01	1.3134E+02	2.5340E+04	89	1.	-1.73
44	1.5000E+01	4.4520E+01	8.4878E+03	10	1.	0.97
45	1.7444E+01	2.9529E+01	5.6297E+03	10	1.	1.39
46	1.9608E+01	2.1442E+01	4.0879E+03	10	1.	1.28
47	2.0000E+01	2.0220E+01	3.8550E+03	10	1.	0.78
48	2.0000E+01	2.0215E+01	3.8540E+03	89	1.	0.76
49	2.0169E+01	1.9783E+01	3.7716E+03	10	1.	0.92
50	2.1125E+01	1.7236E+01	3.2861E+03	10	1.	-0.12
51	2.2105E+01	1.5256E+01	2.9086E+03	10	1.	0.12
52	2.2200E+01	1.5610E+01	2.9761E+03	15	1.	3.65
53	2.2724E+01	1.4131E+01	2.6940E+03	10	1.	0.01
54	2.3819E+01	1.2460E+01	2.3756E+03	10	1.	0.28
55	2.4942E+01	1.0910E+01	2.0800E+03	10	1.	-0.49
56	2.5000E+01	1.0808E+01	2.0606E+03	10	1.	-0.79
57	2.5300E+01	1.0530E+01	2.0076E+03	15	1.	-0.17
58	2.6390E+01	9.0870E+00	1.7324E+03	15	1.	-3.44
59	2.7490E+01	8.3500E+00	1.5919E+03	15	1.	-0.95
60	2.8620E+01	4.2710E+01	8.1427E+03	15	1.	-1.40
61	3.0000E+01	3.6550E+01	6.9684E+03	89	1.	-5.34
62	3.3000E+01	4.1234E+01	7.8613E+03	90	1.	6.79
63	5.0000E+01	4.1014E+01	7.8193E+03	90	1.	6.22
64	3.0000E+01	4.0677E+01	7.7552E+03	10	1.	5.35
65	4.0000E+01	1.8393E+01	3.5066E+03	89	1.	-1.51
66	4.0000E+01	1.8596E+01	3.5453E+03	10	1.	-0.42
67	4.2980E+01	1.5500E+01	2.9561E+03	28	5.	0.25
68	5.0000E+01	1.0157E+01	1.9365E+03	89	1.	-2.37
69	5.0000E+01	1.0490E+01	2.0000E+03	90	1.	0.03

70	5.7520E+01	7.0300E+00	1.3405E+03	28	5.	-1.70
71	6.0010E+01	6.1994E+00	1.1819E+03	89	1.	-3.01
72	6.7870E+01	4.4300E+00	8.4458E+02	28	5.	-5.18
73	7.0810E+01	4.0000E+00	7.6260E+02	28	5.	-2.00
74	8.0000E+01	2.8930E+00	5.5156E+02	89	1.	-1.79
75	8.6540E+01	2.3560E+00	4.4805E+02	28	5.	-1.44
76	1.0000E+02	1.5898E+00	3.0310E+02	10	1.	-2.26
77	1.0000E+02	1.0039E+00	3.0579E+02	89	1.	-1.39
78	1.0500E+02	1.6200E+00	3.0885E+02	28	5.	13.22
79	1.2500E+02	9.5500E-01	1.8207E+02	28	5.	0.12
80	1.5000E+02	5.9239E-01	1.1294E+02	10	1.	0.37
81	1.5000E+02	5.6661E-01	1.0802E+02	89	1.	-4.00
82	2.0000E+02	3.0701E-01	5.8532E+01	89	1.	-3.11
83	3.0000E+02	1.5799E-01	3.0121E+01	89	1.	-1.75
84	4.0000E+02	1.1356E-01	2.1650E+01	10	1.	-0.58
85	5.0000E+02	9.2525E-02	1.7640E+01	89	1.	-0.50
86	6.0000E+02	8.0552E-02	1.5357E+01	89	1.	-0.20
87	6.6200E+02	7.5176E-02	1.4352E+01	89	1.	-0.14
88	7.0000E+02	7.2449E-02	1.3813E+01	89	1.	-0.05
89	8.0000E+02	6.6555E-02	1.2689E+01	89	1.	0.45
90	9.0000E+02	6.1882E-02	1.1798E+01	89	1.	0.12
91	1.0000E+03	5.8110E-02	1.1079E+01	89	1.	0.16

91 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR TIN

Z = 50

CONVERSION CONSTANT IS 1.971E+02

K-EDGE	29.21	4.156	3.929	0.493	0.485	
L-EDGES	4.365					
M-EDGES	0.884	0.757	0.715			
	KEV	CM2/GH	BARN/S/AT	SOURCE	HEIGHT	DIFF
1	1.0000E+00	1.6502E+04	2.0697E+06	10	1.	-1.50
2	1.2590E+00	6.2610E+03	1.2359E+06	4	1.	6.03
3	1.5000E+00	3.5494E+03	6.9591E+05	10	1.	-5.82
4	1.5000E+00	3.5347E+03	6.9561E+05	89	1.	-6.21
5	1.7470E+00	2.6890E+03	5.2994E+05	4	1.	5.45
6	2.0000E+00	1.7875E+03	3.5227E+05	10	1.	-0.91
7	2.0000E+00	1.7705E+03	3.4892E+05	89	1.	-1.85
8	2.3170E+00	1.3230E+03	2.6192E+05	4	1.	7.33
9	3.0390E+00	6.4886E+02	1.2783E+05	10	1.	1.29
10	3.0000E+00	6.2486E+02	1.2315E+05	89	1.	-2.46
11	3.6820E+00	3.6700E+02	7.2327E+04	82	3.	-2.90
12	3.9100E+00	3.2000E+02	6.3065E+04	16	3.	-2.09
13	3.9150E+00	3.2000E+02	6.3065E+04	16	3.	-1.77
14	3.9180E+00	3.3000E+02	6.5035E+04	16	3.	1.53
15	3.9220E+00	3.4000E+02	6.7006E+04	16	3.	4.84
16	3.9510E+00	9.2000E+02	1.8131E+05	16	3.	-4.51
17	3.9550E+00	9.1000E+02	1.7934E+05	16	3.	-5.31
18	3.9630E+00	9.4000E+02	1.8525E+05	16	3.	-1.88
19	3.9690E+00	9.2000E+02	1.8131E+05	16	3.	-3.48
20	4.1350E+00	8.5000E+02	1.6752E+05	16	3.	-1.16
21	4.1410E+00	8.5000E+02	1.6752E+05	16	3.	-0.00
22	4.1460E+00	8.5000E+02	1.6752E+05	16	3.	-0.51
23	4.1850E+00	1.1400E+03	2.2467E+05	16	3.	-2.93
24	4.1890E+00	1.1300E+03	2.2270E+05	16	3.	-3.55
25	4.2010E+00	1.1400E+03	2.2467E+05	16	3.	-2.51
26	4.4440E+00	1.0200E+03	2.0102E+05	15	3.	0.94
27	4.4500E+00	1.0200E+03	2.0102E+05	16	3.	1.33
28	4.4550E+00	1.0000E+03	1.9700E+05	16	3.	-0.57
29	4.4740E+00	1.1300E+03	2.2270E+05	16	3.	-1.83
30	4.4810E+00	1.1300E+03	2.2270E+05	16	3.	-1.44
31	4.4910E+00	1.1200E+03	2.2073E+05	16	3.	-1.76
32	4.5050E+00	1.1200E+03	2.2073E+05	15	3.	-0.98
33	4.5150E+00	1.1100E+03	2.1876E+05	15	3.	-1.31
34	5.0000E+00	8.7900E+02	1.7323E+05	59	5.	1.20
35	5.0000E+00	8.7257E+02	1.7196E+05	10	1.	0.16
36	5.0000E+00	8.3692E+02	1.6515E+05	89	1.	-2.52
37	5.9190E+00	6.0300E+02	1.1894E+05	4	1.	6.95
38	6.0000E+00	5.2388E+02	1.0324E+05	69	1.	-5.75
39	6.4040E+00	4.6520E+02	9.1680E+04	39	5.	1.35
40	6.9520E+00	5.7900E+02	7.2910E+04	4	1.	-0.11
41	7.0590E+00	3.6150E+02	7.1245E+04	39	5.	1.53
42	8.0000E+00	2.5760E+02	5.0780E+04	10	1.	0.33
43	8.0000E+00	2.4673E+02	4.8625E+04	89	1.	-3.92
44	8.0000E+00	2.5700E+02	5.0649E+04	39	5.	0.08
45	8.0490E+00	2.6220E+02	5.1674E+04	82	3.	3.47
46	8.0479E+00	2.6770E+02	5.2750E+04	66	3.	5.88
47	8.0460E+00	2.5265E+02	4.9890E+04	57	2.	-0.62
48	8.0720E+00	2.5500E+02	5.0255E+04	15	1.	1.70
49	8.0720E+00	2.5520E+02	4.9900E+04	19	2.	0.98
50	8.3930E+00	2.2610E+02	4.4559E+04	39	5.	0.20
51	9.6390E+00	2.1810E+02	4.2982E+04	82	3.	4.21
52	8.6690E+00	2.0840E+02	4.1071E+04	19	2.	0.50
53	8.6590E+00	2.0980E+02	4.1347E+04	15	1.	1.17
54	9.0000E+00	1.8520E+02	3.6499E+04	39	5.	-1.33
55	9.2920E+00	1.7459E+02	3.4351E+04	19	2.	1.09
56	9.5000E+00	1.6100E+02	3.1729E+04	39	5.	-0.97
57	9.9150E+00	1.4600E+02	2.8775E+04	19	2.	0.60
58	9.9620E+00	1.4160E+02	2.7905E+04	39	5.	-1.20
59	1.0000E+01	1.3975E+02	2.7542E+04	10	1.	-1.50
60	1.0000E+01	1.3677E+02	2.6954E+04	89	1.	-5.61
61	1.0000E+01	1.4020E+02	2.7630E+04	39	5.	-1.19
62	1.0000E+01	1.5020E+02	2.9600E+04	37	2.	5.86
63	1.0570E+01	1.2280E+02	2.4201E+04	19	2.	0.65
64	1.0570E+01	1.2140E+02	2.5925E+04	15	1.	-0.50
65	1.1225E+01	1.0550E+02	2.0792E+04	11	10.	1.71
66	1.1250E+01	1.0360E+02	2.0457E+04	19	2.	0.86
67	1.1250E+01	1.0280E+02	2.0250E+04	15	1.	-0.10
68	1.1921E+01	8.9310E+01	1.7691E+04	82	3.	1.49
69	1.1960E+01	8.9010E+01	1.7542E+04	19	2.	2.05



70	1.195E+01	8.743E+21	1.723E+04	15	1.	0.24
71	1.249E+01	7.738E+01	1.525E+04	11	10.	-0.22
72	1.250E+01	7.551E+01	1.553E+04	57	2.	1.64
73	1.339E+01	6.266E+01	1.239E+04	11	10.	-2.16
74	1.343E+01	6.504E+01	1.281E+04	15	1.	2.36
75	1.343E+01	6.571E+01	1.273E+04	19	2.	1.54
76	1.418E+01	5.576E+01	1.098E+04	15	1.	1.31
77	1.418E+01	5.587E+01	1.101E+04	19	2.	1.51
78	1.496E+01	4.644E+01	9.152E+03	11	10.	-2.54
79	1.498E+01	4.622E+01	9.168E+03	19	2.	-2.65
80	1.500E+01	4.673E+01	9.210E+03	19	1.	-1.21
81	1.500E+01	4.685E+01	9.235E+03	39	5.	-0.19
82	1.500E+01	4.773E+01	9.420E+03	57	2.	1.04
83	1.577E+01	4.100E+01	8.032E+03	11	10.	-0.45
84	1.577E+01	4.137E+01	8.153E+03	82	3.	0.53
85	1.581E+01	4.175E+01	8.222E+03	19	2.	2.08
86	1.581E+01	4.166E+01	8.092E+03	15	1.	0.43
87	1.665E+01	3.691E+01	7.096E+03	19	2.	1.58
88	1.748E+01	3.112E+01	6.133E+03	11	10.	0.38
89	1.752E+01	3.086E+01	6.081E+03	15	1.	0.17
90	1.752E+01	3.140E+01	6.188E+03	19	2.	1.92
91	1.767E+01	3.028E+01	5.957E+03	11	10.	0.62
92	1.831E+01	2.271E+01	4.475E+03	15	1.	-3.73
93	1.931E+01	2.388E+01	4.706E+03	19	2.	1.25
94	1.961E+01	2.251E+01	4.435E+03	11	10.	-0.47
95	2.000E+01	2.136E+01	4.211E+03	10	1.	-0.29
96	2.000E+01	2.140E+01	4.217E+03	39	5.	-0.15
97	2.000E+01	2.121E+01	4.169E+03	37	2.	-1.04
98	2.021E+01	2.075E+01	4.085E+03	11	10.	-0.39
99	2.025E+01	2.154E+01	4.205E+03	11	10.	-0.39
100	2.025E+01	2.142E+01	4.221E+03	19	2.	5.11
101	2.121E+01	1.888E+01	3.681E+03	19	1.	3.50
102	2.121E+01	1.875E+01	3.691E+03	15	1.	2.79
103	2.215E+01	1.596E+01	3.149E+03	11	10.	3.06
104	2.217E+01	1.541E+01	3.037E+03	82	3.	-3.91
105	2.220E+01	1.666E+01	5.233E+03	19	2.	4.16
106	2.220E+01	1.629E+01	3.210E+03	15	1.	1.84
107	2.317E+01	1.397E+01	2.753E+03	82	3.	-1.55
108	2.320E+01	1.465E+01	2.697E+03	15	1.	3.57
109	2.321E+01	1.456E+01	2.689E+03	19	2.	3.76
110	2.424E+01	1.303E+01	2.562E+03	19	2.	3.82
111	2.499E+01	1.156E+01	2.272E+03	11	10.	-0.10
112	2.494E+01	1.159E+01	2.284E+03	39	5.	0.19
113	2.500E+01	1.150E+01	2.244E+03	10	1.	-0.91
114	2.500E+01	1.152E+01	2.270E+03	39	5.	0.22
115	2.500E+01	1.149E+01	2.264E+03	48	5.	-0.54
116	2.500E+01	1.207E+01	2.380E+03	57	2.	5.06
117	2.525E+01	1.179E+01	2.126E+03	82	5.	-3.50
118	2.527E+01	1.120E+01	2.191E+03	11	10.	-0.34
119	2.530E+01	1.153E+01	2.175E+03	15	1.	-0.62
120	2.530E+01	1.150E+01	2.256E+03	19	2.	3.41
121	2.639E+01	9.970E+00	1.964E+03	15	1.	0.72
122	2.639E+01	1.002E+01	1.974E+03	19	2.	1.22
123	2.745E+01	8.955E+00	1.764E+03	19	2.	1.21
124	2.749E+01	8.884E+00	1.780E+03	15	1.	0.41
125	2.800E+01	8.251E+00	1.626E+03	40	5.	-1.93
126	2.948E+01	8.254E+00	1.628E+03	11	10.	2.20
127	2.862E+01	7.853E+00	1.547E+03	15	1.	-0.90
128	2.862E+01	7.912E+00	1.559E+03	19	2.	-0.15
129	3.000E+01	4.260E+01	8.396E+03	93	1.	3.66
130	3.000E+01	4.224E+01	8.326E+03	10	1.	2.79
131	3.000E+01	4.206E+01	8.293E+03	37	2.	2.95
132	3.000E+01	4.260E+01	8.395E+03	39	5.	3.68
133	3.000E+01	4.285E+01	8.445E+03	90	1.	4.26
134	3.004E+01	4.171E+01	8.223E+03	48	5.	1.03
135	3.049E+01	4.055E+01	7.991E+03	11	10.	2.90
136	3.097E+01	3.692E+01	7.276E+03	19	2.	-2.43
137	3.218E+01	3.304E+01	6.511E+03	19	2.	-5.55
138	3.264E+01	3.150E+01	6.163E+03	78	5.	-5.20
139	3.543E+01	3.018E+01	5.947E+03	19	2.	-2.74
140	3.470E+01	2.798E+01	5.514E+03	19	2.	-0.37
141	3.500E+01	2.702E+01	5.500E+03	37	2.	1.31
142	3.590E+01	2.552E+01	5.029E+03	19	2.	-1.06
143	3.732E+01	2.510E+01	4.532E+03	19	2.	-1.41
144	4.000E+01	1.950E+01	3.804E+03	10	1.	-1.00
145	4.000E+01	1.877E+01	3.790E+03	37	2.	-3.71
146	4.000E+01	1.960E+01	3.862E+03	39	5.	0.52
147	4.004E+01	1.913E+01	3.770E+03	48	5.	-1.64
148	4.007E+01	1.921E+01	3.785E+03	19	2.	-1.02
149	4.012E+01	1.940E+01	3.823E+03	28	5.	0.30

150	4.1550E+01	1.7650E+01	3.4784E+03	78	5.	0.08
151	4.2900E+01	1.6010E+01	3.1532E+03	28	5.	-0.56
152	4.5400E+01	1.3700E+01	2.7000E+03	28	5.	-1.44
153	5.0300E+01	1.0300E+01	2.1284E+03	28	5.	0.46
154	5.0080E+01	1.0535E+01	2.0752E+03	48	5.	-1.63
155	5.7450E+01	7.1540E+00	1.4099E+03	19	2.	-3.02
156	5.7520E+01	7.2000E+00	1.4190E+03	28	5.	-2.12
157	5.9070E+01	6.6480E+00	1.3102E+03	19	2.	-2.91
158	6.0030E+01	6.5220E+00	1.2853E+03	40	5.	-0.52
159	6.0750E+01	5.9930E+00	1.1811E+03	19	2.	-5.55
160	6.4640E+01	5.2770E+00	1.0400E+03	19	2.	-1.45
161	6.6500E+01	4.3460E+00	9.7474E+02	19	2.	-0.20
162	6.7870E+01	4.1600E+00	9.1838E+02	28	5.	-0.60
163	6.8170E+01	4.7300E+00	9.3217E+02	78	5.	2.11
164	6.8520E+01	4.6370E+00	9.1385E+02	19	2.	1.50
165	6.8840E+01	4.6000E+00	9.0655E+02	28	5.	1.97
166	7.0040E+01	4.2710E+00	8.4172E+02	40	5.	-0.77
167	7.0380E+01	4.4280E+00	8.7256E+02	19	2.	4.24
168	7.0910E+01	4.0800E+00	8.0407E+02	28	5.	-2.36
169	7.2440E+01	3.9580E+00	7.8003E+02	19	2.	0.74
170	7.4480E+01	3.7140E+00	7.3194E+02	19	2.	1.90
171	7.6540E+01	3.5080E+00	6.9155E+02	19	2.	3.58
172	7.6540E+01	3.4060E+00	6.7124E+02	15	1.	0.57
173	7.9500E+01	3.0150E+00	5.9419E+02	78	5.	-1.43
174	8.6540E+01	2.4500E+00	4.8284E+02	28	5.	0.71
175	8.4990E+01	2.5250E+00	4.9762E+02	40	5.	-1.13
176	8.8400E+01	2.3100E+00	4.5525E+02	55	2.	0.53
177	8.8970E+01	2.3300E+00	4.5919E+02	78	5.	3.16
178	9.1680E+01	1.9760E+00	3.8942E+02	19	2.	-5.22
179	9.5200E+01	1.9120E+00	3.7681E+02	55	2.	1.36
180	9.7130E+01	1.7800E+00	3.5080E+02	19	2.	-0.50
181	1.0000E+02	1.6558E+00	5.2632E+02	10	1.	-0.07
182	1.0000E+02	1.6597E+00	5.2702E+02	68	1.	0.16
183	1.0000E+02	1.6760E+00	5.3039E+02	40	5.	1.30
184	1.0310E+02	1.5870E+00	5.1276E+02	55	2.	3.79
185	1.1250E+02	1.2220E+00	2.4085E+02	55	2.	0.29
186	1.1487E+02	1.1720E+00	2.3097E+02	40	5.	1.48
187	1.2300E+02	9.9.000E-01	1.9535E+02	28	5.	1.04
188	1.3031E+02	8.4760E-01	1.6794E+02	40	5.	0.80
189	1.4500E+02	6.6642E-01	1.3134E+02	34	2.	2.62
190	1.4560E+02	6.4560E-01	1.2723E+02	48	3.	0.39
191	1.5000E+02	6.1452E-01	1.2111E+02	10	1.	2.47
192	1.5300E+02	5.3100E-01	1.0465E+02	28	5.	-0.17
193	1.7670E+02	4.3900E-01	8.4743E+01	55	2.	3.63
194	1.9925E+02	3.4500E-01	6.7992E+01	78	5.	6.66
195	2.0620E+02	3.1400E-01	6.1082E+01	55	2.	3.82
196	2.0850E+02	2.9270E-01	5.7684E+01	48	5.	-1.32
197	2.7910E+02	1.7720E-01	3.4922E+01	48	3.	-1.53
198	5.0000E+02	1.6087E-01	3.1705E+01	88	1.	-0.55
199	3.2000E+02	1.4380E-01	2.8340E+01	51	1.	-3.05
200	3.2030E+02	1.4653E-01	2.8845E+01	34	2.	-1.59
201	4.0031E+02	1.1423E-01	2.2512E+01	10	1.	-0.03
202	4.1100E+02	1.0950E-01	2.1580E+01	50	1.	-1.43
203	4.1180E+02	1.0930E-01	2.1541E+01	49	5.	-1.41
204	5.0000E+02	9.2497E-02	1.8229E+01	88	1.	-0.12
205	6.0000E+02	8.7275E-02	1.5820E+01	88	1.	0.13
206	6.6160E+02	7.4935E-02	1.4584E+01	50	1.	-0.96
207	6.6200E+02	7.4852E-02	1.4748E+01	88	1.	0.19
208	6.6270E+02	7.4172E-02	1.4618E+01	54	2.	-0.69
209	7.0000E+02	7.2095E-02	1.4196E+01	88	1.	0.22
210	8.0030E+02	6.6086E-02	1.5024E+01	88	1.	0.50
211	8.4000E+02	6.4180E-02	1.2645E+01	52	1.	0.49
212	9.0000E+02	6.1407E-02	1.2102E+01	88	1.	0.39
213	1.0000E+03	5.7627E-02	1.1357E+01	88	1.	0.41

213 DATA POINTS USED FOR FIT



EXPERIMENTAL DATA FOR ANTICRY

Z = 51

CONVERSION CONSTANT IS 2.022E+32

K-EDGE	30.491						
L-EDGES	4.638	4.381	4.132				
M-EDGES	0.944	0.812	0.766	0.537	0.528		
1	1.0000E+00	1.1393E+04	2.3033E+06	10	1.	2.26	
2	1.0001E+00	1.1394E+04	2.3015E+06	90	1.	2.21	
3	1.5000E+00	3.7972E+03	7.6773E+05	10	1.	-4.05	
4	1.000CE+00	1.9073E+03	3.6561E+05	10	1.	0.34	
5	3.0000E+00	6.9557E+02	1.4003E+05	10	1.	2.71	
6	4.1189E+00	3.0000E+02	6.0652E+04	16	3.	-1.48	
7	4.1286E+00	3.0000E+02	6.0652E+04	16	3.	-0.88	
8	4.1306E+00	3.1000E+02	6.2674E+04	16	3.	2.55	
9	4.1300E+00	2.9780E+02	6.0209E+04	90	1.	-1.48	
10	4.1598E+00	8.4000E+02	1.6983E+05	16	3.	-2.71	
11	4.1773E+00	8.4000E+02	1.6983E+05	16	3.	-1.68	
12	4.1861E+00	8.2000E+02	1.6576E+05	16	3.	-3.51	
13	4.3616E+00	7.6000E+02	1.5336E+05	16	3.	-1.17	
14	4.3670E+00	7.5000E+02	1.5163E+05	16	3.	-2.15	
15	4.3770E+00	7.4000E+02	1.4961E+05	16	3.	-2.91	
16	4.4100E+00	1.0200E+03	2.0622E+05	16	3.	-3.12	
17	4.4235E+00	1.0000E+03	2.0217E+05	16	3.	-4.33	
18	4.6950E+00	9.0000E+02	1.8196E+05	16	3.	-0.23	
19	4.7000E+00	1.0800E+03	2.1835E+05	16	3.	3.51	
20	4.7073E+00	1.0400E+03	2.1026E+05	16	3.	-0.17	
21	4.7194E+00	9.9500E+02	2.0015E+05	16	3.	-4.16	
22	4.7610E+01	9.6000E+02	1.9409E+05	16	3.	-5.00	
23	4.9329E+00	9.6311E+02	1.9415E+05	10	1.	3.71	
24	5.0000E+00	9.12E+02	1.8449E+05	10	1.	1.96	
25	5.4123E+00	7.6113E+02	1.555E+05	10	1.	4.90	
26	5.8956E+00	6.1442E+02	1.2422E+05	10	1.	3.81	
27	5.9470E+00	5.9953E+02	1.2121E+05	10	1.	3.55	
28	6.0000E+00	5.8155E+02	1.1757E+05	90	1.	2.71	
29	6.4000E+00	4.8413E+02	9.7879E+04	10	1.	0.96	
30	6.4900E+00	4.6542E+02	9.4097E+04	10	1.	0.61	
31	6.9250E+00	4.0126E+02	8.1135E+04	10	1.	2.51	
32	7.0530E+00	3.7905E+02	7.6635E+04	10	1.	1.68	
33	7.4720E+00	3.2506E+02	6.5716E+04	10	1.	0.96	
34	7.6490E+00	3.0431E+02	6.1523E+04	10	1.	0.37	
35	8.0000E+00	2.7059E+02	5.4796E+04	10	1.	0.15	
36	8.0900E+00	2.7354E+02	5.5303E+04	90	1.	1.24	
37	8.2410E+00	2.6622E+02	5.3825E+04	10	1.	-0.13	
38	8.2650E+00	2.4655E+02	4.9866E+04	10	1.	-0.52	
39	8.6310E+00	2.2046E+02	4.4571E+04	10	1.	-0.32	
40	8.9050E+00	2.0322E+02	4.1086E+04	10	1.	-0.22	
41	9.5720E+00	1.6753E+02	3.3870E+04	10	1.	-0.52	
42	1.0000E+01	1.4707E+02	2.9735E+04	10	1.	-2.02	
43	1.0000E+01	1.5168E+02	3.0666E+04	90	1.	1.05	
44	1.0000E+01	1.4497E+02	2.9310E+04	89	1.	-3.42	
45	1.5000E+01	4.9341E+01	9.9755E+03	10	1.	-1.69	
46	1.5000E+01	5.0499E+01	1.0209E+04	90	1.	0.62	
47	1.7344E+01	3.2809E+01	6.6351E+03	10	1.	-0.63	
48	1.9600E+01	2.3850E+01	4.8218E+03	10	1.	-0.30	
49	2.0000E+01	2.2476E+01	4.5410E+03	89	1.	-0.80	
50	2.0000E+01	2.2686E+01	4.5856E+03	10	1.	0.13	
51	2.0000E+01	2.2910E+01	4.6118E+03	90	1.	1.11	
52	2.0169E+01	2.2045E+01	4.4371E+03	10	1.	-0.34	
53	2.1125E+01	1.9201E+01	3.6820E+03	10	1.	-0.99	
54	2.2105E+01	1.6981E+01	3.4332E+03	10	1.	-0.44	
55	2.2724E+01	1.5747E+01	3.0855E+03	10	1.	-0.18	
56	2.3919E+01	1.3904E+01	2.8111E+03	10	1.	0.64	
57	2.4942E+01	1.2113E+01	2.4483E+03	10	1.	-0.25	
58	2.5000E+01	1.2072E+01	2.4407E+03	10	1.	0.09	
59	3.0000E+01	7.3254E+00	1.4810E+03	89	1.	0.77	
60	3.3000E+01	7.5247E+00	1.5215E+03	90	1.	3.51	
61	3.0500E+01	4.1207E+01	8.5310E+03	89	1.	3.52	
62	4.0000E+01	2.0157E+01	4.0792E+03	10	1.	-2.39	
63	4.0000E+01	1.9846E+01	4.0123E+03	89	1.	-3.90	
64	5.0000E+01	1.1008E+01	2.2256E+03	89	1.	-5.54	
65	5.7466E+01	8.1630E+00	1.6506E+03	30	2.	1.32	
66	5.9070E+01	7.5760E+00	1.5317E+03	30	2.	1.14	
67	6.0000E+01	6.8361E+00	1.3821E+03	90	1.	-4.69	
68	6.0000E+01	6.7337E+00	1.3514E+03	89	1.	-6.32	
69	6.0750E+01	6.7356E+00	1.3618E+03	30	2.	-3.05	



70	6.6500E+01	5.6220E+00	1.1366E+03	30	2.	3.53
71	6.8520E+01	5.3990E+00	1.0915E+03	30	2.	7.83
72	7.0590E+01	4.9240E+00	9.9551E+02	30	2.	5.74
73	7.2440E+01	4.4710E+00	9.0049E+02	30	2.	5.40
74	8.0000E+01	3.1548E+00	6.5834E+02	89	1.	-4.30
75	1.0000E+02	1.3520E+00	3.5082E+02	10	1.	-3.78
76	1.6000E+02	1.7493E+00	3.5357E+02	89	1.	-3.00
77	1.5000E+02	6.4172E-01	1.2974E+02	10	1.	0.99
78	1.5000E+02	6.1154E-01	1.2364E+02	89	1.	-5.76
79	2.0000E+02	3.2679E-01	6.6668E+01	89	1.	-1.85
80	3.0000E+02	1.6534E-01	3.3125E+01	89	1.	-0.19
81	4.0000E+02	1.1577E-01	2.3466E+01	10	1.	0.62
82	5.0000E+02	9.3231E-02	1.6849E+01	89	1.	0.18
83	6.0000E+02	8.0633E-02	1.6301E+01	89	1.	0.16
84	6.6200E+02	7.5524E-02	1.5158E+01	89	1.	0.35
85	7.0000E+02	7.2201E-02	1.4597E+01	89	1.	0.04
86	8.0000E+02	6.6125E-02	1.3559E+01	89	1.	0.39
87	9.0000E+02	6.1379E-02	1.2409E+01	89	1.	-0.06
88	1.0000E+03	5.7565E-02	1.1659E+01	89	1.	-0.10

89 DATA POINTS USED FOR FIT



EXPERIMENTAL DATA FOR TELLURIUM

Z = 52

CONVERSION CONSTANT IS 2.119E+02

K-EDGES	31.815	L-EDGES	6.939	M-EDGES	4.612	4.341	0.582	0.572
					1.006	0.870	0.818	

	KEV	CM2/GM	DARNS/AT	SOURCE	HEIGHT	DIFF
1	1.5000E+00	4.1361E+03	8.7633E+05	90	1.	0.05
2	1.5000E+00	3.9772E+03	8.4265E+05	10	1.	-3.81
3	2.0000E+00	1.9999E+03	4.2573E+05	90	1.	0.36
4	2.0000E+00	1.9881E+03	4.2122E+05	10	1.	-0.21
5	2.0000E+00	2.0471E+03	4.3773E+05	90	1.	2.73
6	3.0000E+00	7.3014E+02	1.1476E+05	10	1.	2.21
7	3.0000E+00	7.2514E+02	1.1554E+05	90	1.	1.51
8	3.0000E+00	7.2467E+02	1.1535E+05	90	1.	1.45
9	4.0000E+00	3.4742E+02	7.5605E+04	90	1.	0.36
10	4.3266E+00	2.8000E+02	5.9324E+04	16	3.	-1.54
11	4.3530E+00	2.7530E+02	5.7927E+04	90	1.	-3.63
12	4.3380E+00	2.7080E+02	5.7375E+04	90	1.	-4.11
13	4.3396E+00	2.9000E+02	6.1445E+04	16	3.	2.75
14	4.4070E+00	7.8000E+02	1.6526E+05	16	3.	-2.53
15	4.5000E+00	7.3000E+02	1.5467E+05	16	3.	-3.60
16	4.6260E+00	9.3000E+02	1.9704E+05	16	3.	-6.37
17	4.6400E+00	9.3000E+02	1.9704E+05	16	3.	-5.64
18	4.6650E+00	9.2000E+02	1.9492E+05	16	3.	-4.32
19	4.9407E+00	1.0100E+03	2.1399E+05	16	3.	3.82
20	4.9410E+00	1.0000E+03	2.1167E+05	16	3.	2.81
21	4.9510E+00	9.1000E+02	1.9280E+05	16	3.	-5.96
22	5.0000E+00	9.3220E+02	1.9751E+05	10	1.	-1.29
23	5.0000E+00	9.6628E+02	2.0475E+05	90	1.	2.42
24	5.0000E+00	9.7383E+02	2.0633E+05	90	1.	3.22
25	5.0010E+00	9.6730E+02	1.9468E+05	16	3.	-4.56
26	5.4120E+00	7.9405E+02	1.6760E+05	10	1.	2.88
27	5.8950E+00	6.3227E+02	1.5395E+05	10	1.	2.54
28	5.9470E+00	6.1698E+02	1.5072E+05	10	1.	2.36
29	6.0000E+00	5.9191E+02	1.2541E+05	90	1.	1.47
30	6.4000E+00	4.9595E+02	1.0508E+05	10	1.	-0.28
31	6.4900E+00	4.7680E+02	1.0102E+05	10	1.	-0.55
32	6.9250E+00	4.1245E+02	8.7388E+04	10	1.	1.99
33	7.1593E+00	3.8925E+02	8.2472E+04	10	1.	1.17
34	7.4726E+00	3.3449E+02	7.0868E+04	10	1.	0.93
35	7.6490E+00	3.1317E+02	6.5351E+04	10	1.	0.47
36	8.0000E+00	2.7760E+02	5.8816E+04	10	1.	0.16
37	8.0000E+00	2.7733E+02	5.8761E+04	90	1.	0.06
38	8.0410E+00	2.7363E+02	5.7974E+04	10	1.	0.08
39	8.2650E+00	2.5402E+02	5.5819E+04	10	1.	-0.04
40	8.6310E+00	2.2686E+02	4.8065E+04	10	1.	1.19
41	8.9050E+00	2.0955E+02	4.4291E+04	10	1.	1.32
42	9.5720E+00	1.7253E+02	3.6555E+04	10	1.	0.32
43	1.0000E+01	1.5135E+02	3.2064E+04	10	1.	-1.17
44	1.0000E+01	1.5588E+02	3.2600E+04	90	1.	0.49
45	1.5000E+01	5.0907E+01	1.0786E+04	10	1.	-0.72
46	1.5000E+01	5.1521E+01	1.0916E+04	90	1.	0.48
47	1.7444E+01	3.5890E+01	7.1804E+03	10	1.	-0.07
48	1.9608E+01	2.4643E+01	5.2211E+03	10	1.	-0.11
49	2.0000E+01	2.3511E+01	4.9815E+03	10	1.	0.56
50	2.0000E+01	2.3485E+01	4.9758E+03	90	1.	0.45
51	2.0166E+01	2.2799E+01	4.8504E+03	10	1.	-0.10
52	2.1123E+01	1.9859E+01	4.2076E+03	10	1.	-1.11
53	2.2105E+01	1.7565E+01	3.7210E+03	10	1.	-0.85
54	2.2724E+01	1.6292E+01	3.4519E+03	10	1.	-0.72
55	2.3819E+01	1.4249E+01	3.0500E+03	10	1.	-0.15
56	2.4942E+01	1.2512E+01	2.6510E+03	10	1.	-1.48
57	2.5010E+01	1.2504E+01	2.6493E+03	10	1.	-0.91
58	3.3000E+01	7.0335E+00	1.6597E+03	90	1.	1.94
59	3.1793E+01	6.6553E+00	1.4660E+03	90	1.	1.22
60	3.1800E+01	6.6498E+00	1.4689E+03	90	1.	1.52
61	4.0000E+01	2.0266E+01	4.2811E+03	89	1.	-1.58
62	4.0000E+01	2.0571E+01	4.5595E+03	10	1.	0.20
63	4.0000E+01	2.0881E+01	4.4240E+03	90	1.	1.70
64	5.0000E+01	1.134E+01	2.3801E+03	89	1.	-1.76
65	5.0000E+01	1.1535E+01	2.4434E+03	90	1.	0.85
66	5.0000E+01	1.1514E+01	2.4394E+03	90	1.	0.58
67	5.0000E+01	1.1528E+01	2.4424E+03	90	1.	0.81
68	6.0000E+01	6.3794E+00	1.4575E+03	89	1.	-1.98
69	6.0000E+01	7.0076E+00	1.4847E+03	90	1.	-0.16



70	6.0000E+01	7.0076E+00	1.4847E+03	90	1.	-0.16
71	6.0000E+01	7.1399E+00	1.5127E+03	90	1.	1.73
72	8.0000E+01	3.2340E+00	6.6520E+02	89	1.	0.30
73	8.0000E+01	3.2004E+00	6.7808E+02	91	1.	-0.74
74	8.0000E+01	3.2100E+00	6.7798E+02	91	1.	-0.76
75	1.0000E+02	1.7582E+00	3.7624E+02	10	1.	0.27
76	1.0000E+02	1.7517E+00	3.7114E+02	90	1.	-1.09
77	1.0000E+02	1.7612E+00	3.7314E+02	90	1.	-0.55
78	1.0000E+02	1.7897E+00	3.7919E+02	89	1.	1.05
79	1.5000E+02	6.5535E-01	1.3205E+02	10	1.	3.55
80	1.5000E+02	6.3571E-01	1.3490E+02	90	1.	0.41
81	1.5000E+02	6.2355E-01	1.3212E+02	89	1.	-1.66
82	2.0000E+02	3.3707E-01	7.1415E+01	90	1.	0.72
83	2.0000E+02	3.3113E-01	7.0159E+01	89	1.	-1.05
84	3.0000E+02	1.6395E-01	3.4759E+01	89	1.	-0.46
85	4.0000E+02	1.1464E-01	2.4290E+01	90	1.	0.04
86	4.0000E+02	1.1423E-01	2.4361E+01	10	1.	0.25
87	6.0000E+02	7.9235E-02	1.6800E+01	89	1.	-0.04
88	6.6200E+02	7.3661E-02	1.5507E+01	89	1.	-0.09
89	7.0000E+02	7.0833E-02	1.5307E+01	89	1.	-0.04
90	8.0000E+02	6.4761E-02	1.3721E+01	89	1.	-0.00
91	9.0000E+02	6.0051E-02	1.2725E+01	89	1.	0.01
92	1.0000E+03	5.6278E-02	1.1924E+01	89	1.	0.02

92 DATA POINTS USED FOR FIT



EXPERIMENTAL DATA FOR IODINE

Z = 53

CONVERSION CONSTANT IS 2.107E+02

K-EDGES	33.169					
L-EDGES	5.188	4.052	4.257			
M-EDGES	1.972	0.931	0.875	0.631	0.619	

	KEY	CM2/GM	BARNs/AT	SOURCE	WEIGHT	DIFF
1	1.5000E+00	4.3902E+03	9.2512E+05	10	1.	-0.74
2	2.0000E+00	2.1745E+03	4.5924E+05	10	1.	0.45
3	3.0000E+00	3.6434E+02	1.650E+05	10	1.	0.93
4	4.5090E+00	5.1229E+02	6.6230E+04	10	1.	7.31
5	4.5550E+00	2.6453E+02	5.5764E+04	90	1.	-7.38
6	5.4120E+00	8.5652E+02	1.8028E+05	10	1.	2.44
7	5.8950E+00	6.8459E+02	1.4426E+05	10	1.	2.76
8	5.9475E+00	6.6795E+02	1.4076E+05	10	1.	2.62
9	6.0000E+00	6.4749E+02	1.3644E+05	90	1.	1.84
10	6.4000E+00	5.3430E+02	1.1259E+05	10	1.	-0.28
11	6.4300E+00	4.6740E+02	1.0262E+05	64	1.	-8.92
12	6.4900E+00	5.1370E+02	1.0825E+05	10	1.	-0.41
13	5.9250E+00	4.4593E+02	9.3955E+04	10	1.	2.75
14	6.9300E+00	4.1000E+02	8.5376E+04	64	1.	-5.81
15	7.0580E+00	4.2041E+02	8.8597E+04	10	1.	1.90
16	7.4720E+00	3.6110E+02	7.6304E+04	10	1.	2.13
17	7.4770E+00	3.3100E+02	6.9755E+04	64	1.	-6.47
18	7.6490E+00	3.3907E+02	7.1451E+04	10	1.	1.78
19	8.0000E+00	2.9950E+02	6.3112E+04	10	1.	1.28
20	8.0610E+00	3.0314E+02	6.3883E+04	90	1.	2.51
21	8.0410E+00	2.9583E+02	6.2538E+04	10	1.	1.42
22	8.0470E+00	2.7580E+02	5.8115E+04	64	1.	-5.26
23	8.2650E+00	2.7527E+02	5.8907E+04	10	1.	1.59
24	8.6310E+00	2.4556E+02	5.1745E+04	10	1.	1.79
25	8.6380E+00	2.7120E+02	4.8721E+04	64	1.	-3.96
25	8.9050E+00	2.2621E+02	4.7656E+04	10	1.	1.95
27	9.5720E+00	1.8692E+02	5.9388E+04	10	1.	2.21
28	1.0000E+01	1.63922E+02	5.4541E+04	10	1.	0.75
29	1.0030E+01	1.7939E+02	5.5693E+04	90	1.	4.11
30	1.0003E+01	1.6706E+02	5.5205E+04	90	1.	2.68
31	1.0540E+01	1.3950E+02	2.9555E+04	64	1.	-1.16
32	1.1220E+01	1.1940E+02	2.5161E+04	64	1.	0.16
33	1.1920E+01	9.9300E+01	2.0925E+04	64	1.	-1.94
34	1.4160E+01	6.1551E+01	1.3181E+04	64	1.	-1.88
35	1.5000E+01	5.5230E+01	1.1640E+04	10	1.	1.10
36	1.5770E+01	4.3520E+01	9.0230E+03	64	1.	-2.49
37	1.5770E+01	4.0640E+01	1.0251E+04	79	1.	1.95
38	1.6610E+01	4.0280E+01	8.4880E+03	64	1.	-2.65
39	1.7444E+01	3.6023E+01	7.7555E+03	10	1.	1.37
40	1.7480E+01	3.5621E+01	7.5051E+03	64	1.	-1.40
41	1.7480E+01	3.5160E+01	7.6198E+03	79	1.	0.10
42	1.9600E+01	2.6779E+01	5.6430E+03	10	1.	0.94
43	2.0000E+01	2.5604E+01	5.3954E+03	10	1.	1.76
44	2.0000E+01	2.5245E+01	5.3198E+03	69	1.	0.33
45	2.0169E+01	2.4794E+01	5.2247E+03	10	1.	0.62
46	2.0210E+01	2.4500E+01	5.1839E+03	64	1.	0.59
47	2.0210E+01	2.4750E+01	5.2155E+03	79	1.	1.20
48	2.1125E+01	2.1504E+01	4.5525E+03	10	1.	-0.57
49	2.1180E+01	2.1600E+01	4.5517E+03	64	1.	0.52
50	2.1180E+01	2.1740E+01	4.5812E+03	79	1.	0.97
51	2.2105E+01	1.9109E+01	4.0269E+03	10	1.	-0.55
52	2.2160E+01	1.8470E+01	3.6921E+03	64	1.	-3.03
53	2.2724E+01	1.7732E+01	3.7355E+03	10	1.	-0.56
54	2.3170E+01	1.6450E+01	3.8664E+03	64	1.	-2.59
55	2.3170E+01	1.7200E+01	3.6245E+03	79	1.	1.86
56	2.5819E+01	1.5677E+01	3.3556E+03	10	1.	0.03
57	2.4942E+01	1.3604E+01	2.8957E+03	10	1.	-1.75
58	2.5000E+01	1.3622E+01	2.8705E+03	10	1.	-1.00
59	2.5270E+01	1.3720E+01	2.6912E+03	64	1.	2.63
60	2.5270E+01	1.3540E+01	2.6932E+03	79	1.	1.18
61	2.5560E+01	1.2540E+01	2.6425E+03	64	1.	5.04
62	2.7470E+01	1.1170E+01	2.3558E+03	64	1.	4.46
63	2.7470E+01	1.0550E+01	2.2252E+03	79	1.	-1.34
64	3.0000E+01	8.3249E+00	1.7545E+03	89	1.	-1.63
65	3.2979E+01	7.5500E+00	1.5910E+03	79	1.	-2.65
66	3.4720E+01	3.2720E+01	6.8945E+03	64	1.	2.03
67	3.5720E+01	3.2540E+01	6.6570E+03	79	1.	1.47
68	3.6020E+01	2.9630E+01	6.2438E+03	64	1.	1.42
69	3.7350E+01	2.7100E+01	5.7107E+03	64	1.	1.77

70	3.7360E+01	2.6080E+01	5.4957E+03	79	1.	-2.06
71	4.0000E+01	2.2087E+01	4.6542E+03	10	1.	-1.40
72	4.0000E+01	2.1642E+01	4.5604E+03	89	1.	-3.38
73	4.0120E+01	2.2660E+01	4.7750E+03	64	1.	-1.95
74	4.0120E+01	2.2190E+01	4.6760E+03	79	1.	-0.15
75	5.0000E+01	1.2060E+01	2.5412E+03	89	1.	-3.59
76	5.2360E+01	1.0780E+01	2.2716E+03	64	1.	-2.52
77	5.2360E+01	1.0990E+01	2.3159E+03	79	1.	-0.62
78	5.7520E+01	8.5953E+00	1.8122E+03	54	1.	-0.17
79	5.7520E+01	8.9690E+00	1.8900E+03	79	1.	4.18
80	5.9310E+01	7.8800E+00	1.6605E+03	64	1.	-0.71
81	6.0000E+01	7.5936E+00	1.5580E+03	89	1.	-3.94
82	6.1130E+01	7.2323E+00	1.5282E+03	64	1.	-0.88
83	6.1130E+01	7.5120E+00	1.5830E+03	79	1.	2.67
84	6.6820E+01	5.9833E+00	1.2508E+03	64	1.	4.05
85	6.6820E+01	5.8999E+00	1.2431E+03	79	1.	2.59
86	6.8790E+01	5.1870E+00	1.0930E+03	64	1.	-2.44
87	7.0820E+01	4.8503E+00	1.0220E+03	54	1.	-1.35
88	7.0820E+01	5.2090E+00	1.1977E+03	79	1.	5.95
89	7.2860E+01	4.6523E+00	9.8130E+02	64	1.	2.12
90	7.4960E+01	4.3923E+00	9.2551E+02	64	1.	4.04
91	7.7100E+01	3.8810E+00	8.1783E+02	64	1.	-0.88
92	8.0000E+01	3.4852E+00	7.3441E+02	89	1.	-1.79
93	1.0000E+02	1.9163E+00	4.0380E+02	10	1.	-1.96
94	1.0000E+02	1.9308E+00	4.0686E+02	89	1.	-1.22
95	1.5000E+02	7.039E-01	1.4843E+02	10	1.	1.03
96	1.5000E+02	6.6937E-01	1.4105E+02	89	1.	-3.99
97	2.0000E+02	3.5542E-01	7.4475E+01	89	1.	-3.13
98	2.7900E+02	2.1606E-01	4.5530E+01	54	1.	9.54
99	3.0000E+02	1.7291E-01	3.6437E+01	89	1.	-1.80
100	4.0000E+02	1.2016E-01	2.5321E+01	10	1.	-0.49
101	5.0000E+02	9.5646E-02	2.0155E+01	89	1.	-0.56
102	6.0000E+02	6.2137E-02	1.7308E+01	89	1.	-3.26
103	6.6200E+02	7.6201E-02	1.6058E+01	89	1.	-0.22
104	7.0000E+02	7.3232E-02	1.5452E+01	89	1.	-0.72
105	8.0000E+02	6.6871E-02	1.4091E+01	89	1.	-0.01
106	9.0000E+02	6.1922E-02	1.3049E+01	89	1.	0.08
107	1.0000E+03	5.7969E-02	1.2216E+01	89	1.	0.12

107 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR YENON

Z = 54

CONVERSION CONSTANT IS 1.180E+02

X-EDGE	34.592						
L-EDGES	5.452	5.100	4.781	0.684	0.669		
M-EDGES	1.43	0.999	0.937				
1	1.2540E+00	6.2000E+03	1.3517E+06	47	5.	-8.60	
2	1.4870E+00	4.5000E+03	9.8107E+05	47	5.	0.67	
3	1.5000E+00	4.8105E+03	1.0488E+06	90	1.	9.93	
4	1.5000E+00	4.8151E+03	1.0498E+06	90	1.	10.04	
5	1.5000E+00	4.8151E+03	1.0498E+06	90	1.	10.04	
6	1.5000E+00	4.6609E+03	1.0162E+06	10	1.	9.51	
7	2.0000E+00	2.3230E+03	5.0645E+05	90	1.	7.26	
8	2.0000E+00	2.2928E+03	4.9987E+05	10	1.	5.87	
9	3.0000E+00	8.4278E+02	1.8374E+05	90	1.	4.62	
10	3.0000E+00	8.4186E+02	1.8354E+05	90	1.	4.50	
11	4.0000E+00	4.0464E+02	8.7564E+04	90	1.	0.28	
12	4.5090E+00	3.2663E+02	7.1211E+04	10	1.	8.98	
13	4.7600E+00	2.4899E+02	5.4205E+04	90	1.	-5.31	
14	4.7700E+00	2.4642E+02	5.3723E+04	90	1.	-5.82	
15	4.7750E+00	2.4541E+02	5.3502E+04	90	1.	-5.92	
16	4.7780E+00	2.4536E+02	5.3492E+04	90	1.	-5.84	
17	4.9520E+00	6.4100E+02	1.3975E+05	55	1.	-5.13	
18	5.4290E+00	7.2500E+02	1.5806E+05	55	1.	-3.25	
19	5.8950E+00	7.1156E+02	1.5513E+05	10	1.	1.52	
20	5.8990E+00	6.7400E+02	1.4694E+05	55	1.	-3.67	
21	5.9470E+00	6.9426E+02	1.5136E+05	10	1.	1.54	
22	6.0000E+00	6.6957E+02	1.4598E+05	90	1.	0.02	
23	6.4000E+00	5.5239E+02	1.2043E+05	10	1.	-2.19	
24	6.4040E+00	5.4600E+02	1.1904E+05	55	1.	-3.17	
25	6.4933E+00	5.3106E+02	1.1578E+05	10	1.	-2.45	
26	6.9250E+00	4.6272E+02	1.0088E+05	10	1.	0.83	
27	7.0580E+00	5.1600E+02	1.1250E+05	55	1.	18.21	
28	7.0580E+00	4.3571E+02	9.4991E+04	10	1.	-0.19	
29	7.4720E+00	3.629E+02	8.2036E+04	10	1.	0.14	
30	7.6490E+00	3.5242E+02	7.6852E+04	10	1.	-0.26	
31	8.0000E+00	5.1005E+02	6.7596E+04	10	1.	-1.27	
32	8.0000E+00	5.1800E+02	6.9330E+04	90	1.	1.26	
33	8.0410E+00	3.0695E+02	6.6920E+04	10	1.	-0.92	
34	8.0480E+00	3.0400E+02	6.6277E+04	55	1.	-1.64	
35	8.2650E+00	2.8640E+02	6.2440E+04	10	1.	-0.51	
36	8.6310E+00	2.5517E+02	5.5630E+04	10	1.	-0.49	
37	8.9050E+00	2.3200E+02	5.0579E+04	55	1.	-1.66	
38	8.9050E+00	2.3495E+02	5.1222E+04	10	1.	-0.41	
39	9.5720E+00	1.9436E+02	4.2573E+04	10	1.	-0.13	
40	1.0000E+01	1.7053E+02	3.7179E+04	10	1.	-1.55	
41	1.0000E+01	1.7612E+02	3.8398E+04	90	1.	1.67	
42	1.0000E+01	1.6834E+02	3.6700E+04	89	1.	-2.82	
43	1.5000E+01	5.7532E+01	1.2543E+04	10	1.	-0.66	
44	1.5000E+01	5.8973E+01	1.2857E+04	90	1.	1.83	
45	1.7444E+01	3.8397E+01	8.3712E+03	10	1.	0.24	
46	1.7480E+01	3.6800E+01	8.0230E+03	35	1.	-3.39	
47	1.7480E+01	3.8390E+01	8.3696E+03	76	2.	0.79	
48	1.7480E+01	3.8390E+01	8.3696E+03	8	4.	0.79	
49	1.9600E+01	2.7925E+01	6.0881E+03	10	1.	0.23	
50	2.0000E+01	2.6740E+01	5.8297E+03	10	1.	1.27	
51	2.0000E+01	2.6883E+01	5.8609E+03	90	1.	1.81	
52	2.0000E+01	2.6347E+01	5.7440E+03	89	1.	-0.22	
53	2.0169E+01	2.5874E+01	5.6409E+03	10	1.	0.30	
54	2.1125E+01	2.2535E+01	4.9173E+03	10	1.	-0.58	
55	2.2105E+01	1.9957E+01	4.3509E+03	10	1.	-0.27	
56	2.2724E+01	1.8522E+01	4.0381E+03	10	1.	-0.11	
57	2.3319E+01	1.6386E+01	3.5725E+03	10	1.	0.61	
58	2.4942E+01	1.4201E+01	3.0960E+03	10	1.	-1.05	
59	2.5000E+01	1.4242E+01	3.1050E+03	10	1.	-0.13	
60	3.0000E+01	8.7333E+00	1.9040E+03	89	1.	0.57	
61	4.0000E+01	2.2763E+01	4.9627E+03	10	1.	1.86	
62	4.0000E+01	2.2249E+01	4.8505E+03	89	1.	-0.44	
63	5.0000E+01	1.2426E+01	2.7691E+03	89	1.	-1.17	
64	6.0000E+01	7.6275E+00	1.6629E+03	89	1.	-1.79	
65	8.0000E+01	3.6056E+00	7.8608E+02	89	1.	0.39	
66	1.0000E+02	1.9831E+00	4.3235E+02	10	1.	0.23	
67	1.0000E+02	1.9977E+00	4.3554E+02	89	1.	0.97	
68	1.5000E+02	7.2719E+01	1.5854E+02	10	1.	3.36	
69	1.5000E+02	6.9026E+01	1.5049E+02	89	1.	-1.08	

70	2.0000E+02	3.6244E-01	7.9017E+01	89	1.	-1.18
71	3.0000E+02	1.7571E-01	3.8229E+01	89	1.	-0.43
72	4.0000E+02	1.2185E-01	2.6343E+01	10	1.	0.40
73	5.0000E+02	9.5608E-02	2.0844E+01	89	1.	-0.06
74	6.0000E+02	8.1820E-02	1.7838E+01	89	1.	0.01
75	6.6200E+02	7.5776E-02	1.6520E+01	89	1.	-0.07
76	7.0000E+02	7.2763E-02	1.5865E+01	89	1.	-0.02
77	8.0000E+02	6.6321E-02	1.4459E+01	89	1.	0.00
78	9.0000E+02	6.1354E-02	1.3376E+01	89	1.	0.00
79	1.0000E+03	5.7396E-02	1.2515E+01	89	1.	0.00

79 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR BARIUM

Z = 56

CONVERSION CONSTANT IS 2.261E+02

K-EDGE	57.441					
L-EDGES	5.387	5.624	5.247			
M-EDGES	1.438	1.151	1.061	0.797	0.774	
	KEV	CM2/GM	BARNs/AT	SOURCE	WEIGHT	DIFF
1	1.5000E+00	5.3883E+05	1.2289E+06	10	1.	-2.45
2	2.0000E+00	2.5857E+03	5.8973E+05	10	1.	-2.27
3	3.0000E+00	9.6249E+02	2.1952E+05	10	1.	2.42
4	3.0000E+00	9.7897E+02	2.2328E+05	90	1.	4.17
5	4.5090E+00	3.5870E+02	8.1812E+04	10	1.	7.47
6	4.9320E+00	2.8926E+02	6.5974E+04	10	1.	8.71
7	5.0000E+00	2.6024E+02	5.9355E+04	10	1.	1.25
8	5.2400E+00	2.1816E+02	4.9758E+04	90	1.	-4.47
9	5.2440E+00	2.1698E+02	4.9487E+04	90	1.	-4.80
10	5.2450E+00	2.1794E+02	4.9707E+04	90	1.	-4.42
11	5.2440E+00	2.1612E+02	4.9747E+04	90	1.	-4.30
12	6.4000E+00	6.0102E+02	1.3708E+05	10	1.	-2.30
13	6.4900E+00	5.7787E+02	1.3180E+05	10	1.	-2.52
14	6.5250E+00	5.0742E+02	1.1573E+05	10	1.	1.64
15	7.0564E+01	4.7642E+02	1.0866E+05	10	1.	0.36
16	7.4720E+01	4.1401E+02	9.4427E+04	10	1.	1.42
17	7.6490E+01	3.8793E+02	8.8479E+04	10	1.	1.13
18	8.0000E+01	3.3815E+02	7.7124E+04	10	1.	-0.77
19	8.0410E+01	3.3654E+02	7.6756E+04	10	1.	0.11
20	8.2650E+01	3.1609E+02	7.2093E+04	10	1.	1.18
21	8.6310E+01	2.8063E+02	6.4006E+04	10	1.	0.83
22	8.9050E+01	2.5818E+02	5.8885E+04	10	1.	0.81
23	9.5720E+01	2.1403E+02	4.8815E+04	10	1.	1.29
24	1.0000E+02	1.8843E+02	4.2976E+04	10	1.	0.17
25	1.0000E+02	1.8542E+02	4.2290E+04	89	1.	-1.43
26	1.5000E+02	6.3542E+01	1.4493E+04	10	1.	-0.05
27	1.5770E+02	5.6530E+01	1.2893E+04	79	1.	1.75
28	1.7444E+02	4.2315E+01	9.6967E+03	10	1.	0.32
29	1.7480E+02	4.1544E+01	9.9077E+03	79	1.	3.07
30	1.9608E+02	3.9151E+01	7.0509E+03	10	1.	-0.29
31	2.0000E+02	2.9640E+01	6.7601E+03	10	1.	0.77
32	2.0000E+02	2.9218E+01	6.6640E+03	89	1.	-0.66
33	2.0169E+02	2.8688E+01	6.5413E+03	10	1.	-0.25
34	2.0210E+02	2.7850E+01	6.3520E+03	79	1.	-2.60
35	2.1125E+02	2.5031E+01	5.7030E+03	10	1.	-1.35
36	2.1180E+02	2.4870E+01	5.6723E+03	79	1.	-1.30
37	2.2105E+02	2.2172E+01	5.0569E+03	10	1.	-1.28
38	2.2724E+02	2.0581E+01	4.6941E+03	10	1.	-1.30
39	2.3170E+02	1.9910E+01	4.5410E+03	79	1.	0.60
40	2.3819E+02	1.8230E+01	4.1578E+03	10	1.	-0.81
41	2.4942E+02	1.5772E+01	3.5972E+03	10	1.	-2.94
42	2.5000E+02	1.5850E+01	3.6151E+03	10	1.	-1.85
43	2.5270E+02	1.5910E+01	3.6287E+03	79	1.	1.39
44	2.7470E+02	1.3160E+01	3.0015E+03	79	1.	4.73
45	3.0000E+02	9.7774E+00	2.2300E+03	89	1.	-1.78
46	5.0970E+01	9.7670E+00	2.2276E+03	79	1.	6.82
47	5.7360E+01	5.7150E+00	1.3035E+03	79	1.	2.71
48	5.7420E+01	5.4285E+00	1.2381E+03	90	1.	-2.03
49	5.7430E+01	5.4151E+00	1.2351E+03	90	1.	-2.20
50	5.7460E+01	5.0836E+00	6.5769E+03	90	1.	-0.16
51	4.0000E+01	2.4634E+01	5.6184E+03	10	1.	0.41
52	4.0000E+01	2.3954E+01	5.4633E+03	89	1.	-2.36
53	4.0120E+01	2.4570E+01	5.6039E+03	79	1.	0.92
54	5.0000E+01	1.3441E+01	3.0656E+03	89	1.	-3.39
55	5.2360E+01	1.2630E+01	2.8806E+03	79	1.	2.48
56	5.7520E+01	9.9640E+00	2.2726E+03	79	1.	3.43
57	6.0000E+01	8.2706E+00	1.8863E+03	89	1.	-4.14
58	6.1150E+01	6.2400E+00	1.8794E+03	79	1.	0.43
59	6.6820E+01	6.8510E+00	1.5626E+03	79	1.	6.07
60	7.0820E+01	5.4550E+00	1.2442E+03	79	1.	-1.32
61	7.7100E+01	4.6020E+00	1.0496E+03	79	1.	4.40
62	8.0000E+01	3.9327E+00	8.9695E+02	89	1.	-1.61
63	1.0000E+02	2.1648E+00	4.9574E+02	10	1.	-1.46
64	1.0000E+02	2.1802E+00	4.9724E+02	89	1.	-0.76
65	1.5000E+02	7.9049E-01	1.8029E+02	10	1.	2.46
66	1.5000E+02	7.4914E-01	1.7086E+02	89	1.	-2.89
67	2.0000E+02	3.8954E-01	8.8846E+01	89	1.	-1.63
68	3.0000E+02	1.8438E-01	4.2053E+01	89	1.	-0.33
69	4.0000E+02	1.2505E-01	2.8522E+01	10	1.	0.68

70	5.0000E+02	9.7791E-02	2.2304E+01	89	1.	0.11
71	6.0000E+02	8.374E-02	1.8947E+01	89	1.	0.12
72	6.6200E+02	7.4686E-02	1.749CE+01	89	1.	-0.02
73	7.0000E+02	7.3521E-02	1.6768E+01	89	1.	0.01
74	8.0000E+02	6.6782E-02	1.5231E+01	89	1.	0.00
75	9.0000E+02	6.1634E-02	1.4357E+01	99	1.	-0.05
76	1.0000E+03	5.7553E-02	1.3126E+01	89	1.	-0.08

76 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR LANTHANUM

Z = 57

CONVERSION CONSTANT IS 2.307E+02

K-EDGE	38.925						
L-EDGES	6.267	5.891	5.483	0.851	0.832		
M-EDGES	1.363	1.205	1.125				
	KEV	CM2/GM	BARNs/AT	SOURCE	WEIGHT	DIFF	
1	1.5000E+00	5.8678E+03	1.3555E+06	10	1.	-2.26	
2	2.0000E+00	2.7725E+03	6.3948E+05	10	1.	-2.98	
3	3.0000E+00	1.0320E+03	2.3806E+05	10	1.	2.51	
4	3.0000E+00	1.0475E+03	2.4162E+05	90	1.	4.04	
5	4.0000E+00	5.1269E+02	1.1826E+05	90	1.	6.45	
6	5.0000E+00	2.7398E+02	6.3176E+04	10	1.	0.49	
7	5.4780E+00	2.0622E+02	4.9031E+04	90	1.	-3.64	
8	5.4800E+00	2.0710E+02	4.7770E+04	90	1.	-4.07	
9	8.0000E+00	3.5624E+02	8.2172E+04	10	1.	-0.53	
10	8.0000E+00	3.5700E+02	8.2348E+04	39	5.	-0.52	
11	8.5000E+00	3.0620E+02	7.0630E+04	87	2.	0.17	
12	9.9620E+00	2.0250E+02	4.6710E+04	39	5.	0.21	
13	1.0000E+01	2.0014E+02	4.6165E+04	10	1.	0.02	
14	1.0000E+01	2.0450E+02	4.7172E+04	87	2.	2.20	
15	1.0000E+01	1.9652E+02	4.5330E+04	89	1.	-1.79	
16	1.5000E+01	6.7380E+01	1.5542E+04	10	1.	-1.16	
17	1.5000E+01	6.7990E+01	1.5683E+04	39	5.	-0.27	
18	2.0000E+01	3.1465E+01	7.2575E+03	10	1.	0.24	
19	2.0000E+01	3.1510E+01	7.2683E+03	39	5.	0.39	
20	2.0000E+01	3.1610E+01	7.2914E+03	87	2.	0.71	
21	2.0000E+01	3.1049E+01	7.1620E+03	89	1.	-1.08	
22	2.4942E+01	1.7120E+01	3.9490E+03	39	5.	-0.15	
23	2.5000E+01	1.6871E+01	3.8915E+03	10	1.	-0.98	
24	2.5000E+01	1.7233E+01	3.9790E+03	48	3.	1.24	
25	3.0000E+01	1.0450E+01	2.4105E+03	39	5.	0.39	
26	3.0000E+01	1.2431E+01	2.4060E+03	89	1.	0.21	
27	3.0040E+01	1.0250E+01	2.3643E+03	48	3.	-1.17	
28	3.5060E+01	6.8950E+00	1.5756E+03	48	3.	0.66	
29	4.0000E+01	2.5864E+01	5.9663E+03	10	1.	0.01	
30	4.0000E+01	2.5860E+01	5.9651E+03	39	5.	-0.00	
31	4.0300E+01	2.5084E+01	5.7860E+03	89	1.	-3.00	
32	4.0400E+01	2.7060E+01	6.2419E+03	48	3.	4.91	
33	5.0300E+01	1.4108E+01	3.2543E+03	89	1.	-5.57	
34	5.0800E+01	1.4440E+01	3.3508E+03	48	3.	-0.88	
35	6.0300E+01	8.6917E+00	2.0049E+03	89	1.	-4.14	
36	6.0330E+01	8.9630E+00	2.0675E+03	40	5.	-1.02	
37	7.0040E+01	5.9610E+00	1.3750E+03	40	5.	-0.44	
38	7.9960E+01	4.1610E+00	9.5981E+02	40	5.	-1.16	
39	8.0000E+01	4.1457E+00	9.5628E+02	89	1.	-1.39	
40	8.9920E+01	3.0710E+00	7.0838E+02	40	5.	0.05	
41	1.0000E+02	2.2831E+00	5.2664E+02	10	1.	-1.34	
42	1.0006E+02	2.2992E+00	5.3035E+02	89	1.	-0.64	
43	1.0006E+02	2.3190E+00	5.3492E+02	40	5.	0.37	
44	1.1487E+02	1.6380E+00	3.7783E+02	40	5.	2.20	
45	1.3031E+02	1.1843E+00	2.7311E+02	40	5.	2.36	
46	1.4550E+02	8.8720E-01	2.0465E+02	48	3.	1.35	
47	1.5000E+02	8.3228E-01	1.9198E+02	10	1.	2.30	
48	1.5000E+02	7.8832E-01	1.8184E+02	89	1.	-3.11	
49	2.0000E+02	4.6817E-01	9.4151E+01	89	1.	-2.01	
50	2.0830E+02	3.8260E-01	8.8253E+01	48	3.	0.16	
51	2.7910E+02	2.1640E-01	4.9916E+01	48	3.	-0.47	
52	3.3000E+02	1.9122E-01	4.4109E+01	89	1.	-0.70	
53	4.0000E+02	1.2858E-01	2.9682E+01	10	1.	0.46	
54	4.1130E+02	1.2270E-01	2.8303E+01	48	3.	-0.79	
55	5.0400E+02	1.0003E-01	2.5074E+01	89	1.	-0.01	
56	6.0000E+02	8.4652E-02	1.9526E+01	89	1.	0.08	
57	6.6200E+02	7.8022E-02	1.7997E+01	89	1.	-0.02	
58	7.0000E+02	7.4747E-02	1.7242E+01	89	1.	0.04	
59	8.0000E+02	6.7786E-02	1.5637E+01	89	1.	0.07	
60	9.0000E+02	6.3476E-02	1.4411E+01	89	1.	0.06	
61	1.0000E+03	5.9276E-02	1.3442E+01	89	1.	0.05	

61 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR CERIUM

Z • 58

CONVERSION CONSTANT IS 2.327E+02

K-EDGE 43.444

L-EDGES 6.549

M-EDGES 1.434

6.165

1.276

5.724

1.186

0.902

0.863

	KEV	CM2/GM	B/RNS/AT	SOURCE	WEIGHT	DIFF
1	1.5000E+00	6.4145E+03	1.4925E+06	10	1.	-0.78
2	2.0000E+00	2.9775E+03	6.9280E+05	10	1.	-3.33
3	3.0000E+00	1.1068E+03	2.5753E+05	10	1.	1.96
4	4.0000E+00	5.4415E+02	1.2661E+05	90	1.	4.77
5	4.5090E+00	4.0106E+02	9.3318E+04	10	1.	4.86
6	4.9320E+00	3.1541E+02	7.3389E+04	10	1.	3.64
7	5.0000E+00	2.8907E+02	6.7260E+04	10	1.	-1.65
8	5.4720E+00	2.4946E+02	5.8043E+04	10	1.	3.80
9	5.7210E+00	1.9843E+02	4.6169E+04	90	1.	-4.54
10	5.7210E+00	1.9954E+02	4.6429E+04	90	1.	-4.40
11	5.7220E+00	2.0212E+02	4.7029E+04	90	1.	-3.12
12	6.9250E+00	5.6722E+02	1.3198E+05	10	1.	1.47
13	7.0590E+00	5.3069E+02	1.2348E+05	10	1.	-0.23
14	7.4720E+00	4.6468E+02	1.0812E+05	10	1.	1.35
15	7.6430E+00	4.3571E+02	1.0138E+05	10	1.	1.00
16	8.0000E+01	3.7574E+02	8.7425E+04	10	1.	-2.10
17	8.0410E+01	3.7615E+02	8.7521E+04	10	1.	-0.67
18	8.2550E+00	3.5619E+02	8.2876E+04	10	1.	1.11
19	8.6310E+00	3.1479E+02	7.3245E+04	10	1.	0.15
20	8.9150E+00	2.8935E+02	6.7524E+04	10	1.	-0.07
21	9.5720E+00	2.4031E+02	5.5914E+04	10	1.	0.34
22	1.0000E+01	2.1393E+02	4.9574E+04	10	1.	-0.22
23	1.0000E+01	2.0853E+02	4.8520E+04	89	1.	-2.34
24	1.5000E+01	7.1952E+01	1.6649E+04	10	1.	-1.67
25	1.7444E+01	4.7985E+01	1.1165E+04	10	1.	-1.15
26	1.7444E+01	5.1865E+01	1.2067E+04	79	1.	7.42
27	1.9608E+01	3.4881E+01	8.1159E+03	10	1.	-1.83
28	2.0000E+01	3.3436E+01	7.7796E+03	10	1.	-0.81
29	2.0000E+01	3.3050E+01	7.6900E+03	89	1.	-1.96
30	2.0169E+01	3.2352E+01	7.5368E+03	10	1.	-1.69
31	2.0210E+01	3.5351E+01	7.8249E+03	79	1.	2.63
32	2.1125E+01	2.6313E+01	6.5877E+03	10	1.	-2.59
33	2.1180E+01	2.9780E+01	6.9291E+03	79	1.	3.18
34	2.2105E+01	2.5115E+01	5.8436E+03	10	1.	-2.33
35	2.2724E+01	2.3312E+01	5.4242E+03	10	1.	-2.33
36	2.3170E+01	2.3510E+01	5.4702E+03	79	1.	3.79
37	2.3819E+01	2.0671E+01	4.8097E+03	10	1.	-1.70
38	2.4942E+01	1.7872E+01	4.1584E+03	10	1.	-3.82
39	2.5000E+01	1.7983E+01	4.1843E+03	10	1.	-2.61
40	2.5270E+01	1.8650E+01	4.3394E+03	79	1.	3.95
41	2.7470E+01	1.5350E+01	3.5716E+03	79	1.	6.94
42	3.0000E+01	1.1140E+01	2.5920E+03	89	1.	-1.93
43	3.0970E+01	1.0860E+01	2.5269E+03	79	1.	4.19
44	3.4720E+01	8.0300E+00	1.8684E+03	79	1.	3.73
45	3.7360E+01	6.4220E+00	1.4942E+03	79	1.	1.82
46	4.0000E+01	4.9379E+00	1.1488E+03	10	1.	-6.23
47	4.0000E+01	5.2003E+00	1.2100E+03	89	1.	-1.24
48	4.0120E+01	5.2970E+00	1.2325E+03	79	1.	1.40
49	4.0445E+01	5.0714E+00	1.1800E+03	90	1.	-0.83
50	4.0450E+01	2.6646E+01	6.2000E+03	90	1.	-1.38
51	5.0000E+01	1.4930E+01	3.4516E+03	89	1.	5.84
52	5.2360E+01	1.4440E+01	3.5599E+03	79	1.	3.50
53	5.7520E+01	1.1280E+01	2.6246E+03	79	1.	3.47
54	6.0000E+01	9.1477E+00	2.1284E+03	89	1.	-6.29
55	6.1130E+01	9.6070E+00	2.2353E+03	79	1.	3.50
56	6.6820E+01	7.5700E+00	1.7614E+03	79	1.	3.65
57	7.0820E+01	6.5250E+00	1.5182E+03	79	1.	4.43
58	7.7100E+01	5.3070E+00	1.2348E+03	79	1.	6.58
59	8.0000E+01	4.3769E+00	1.0184E+03	89	1.	-3.03
60	1.0000E+02	2.4118E+00	5.6117E+02	10	1.	-2.53
61	1.0000E+02	2.4287E+00	5.6511E+02	89	1.	-1.85
62	1.5000E+02	8.3127E-01	1.9342E+02	89	1.	-3.45
63	1.5000E+02	8.7790E-01	2.0427E+02	10	1.	1.97
64	2.0000E+02	4.2065E-01	9.9738E+01	89	1.	-1.87
65	3.0000E+02	1.9886E-01	4.6270E+01	89	1.	-0.27
66	4.0000E+02	1.3281E-01	3.0901E+01	10	1.	0.85
67	5.0000E+02	1.0265E-01	2.3885E+01	89	1.	0.21
68	6.0000E+02	8.6548E-02	2.0138E+01	89	1.	0.18
69	6.6200E+02	7.9604E-02	1.0522E+01	89	1.	0.00

70	7.0000E+02	7.6182E-02	1.7726E+01	89	1.	0.03
71	8.0000E+02	6.3424E-02	1.6037E+01	89	1.	-0.03
72	9.0000E+02	6.1467E-02	1.4767E+01	89	1.	-0.08
73	1.0000E+03	5.9165E-02	1.3766E+01	89	1.	-0.12

73 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR NEODYMIUM
CONVERSION CONSTANT IS 2.396E+02

Z = 60

K-EDGE	43.562					
L-EDGES	7.126	6.722	6.208			
M-EDGES	1.575	1.404	1.294	1.004	0.979	
1	2.0000E+00	3.3868E+03	8.1131E+05	10	1.	-3.53
2	3.0000E+00	1.2484E+03	2.9904E+05	10	1.	1.25
3	3.0000E+00	1.2679E+03	3.0372E+05	90	1.	2.84
4	4.0000E+00	6.0571E+02	1.4462E+05	90	1.	2.63
5	4.5090E+00	4.4166E+02	1.0580E+05	10	1.	2.07
6	5.9520E+00	3.4239E+02	8.2021E+04	10	1.	-0.46
7	5.0000E+00	3.1792E+02	7.6157E+04	10	1.	-4.29
8	5.3120E+00	2.7517E+02	6.5893E+04	10	1.	1.37
9	5.8950E+00	2.2251E+02	5.3303E+04	10	1.	1.95
10	5.9470E+00	2.1824E+02	5.2280E+04	10	1.	2.26
11	6.2000E+00	1.8127E+02	4.3423E+04	90	1.	-5.57
12	7.4720E+00	5.1434E+02	1.2321E+05	10	1.	1.66
13	7.6490E+00	4.8265E+02	1.1562E+05	10	1.	1.38
14	8.0000E+00	4.1114E+02	9.8490E+04	10	1.	-2.97
15	8.0410E+00	4.1432E+02	9.9250E+04	10	1.	-0.90
16	8.2650E+00	3.9615E+02	9.4897E+04	10	1.	1.84
17	8.6310E+00	3.4815E+02	8.3400E+04	10	1.	0.28
18	8.9050E+00	3.1970E+02	7.6584E+04	10	1.	-0.05
19	9.5720E+00	2.6593E+02	6.3704E+04	10	1.	0.47
20	1.0000E+01	2.3853E+02	5.7093E+04	10	1.	0.98
21	1.0030E+01	2.3118E+02	5.5380E+04	88	1.	-2.05
22	1.5000E+01	7.9388E+01	1.9017E+04	10	1.	-0.96
23	1.7444E+01	5.3358E+01	1.2782E+04	10	1.	0.15
24	1.9608E+01	3.8777E+01	9.2891E+03	10	1.	-0.28
25	2.0000E+01	3.7125E+01	8.8934E+03	10	1.	0.68
26	2.0000E+01	3.6749E+01	8.8032E+03	88	1.	-0.34
27	2.0169E+01	3.6356E+01	8.6529E+03	10	1.	0.02
28	2.1125E+01	3.1552E+01	7.5583E+03	10	1.	-0.56
29	2.2105E+01	2.8032E+01	6.7152E+03	10	1.	0.03
30	2.2724E+01	2.6017E+01	6.2324E+03	10	1.	0.12
31	2.3819E+01	2.3091E+01	5.5315E+03	10	1.	1.04
32	2.4942E+01	1.9969E+01	4.7875E+03	10	1.	-0.94
33	2.5000E+01	2.0103E+01	4.8156E+03	10	1.	0.36
34	3.0000E+01	1.2508E+01	2.9963E+03	88	1.	2.19
35	3.2640E+01	9.8100E+00	2.3500E+03	78	3.	1.03
36	4.0000E+01	5.5499E+00	1.3295E+03	10	1.	-0.82
37	4.0000E+01	5.8100E+00	1.3918E+03	90	1.	3.83
38	4.0000E+01	5.8309E+00	1.3968E+03	88	1.	4.20
39	4.1530E+01	4.8800E+00	1.1690E+03	78	3.	-3.45
40	4.2980E+01	4.5800E+00	1.0971E+03	78	3.	-0.58
41	4.3550E+01	4.5951E+00	1.1008E+03	90	1.	3.35
42	4.3570E+01	2.3411E+01	5.6082E+03	90	1.	-0.46
43	5.0000E+01	1.6131E+01	3.8643E+03	89	1.	-2.52
44	5.0000E+01	1.7552E+01	4.2047E+03	88	1.	6.06
45	5.1420E+01	1.5580E+01	3.7322E+03	78	3.	1.29
46	6.0000E+01	9.9756E+00	2.3896E+03	89	1.	-3.13
47	6.0000E+01	1.0562E+01	2.5300E+03	88	1.	2.56
48	5.8170E+01	7.2000E+00	1.7248E+03	78	3.	-1.85
49	7.9500E+01	4.8390E+00	1.1570E+03	78	3.	-1.22
50	8.0000E+01	4.8041E+00	1.1508E+03	89	1.	-0.12
51	8.0000E+01	4.8070E+00	1.1515E+03	88	1.	-0.06
52	8.8970E+01	3.6000E+00	8.6238E+02	78	3.	-0.64
53	9.7110E+01	2.9000E+00	6.9470E+02	78	3.	0.87
54	1.0300E+02	2.6501E+00	6.3484E+02	10	1.	-0.44
55	1.0000E+02	2.6691E+00	6.3938E+02	89	1.	0.27
56	1.0000E+02	2.6560E+00	6.3624E+02	88	1.	-0.22
57	1.5000E+02	9.1119E-01	2.1828E+02	89	1.	-3.02
58	1.5000E+02	9.5224E-01	2.3051E+02	10	1.	2.42
59	1.8036E+02	6.5800E-01	1.5762E+02	78	3.	9.60
60	1.8200E+02	5.6200E-01	1.3463E+02	78	3.	-5.02
61	2.0000E+02	4.6652E-01	1.1175E+02	89	1.	-2.37
62	2.0000E+02	4.7705E-01	1.1447E+02	88	1.	-0.06
63	3.0000E+02	2.1251E-01	5.0908E+01	89	1.	-1.27
64	3.0030E+02	2.1461E-01	5.1409E+01	88	1.	-0.30
65	4.0000E+02	1.3978E-01	3.5484E+01	10	1.	0.07
66	4.0000E+02	1.3888E-01	3.3270E+01	88	1.	-0.57
67	5.0000E+02	1.0670E-01	2.5575E+01	88	1.	-0.35
68	6.0000E+02	8.9335E-02	2.1393E+01	88	1.	-0.16
69	6.6200E+02	8.1936E-02	1.9621E+01	88	1.	-0.15

70	7.0000E+02	7.6260E-02	1.8747E+01	68	1.	-0.04
71	8.0000E+02	7.0490E-02	1.6886E+01	68	1.	-0.00
72	9.0000E+02	5.4771E-02	1.5516E+01	68	1.	0.08
73	1.0000E+03	6.0263E-02	1.4436E+01	68	1.	0.11

73 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR SAMARIUM

Z = 62

CONVERSION CONSTANT IS 2.496E+02

K-EDGES	46.835					
L-EDGES	7.731	7.512	6.717	1.108	1.082	
M-EDGES	1.729	1.542	1.421			
1	1.0000E+00	2.8271E+03	7.0579E+05	10	1.	5.40
2	1.0001E+00	2.5335E+03	5.3245E+05	90	1.	-5.53
3	2.0000E+00	3.7974E+03	9.4802E+05	10	1.	-2.89
4	3.0000E+00	1.3770E+03	3.4575E+05	10	1.	1.24
5	3.0000E+00	1.4082E+03	3.5154E+05	90	1.	3.53
6	4.5990E+00	4.7812E+02	1.1936E+05	10	1.	1.15
7	4.9320E+00	3.6837E+02	9.1961E+04	10	1.	-1.76
8	5.0000E+00	3.4504E+02	8.6138E+04	10	1.	-4.6
9	..00000E+00	3.6445E+02	9.0983E+04	90	1.	0.69
10	5.4120E+00	2.9827E+02	7.4465E+04	10	1.	1.07
11	5.8950E+00	2.4473E+02	6.0997E+04	10	1.	3.15
12	5.9470E+00	2.3559E+02	5.0881E+04	10	1.	1.72
13	6.4000E+00	1.9730E+02	4.9256E+04	10	1.	2.86
14	6.4900E+00	1.3948E+02	4.7303E+04	10	1.	2.38
15	6.7100E+00	1.6308E+02	4.0712E+04	90	1.	-4.03
16	6.7140E+00	1.6316E+02	4.0731E+04	90	1.	-3.84
17	8.0000E+00	4.4189E+02	1.1032E+05	10	1.	-3.92
18	8.0410E+00	4.4855E+02	1.1198E+05	10	1.	-1.15
19	8.2650E+00	4.3373E+02	1.0828E+05	10	1.	2.77
20	8.6310E+00	3.7863E+02	9.4524E+04	10	1.	0.56
21	8.9050E+00	3.4734E+02	8.6711E+04	10	1.	0.17
22	9.5720E+00	2.8927E+02	7.2216E+04	10	1.	0.90
23	1.0000E+01	2.6308E+02	6.5677E+04	10	1.	2.95
24	1.0000E+01	2.5228E+02	6.2980E+04	89	1.	-1.28
25	1.3000E+01	1.2780E+02	3.1905E+04	87	2.	0.58
26	1.5000E+01	8.6558E+01	2.1609E+04	10	1.	-0.44
27	1.7444E+01	5.8310E+01	1.4557E+04	10	1.	0.58
28	1.9698E+01	4.2368E+01	1.0577E+04	10	1.	-0.12
29	2.0000E+01	4.0455E+01	1.0107E+04	10	1.	0.62
30	2.0000E+01	4.0130E+01	1.0018E+04	87	2.	-0.27
31	2.0000E+01	2.1585E+01	1.0082E+04	89	1.	0.37
32	2.4942E+01	2.2136E+01	5.5247E+03	87	1.	-0.23
33	2.0169E+01	3.9397E+01	9.8352E+03	10	1.	0.17
34	2.1225E+01	3.4551E+01	8.6255E+03	10	1.	-0.42
35	2.2105E+01	3.0746E+01	7.6756E+03	10	1.	0.16
36	2.2724E+01	2.0531E+01	7.1226E+03	10	1.	0.13
37	2.3819E+01	2.5342E+01	6.3266E+03	10	1.	0.96
38	2.4942E+01	2.1935E+01	5.4761E+03	10	1.	-1.10
39	2.5000E+01	2.2080E+01	5.5121E+03	10	1.	0.17
40	3.0000E+01	1.3440E+01	3.3552E+03	87	2.	-0.84
41	3.0000E+01	1.3779E+01	3.4400E+03	89	1.	1.67
42	4.0000E+01	6.1307E+00	1.5305E+03	10	1.	-2.39
43	4.0000E+01	6.4211E+00	1.6030E+03	89	1.	2.23
44	4.6820E+01	4.1729E+00	1.0418E+03	90	1.	0.85
45	4.6844E+01	2.0831E+01	5.2004E+03	90	1.	-1.47
46	5.0000E+01	1.8632E+01	4.6514E+03	90	1.	4.26
47	5.0000E+01	1.8458E+01	4.6104E+03	90	1.	3.34
48	5.0000E+01	1.7255E+01	4.3075E+03	89	1.	-3.46
49	6.0000E+01	1.1696E+01	2.6702E+03	89	1.	-3.67
50	8.0000E+01	5.1862E+00	1.2947E+03	89	1.	0.23
51	1.0000E+02	2.8644E+00	7.1499E+02	10	1.	0.21
52	1.0000E+02	2.8854E+00	7.2033E+02	89	1.	0.95
53	1.5000E+02	1.0379E+00	2.5911E+02	10	1.	3.39
54	1.5000E+02	9.8563E-01	2.4556E+02	89	1.	-2.02
55	2.0000E+02	5.0054E-01	1.2496E+02	89	1.	-1.36
56	3.0000E+02	2.2429E-01	5.5994E+01	89	1.	-0.50
57	4.0000E+02	1.4541E-01	3.6301E+01	10	1.	0.59
58	5.0000E+02	1.0984E-01	2.7422E+01	89	1.	-0.05
59	6.0000E+02	9.1186E-02	2.2764E+01	89	1.	0.01
60	6.6200E+02	8.3285E-02	2.0792E+01	89	1.	-0.11
61	7.0000E+02	7.9431E-02	1.9830E+01	89	1.	-0.04
62	8.0000E+02	7.1309E-02	1.7802E+01	89	1.	-0.00
63	9.0000E+02	6.5301E-02	1.6302E+01	89	1.	-0.01
64	1.0000E+03	6.0673E-02	1.5132E+01	89	1.	-0.01

64 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR GADOLINIUM

Z = 64

CONVERSION CONSTANT IS 2.611E+02

L-EDGES	5.1240	8.376	7.931	7.243	1.221	1.181	
M-EDGES	7.362	1.690	1.544				
KEY	CM2/GM	BARNs/AT	SOURCE	WEIGHT	DIFF		
1	1.0000E+00	3.0678E+03	8.0105E+05	10	1.	4.61	
2	1.0001E+00	2.7903E+03	7.2859E+05	90	1.	-4.83	
3	2.0000E+00	4.3518E+03	1.1363E+06	90	1.	3.59	
4	2.0000E+00	4.2355E+03	1.1062E+06	10	1.	0.65	
5	2.9840E+00	1.4260E+03	3.7236E+05	82	3.	-4.11	
6	3.0000E+00	1.4982E+03	3.9122E+05	10	1.	2.16	
7	3.0000E+00	1.5510E+03	4.0501E+05	90	1.	5.76	
8	3.3140E+00	1.1067E+03	2.8898E+05	82	3.	-2.29	
9	3.6920E+00	8.5200E+02	2.2247E+05	82	3.	-0.48	
10	1.0000E+00	7.1343E+02	1.8629E+05	90	1.	2.54	
11	-0.0890E+00	6.5750E+02	1.7165E+05	82	3.	0.91	
12	4.5110E+00	5.2000E+02	1.3578E+05	82	3.	1.98	
13	4.9530E+00	4.0800E+02	1.0564E+05	82	3.	1.83	
14	5.0000E+00	3.7257E+02	9.7285E+04	10	1.	-4.73	
15	5.4140E+00	3.2250E+02	8.4211E+04	82	3.	1.21	
16	7.2780E+00	1.4646E+02	3.8244E+04	90	1.	-3.28	
17	7.2780E+00	3.7590E+02	9.8155E+04	82	3.	2.13	
18	0.0400E+00	4.2900E+02	1.1202E+05	82	3.	0.45	
19	0.6390E+00	4.0850E+02	1.0667E+05	82	3.	-0.11	
20	1.0000E+01	2.8911E+02	7.5492E+04	10	1.	4.19	
21	1.0000E+01	2.7096E+02	7.0752E+04	90	1.	-2.35	
22	1.5000E+01	9.3545E+01	2.4427E+04	10	1.	-0.61	
23	2.0000E+01	4.3759E+01	1.1426E+04	10	1.	0.38	
24	2.0000E+01	4.3420E+01	1.1338E+04	39	3.	-0.40	
25	2.4942E+01	2.3850E+01	6.2277E+03	39	3.	-1.02	
26	2.9000E+01	2.4033E+01	6.2754E+03	10	1.	0.35	
27	2.5030E+01	2.3830E+01	6.2225E+03	48	3.	-0.49	
28	3.0000E+01	1.4400E+01	3.7681E+03	39	3.	-2.40	
29	3.0046E+01	1.5353E+01	4.0082E+03	48	3.	4.41	
30	3.2644E+01	1.2371E+01	3.2248E+03	78	3.	4.89	
31	3.5060E+01	9.9300E+00	2.5929E+03	48	3.	2.01	
32	4.0000E+01	6.7120E+00	1.7526E+03	10	1.	-2.38	
33	4.0000E+01	6.6932E+00	1.7477E+03	39	3.	-2.66	
34	4.0040E+01	5.9490E+00	1.8145E+03	19	3.	1.34	
35	4.1530E+01	6.2400E+00	1.6294E+03	78	3.	0.25	
36	4.2980E+01	5.6100E+00	1.4649E+03	78	3.	-1.33	
37	4.5010E+01	5.1870E+00	1.3335E+03	48	3.	1.41	
38	5.0242E+01	1.8301E+01	4.7787E+03	90	1.	-4.62	
39	5.0250E+01	1.8515E+01	4.8347E+03	30	1.	-3.46	
40	5.1420E+01	1.8470E+01	4.8229E+03	78	3.	2.15	
41	5.5040E+01	1.5430E+01	4.0291E+03	40	5.	1.55	
42	6.0030E+01	1.2410E+01	5.2405E+03	40	5.	1.92	
43	6.8170E+01	8.5200E+00	2.2247E+03	78	3.	-2.17	
44	7.0040E+01	8.1800E+00	2.1560E+03	40	5.	0.05	
45	7.9500E+01	5.7000E+00	1.4884E+03	78	3.	-2.09	
46	7.9960E+01	5.6870E+00	1.4850E+03	40	5.	-0.83	
47	8.0000E+01	5.5535E+00	1.4502E+03	89	1.	-3.03	
48	8.9920E+01	4.1650E+00	1.0875E+03	40	5.	-0.64	
49	8.8970E+01	4.3400E+00	1.1333E+03	78	3.	0.65	
50	9.7110E+01	3.4500E+00	9.0086E+02	78	3.	0.92	
51	1.0000E+02	3.0705E+00	8.0176E+02	10	1.	-2.56	
52	1.0000E+02	3.0950E+00	8.0815E+02	89	1.	-2.19	
53	1.0006E+02	3.1273E+00	8.1652E+02	40	5.	-1.02	
54	1.1487E+02	2.2190E+00	5.8204E+02	40	5.	1.88	
55	1.1303E+02	1.5750E+00	4.1126E+02	40	5.	0.10	
56	1.1560E+02	1.1827E+00	3.9885E+02	48	3.	-0.16	
57	1.1600E+02	1.1110E+00	2.9010E+02	10	1.	1.09	
58	1.1503E+02	1.0546E+00	2.7558E+02	89	1.	-4.04	
59	1.1608E+02	7.1400E-01	1.8644E+02	78	3.	3.00	
60	1.1620E+02	7.1700E-01	1.8722E+02	78	3.	5.00	
61	2.0000E+02	5.5660E-01	1.4554E+02	90	1.	1.72	
62	2.0000E+02	5.3593E-01	1.3942E+02	89	1.	-2.42	
63	2.0830E+02	4.9430E-01	1.2907E+02	48	3.	-0.97	
64	2.7910E+02	2.6690E-01	7.0215E+01	48	3.	-0.75	
65	3.0000E+02	2.3569E-01	6.1544E+01	89	1.	-0.41	
66	4.0000E+02	1.5065E-01	3.9337E+01	10	1.	1.04	
67	4.1180E+02	1.4040E-01	3.6661E+01	48	3.	-1.98	
68	5.0000E+02	1.1259E-01	2.9400E+01	89	1.	0.40	
69	6.0000E+02	9.2752E-02	2.4219E+01	89	1.	0.38	

70	6.6200E+02	8.4402E-02	2.2039E+01	89	1.	0.15
71	7.0000E+02	8.0344E-02	2.0980E+01	89	1.	0.19
72	8.0000E+02	7.1320E-02	1.8754E+01	89	1.	0.14
73	9.0000E+02	6.5587E-02	1.7126E+01	89	1.	0.02
74	1.0000E+03	6.0746E-02	1.5862E+01	89	1.	-0.05

74 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR TERBIUM
CONVERSION CONSTANT IS $2.639E+02$

Z = 65

K-EDGE	51.990	L-EDGES	8.708	M-EDGES	8.252	7.515	7.161	1.280	1.240
KEV	CK2/GM				BARNs/AT	SOURCE	WEIGHT	DIFF	
1	1.0000E+00	5.2284E+03	8.5196E+05						
2	1.0001E+00	2.9849E+03	7.8158E+05						
3	2.0000E+00	4.5273E+03	1.1947E+06						
4	3.0000E+00	1.5759E+03	4.1586E+05						
5	3.0000E+00	1.7211E+03	4.5417E+05						
6	4.0000E+00	7.5023E+02	1.9798E+05						
7	4.5090E+00	5.3779E+02	1.4192E+05						
8	4.9320E+00	4.1505E+02	1.0953E+05						
9	5.0000E+00	3.9163E+02	1.0335E+05						
10	5.4120E+00	3.3659E+02	8.8825E+04						
11	5.8950E+00	2.7824E+02	7.3425E+04						
12	5.9470E+00	2.6502E+02	6.9936E+04						
13	5.4000E+00	2.2129E+02	5.8939E+04						
14	6.4900E+00	2.1235E+02	5.6037E+04						
15	6.9250E+00	1.7639E+02	4.7233E+04						
16	7.0580E+00	1.6953E+02	4.4686E+04						
17	7.1720E+00	1.4810E+02	3.9082E+04						
18	7.5130E+00	1.4771E+02	3.8979E+04						
19	8.9050E+00	3.9270E+02	1.0363E+05						
20	9.5720E+00	3.2744E+02	8.6408E+04						
21	1.0000E+01	3.0668E+02	8.0931E+04						
22	1.0000E+01	2.8720E+02	7.5790E+04						
23	1.5000E+01	9.8249E+01	2.5927E+04						
24	1.5000E+01	1.0210E+02	2.5943E+04						
25	1.7444E+01	6.6428E+01	1.7330E+04						
26	1.9608E+01	4.8273E+01	1.2739E+04						
27	2.0000E+01	4.5971E+01	1.2131E+04						
28	2.0000E+01	4.7270E+01	1.2474E+04						
29	2.0000E+01	4.6231E+01	1.2200E+04						
30	2.0169E+01	4.4905E+01	1.1850E+04						
31	2.1000E+01	4.1730E+01	1.1004E+04						
32	2.1125E+01	3.9478E+01	1.0418E+04						
33	2.2105E+01	3.5316E+01	9.2905E+03						
34	2.2724E+01	3.2165E+01	8.6196E+03						
35	2.3819E+01	4.4038E+01	7.6630E+03						
36	2.4942E+01	2.5195E+01	6.6488E+03						
37	2.4942E+01	2.5540E+01	6.7598E+03						
38	2.5000E+01	2.5332E+01	6.6849E+03						
39	3.0000E+01	1.5590E+01	4.1141E+03						
40	3.0000E+01	1.5874E+01	4.1890E+03						
41	4.0000E+01	7.0961E+00	1.8726E+03						
42	4.0000E+01	7.2760E+00	1.9201E+03						
43	4.0000E+01	7.4007E+00	1.9530E+03						
44	4.4000E+01	5.6650E+00	1.4950E+03						
45	5.0000E+01	4.0547E+00	1.0700E+03						
46	5.1994E+01	3.7390E+00	9.8670E+02						
47	5.2000E+01	1.7686E+01	4.6673E+03						
48	6.0000E+01	1.2785E+01	3.5740E+03						
49	6.0000E+01	1.1855E+01	3.1285E+03						
50	8.0000E+01	5.8078E+00	1.5326E+03						
51	1.0000E+02	3.2128E+00	8.4782E+02						
52	1.0000E+02	3.2394E+00	8.5486E+02						
53	1.5000E+02	1.7118E+00	3.0658E+02						
54	1.5000E+02	1.1040E+00	2.9134E+02						
55	2.0000E+02	5.5765E-01	1.4716E+02						
56	3.0000E+02	2.4450E-01	6.4522E+01						
57	4.0000E+02	1.5521E-01	4.0960E+01						
58	5.0000E+02	1.1538E-01	3.0448E+01						
59	6.0000E+02	9.4668E-02	2.4982E+01						
60	6.6200E+02	8.5991E-02	2.2692E+01						
61	7.0000E+02	8.1781E-02	2.1582E+01						
62	8.0000E+02	7.2952E-02	1.9251E+01						
63	9.0000E+02	6.6523E-02	1.7555E+01						
64	1.0000E+03	6.1544E-02	1.6241E+01						

64 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR HOLMIUM

Z • 67

CONVERSION CONSTANT IS 2.739E+02

L-EDGES	53.618	9.395	8.919	8.071	1.390	1.345	
M-EDGES	2.127		1.922	1.739			
KEV	CM2/GM		BARNs/AT	SOURCE	WEIGHT	DIFF	
1	1.0000E+00	3.5074E+03	9.6059E+05	10	1.	2.87	
2	1.0001E+00	3.2966E+03	9.0286E+05	90	1.	-3.29	
3	3.0000E+00	1.7035E+03	4.6650E+05	10	1.	-2.24	
4	3.0000E+00	1.8140E+03	4.9680E+05	90	1.	4.11	
5	4.0000E+00	8.1414E+02	2.2297E+05	90	1.	0.53	
6	4.5090E+00	5.7929E+02	1.5865E+05	10	1.	-1.68	
7	4.9320E+00	4.4970E+02	1.2316E+05	10	1.	-3.20	
8	5.0000E+00	4.2551E+02	1.1648E+05	10	1.	-5.87	
9	5.4120E+00	3.6340E+02	9.9524E+04	10	1.	0.02	
10	5.8950E+00	3.0075E+02	8.2362E+04	10	1.	3.72	
11	5.9470E+00	2.8598E+02	7.8321E+04	10	1.	0.94	
12	6.4100E+00	2.3841E+02	6.5295E+04	10	1.	2.11	
13	6.4900E+00	2.2872E+02	6.2640E+04	10	1.	1.65	
14	6.9250E+00	1.9356E+02	5.3011E+04	10	1.	1.99	
15	7.0580E+00	1.8206E+02	4.9860E+04	10	1.	3.84	
16	7.1720E+00	1.5967E+02	4.3730E+04	10	1.	2.58	
17	7.6490E+00	1.5025E+02	4.1149E+04	10	1.	2.72	
18	8.0000E+00	1.2065E+02	3.2879E+04	10	1.	-7.72	
19	8.0410E+00	1.2457E+02	3.4116E+04	10	1.	-2.96	
20	8.0690E+00	1.3040E+02	3.5713E+04	90	1.	2.50	
21	9.5720E+00	5.5368E+02	9.6863E+04	10	1.	-2.82	
22	1.0000E+01	3.3955E+02	9.2993E+04	10	1.	5.03	
23	1.5000E+01	1.0627E+02	2.9103E+04	10	1.	-1.77	
24	1.5000E+01	1.0760E+02	2.9469E+04	87	2.	-0.53	
25	1.7441E+01	7.2034E+01	1.9728E+04	10	1.	-0.10	
26	1.9608E+01	5.2375E+01	1.4344E+04	10	1.	-0.67	
27	2.0000E+01	4.9765E+01	1.5633E+04	10	1.	-0.49	
28	2.0000E+01	5.0300E+01	1.3776E+04	87	2.	0.57	
29	2.0169E+01	4.8720E+01	1.3343E+04	10	1.	-0.37	
30	2.1125E+01	4.2802E+01	1.1747E+04	10	1.	-0.73	
31	2.2105E+01	3.6765E+01	1.0488E+04	10	1.	0.02	
32	2.2724E+01	5.5529E+01	9.7334E+03	10	1.	-0.12	
33	2.3819E+01	3.1597E+01	8.6555E+03	10	1.	0.67	
34	2.4942E+01	2.7475E+01	7.5245E+03	10	1.	-1.08	
35	2.4942E+01	2.7355E+01	7.4904E+03	87	2.	-1.53	
36	2.5000E+01	2.7591E+01	7.5556E+03	10	1.	-0.05	
37	3.0000E+01	1.6830E+01	4.6111E+03	87	2.	-1.55	
38	3.2640E+01	1.4556E+01	3.9848E+03	78	3.	6.43	
39	4.0000E+01	7.7751E+00	2.1294E+03	10	1.	-3.43	
40	4.0000E+01	7.9320E+00	2.1724E+03	87	2.	-1.49	
41	4.1530E+01	7.3100E+00	2.0020E+03	78	3.	0.06	
42	4.2980E+01	6.6300E+00	1.8158E+03	78	3.	-0.84	
43	4.4000E+01	6.1220E+00	1.6756E+03	87	2.	-2.73	
44	5.1420E+01	4.3500E+00	1.1913E+03	78	3.	2.90	
45	5.5610E+01	3.3454E+00	9.1621E+02	90	1.	-3.54	
46	5.5630E+01	1.5898E+01	4.3541E+03	90	1.	-1.95	
47	6.0000E+01	1.2650E+01	3.4591E+03	89	1.	-5.95	
48	6.8170E+01	9.9600E+00	2.7278E+03	78	3.	3.23	
49	7.9500E+01	6.4900E+00	1.7774E+03	78	3.	-0.17	
50	8.0000E+01	6.2317E+00	1.7067E+03	89	1.	-2.59	
51	8.8970E+01	4.8700E+00	1.3338E+03	78	3.	0.73	
52	9.7110E+01	4.0200E+00	1.1010E+03	78	3.	4.57	
53	1.0000E+02	3.4508E+00	9.4508E+02	10	1.	-3.11	
54	1.0000E+02	3.4822E+00	9.5367E+02	89	1.	-2.22	
55	1.5000E+02	1.2464E+00	3.4136E+02	10	1.	0.39	
56	1.5000E+02	1.1877E+00	3.2527E+02	89	1.	-4.54	
57	1.8086E+02	8.0600E-01	2.2674E+02	78	3.	3.27	
58	1.8200E+02	7.4000E-01	2.0267E+02	78	3.	-3.73	
59	2.0000E+02	6.1908E-01	1.6955E+02	90	1.	0.80	
60	2.0000E+02	5.9756E-01	1.6365E+02	89	1.	-2.71	
61	3.0000E+02	2.5870E-01	-0.0852E+01	89	1.	-0.49	
62	4.0000E+02	1.6203E-01	4.4375E+01	10	1.	1.04	
63	5.0000E+02	1.1918E-01	3.2640E+01	89	1.	0.41	
64	6.0000E+02	9.7089E-02	2.6590E+01	89	1.	0.35	
65	6.6200E+02	8.7880E-02	2.4068E+01	89	1.	0.08	
66	7.0000E+02	8.3428E-02	2.2848E+01	89	1.	0.11	
67	8.0000E+02	7.4110E-02	2.0297E+01	89	1.	0.03	
68	9.0000E+02	6.7753E-02	1.8449E+01	89	1.	-0.15	
69	1.0000E+03	6.2151E-02	1.7024E+01	89	1.	-0.26	

69 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR THORIUM

Z = 69

INVERSION CONSTANT IS 2.805E+02

K-E.DGES	59.390	L-E.DGES	10.116	9.618	8.648	1.515	1.471
M-E.DGES	2.317			2.093	1.888		
KEY	CM2/GM		BARNs/AT		SOURCE	WEIGHT	DIFF
1	1.0000E+00	3.8452E+03	1.0786E+06	10	1.	-0.28	
2	3.0000E+00	1.8481E+03	5.1842E+05	10	1.	-2.96	
3	3.0000E+00	2.0193E+03	5.6645E+05	90	1.	6.02	
4	4.0000E+00	8.9211E+02	2.5025E+05	90	1.	0.79	
5	4.5090E+00	6.3056E+02	1.7688E+05	10	1.	-2.07	
6	4.9320E+00	4.9349E+02	1.3843E+05	10	1.	-2.79	
7	5.0000E+00	4.6720E+02	1.3106E+05	10	1.	-4.57	
8	7.4120E+00	3.9652E+02	1.1129E+05	10	1.	-0.12	
9	8.8950E+00	3.2759E+02	9.1894E+04	10	1.	3.41	
10	5.9470E+00	3.1215E+02	8.7558E+04	10	1.	0.84	
11	6.0000E+00	2.9244E+02	8.2117E+04	90	1.	-3.19	
12	6.4000E+00	2.5987E+02	7.2896E+04	10	1.	1.88	
13	5.4900E+00	2.4930E+02	6.9931E+04	10	1.	1.40	
14	6.9250E+00	2.1155E+02	5.9344E+04	10	1.	2.05	
15	7.0583E+00	1.9841E+02	5.5659E+04	10	1.	0.61	
16	7.4720E+00	1.7439E+02	4.8834E+04	10	1.	2.50	
17	7.6490E+00	1.6373E+02	4.5928E+04	10	1.	2.49	
18	8.0000E+00	1.3420E+02	3.7646E+04	10	1.	-5.55	
19	8.0000E+00	1.4031E+02	3.9359E+04	90	1.	-1.25	
20	8.0410E+00	1.3770E+02	3.3627E+04	10	1.	-1.78	
21	8.2650E+00	1.3144E+02	3.3870E+04	10	1.	0.73	
22	8.6310E+00	1.1648E+02	3.2673E+04	10	1.	-0.06	
23	8.6460E+00	1.1084E+02	3.3337E+04	90	1.	2.44	
24	1.0120E+01	3.4177E+02	9.5870E+04	89	1.	2.19	
25	1.5000E+01	1.1595E+02	3.2526E+04	10	1.	-1.69	
26	1.7444E+01	7.8809E+01	2.2107E+04	10	1.	-0.19	
27	1.9608E+01	5.7355E+01	1.6089E+04	10	1.	-0.98	
28	2.0000E+01	5.5184E+01	1.5480E+04	89	1.	0.39	
29	2.0000E+01	5.4597E+01	1.5259E+04	10	1.	-1.04	
30	2.0169E+01	5.3336E+01	1.4952E+04	10	1.	-0.76	
31	2.1125E+01	4.0176E+01	1.3189E+04	10	1.	-1.03	
32	2.2105E+01	4.2009E+01	1.1784E+04	10	1.	-0.23	
33	2.2724E+01	3.8982E+01	1.0935E+04	10	1.	-0.36	
34	2.3819E+01	3.4673E+01	9.7263E+03	10	1.	0.41	
35	2.4942E+01	3.0225E+01	8.4785E+03	10	1.	-1.10	
36	2.5000E+01	3.0312E+01	8.5030E+03	10	1.	-0.21	
37	3.0000E+01	1.9072E+01	5.3500E+03	89	1.	1.50	
38	3.0000E+01	1.8867E+01	5.2925E+03	87	2.	0.41	
39	3.0000E+01	1.8990E+01	5.3270E+03	87	2.	1.07	
40	3.5000E+01	1.2600E+01	3.5345E+03	87	2.	0.73	
41	3.5000E+01	1.2574E+01	3.5272E+03	87	2.	0.53	
42	4.0000E+01	8.5928E+00	2.4104E+03	10	1.	-2.61	
43	4.0000E+01	8.9015E+00	2.4970E+03	89	1.	1.89	
44	4.4000E+01	6.9380E+00	1.9462E+03	87	2.	0.90	
45	4.4000E+01	6.9460E+00	1.9484E+03	87	2.	1.02	
46	5.0000E+01	4.9124E+00	1.3780E+03	89	1.	-0.54	
47	5.9300E+01	3.1137E+00	8.7344E+02	90	1.	-2.35	
48	5.9401E+01	1.4353E+01	4.0209E+03	90	1.	-3.71	
49	5.9500E+01	1.4511E+01	4.0706E+03	90	1.	-1.38	
50	6.0000E+01	1.5033E+01	4.2171E+03	90	1.	4.42	
51	8.0000E+01	6.7497E+00	1.8934E+03	89	1.	-0.13	
52	1.0000E+02	3.7412E+00	1.1495E+03	10	1.	-0.23	
53	1.0000E+02	3.7788E+00	1.0600E+03	89	1.	0.79	
54	1.5000E+02	1.3500E+00	3.7868E+02	10	1.	2.64	
55	1.5000E+02	1.2907E+00	3.6207E+02	89	1.	-1.87	
56	2.0000E+02	6.4726E-01	1.8156E+02	89	1.	-1.24	
57	3.0000E+02	2.7792E-01	7.7708E+01	89	1.	-0.57	
58	4.0000E+02	1.7130E-01	4.8051E+01	10	1.	0.62	
59	5.0000E+02	1.2480E-01	3.5009E+01	89	1.	-0.03	
60	6.0000E+02	1.0887E-01	2.8296E+01	89	1.	0.02	
61	6.6200E+02	9.0993E-02	2.5525E+01	89	1.	-0.12	
62	7.0000E+02	8.6232E-02	2.4189E+01	89	1.	-0.03	
63	8.0000E+02	7.6290E-02	2.1400E+01	89	1.	-0.03	
64	9.0000E+02	6.9097E-02	1.9383E+01	89	1.	-0.03	
65	1.0000E+03	6.3575E-02	1.7834E+01	89	1.	-0.03	

65 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR YTTERBIUM

Z = 70

CONVERSION CONSTANT IS 2.873E+02

L-EDGE	61.532					
L-EDGES	10.488	9.978	8.943	1.578	1.528	
M-EDGES	2.398	2.171	1.951			
KEY	CME/GM	BARNES/AT	SOURCE	WEIGHT	DIFF	
1	1.0000E+00	3.9723E+03	1.1413E+06	10	1.	3.44
2	1.0000E+00	4.0412E+03	1.1611E+06	90	1.	5.23
3	1.0001E+00	3.8394E+03	1.1031E+06	90	1.	0.00
4	1.5000E+00	1.5101E+03	4.3389E+05	10	1.	5.76
5	1.5000E+00	1.4926E+03	4.0301E+05	89	1.	-5.62
6	3.0000E+00	1.8956E+03	5.4463E+05	10	1.	-3.44
7	3.0000E+00	2.1020E+03	6.0396E+05	90	1.	7.08
8	4.0000E+00	9.2155E+02	2.6478E+05	90	1.	0.97
9	4.5093E+00	6.4952E+02	1.8662E+05	10	1.	-2.18
10	4.9320E+00	5.1061E+02	1.4671E+05	10	1.	-2.42
11	6.0000E+00	4.8347E+02	1.3891E+05	10	1.	-4.25
12	5.4120E+00	4.0895E+02	1.1750E+05	10	1.	-0.14
13	5.8950E+00	3.3778E+02	9.6908E+04	10	1.	3.21
14	5.9470E+00	3.2200E+02	9.2517E+04	10	1.	0.84
15	6.4500E+00	2.6793E+02	7.6982E+04	10	1.	1.81
16	5.4930E+00	2.5704E+02	7.3852E+04	10	1.	1.33
17	6.9250E+00	2.1834E+02	6.2733E+04	10	1.	2.07
18	7.0000E+00	1.9820E+02	5.6947E+04	87	2.	-4.68
19	7.0580E+00	2.0466E+02	5.9804E+04	10	1.	0.58
20	7.4720E+00	1.7949E+02	5.1570E+04	10	1.	2.41
21	7.6490E+00	1.6876E+02	4.8489E+04	10	1.	2.38
22	8.0000E+00	1.3994E+02	4.0207E+04	10	1.	-4.56
23	8.4100E+00	1.4284E+02	4.0471E+04	10	1.	-1.27
24	8.2650E+00	1.3570E+02	3.8989E+04	10	1.	0.78
25	8.6310E+00	1.2055E+02	3.4636E+04	10	1.	0.24
26	8.9500E+00	1.1263E+02	3.2362E+04	10	1.	1.59
27	8.9380E+00	1.1196E+02	3.2153E+04	90	1.	1.90
28	8.9400E+00	1.1154E+02	3.1990E+04	90	1.	1.45
29	1.5000E+01	1.1949E+02	3.4331E+04	10	1.	0.54
30	1.7444E+01	8.1324E+01	2.3356E+04	10	1.	1.40
31	1.3608E+01	5.9213E+01	1.7016E+04	10	1.	0.04
32	2.0000E+01	5.6728E+01	1.6127E+04	10	1.	-0.20
33	2.0000E+01	5.8234E+01	1.6732E+04	90	1.	3.54
34	2.0000E+01	5.4680E+01	1.5711E+04	87	2.	-2.78
35	2.0169E+01	5.5064E+01	1.5821E+04	10	1.	0.11
36	2.1125E+01	4.8562E+01	1.3953E+04	10	1.	-0.23
37	2.2105E+01	4.3404E+01	1.2471E+04	10	1.	0.49
38	2.2724E+01	4.0279E+01	1.1573E+04	10	1.	0.29
39	2.3819E+01	3.5827E+01	1.0294E+04	10	1.	0.96
40	2.4942E+01	3.1274E+01	8.9857E+03	10	1.	-0.55
41	2.4942E+01	3.0570E+01	8.7834E+03	87	2.	-2.79
42	2.5000E+01	3.1540E+01	9.0048E+03	10	1.	0.27
43	3.0000E+01	1.9540E+01	5.6145E+03	87	2.	0.62
44	3.0000E+01	1.9733E+01	5.6698E+03	90	1.	1.62
45	3.2640E+01	1.6330E+01	4.6920E+03	78	3.	5.13
46	3.5000E+01	1.3000E+01	3.7532E+03	87	2.	0.60
47	4.0000E+01	8.9109E+00	2.5603E+03	10	1.	-2.20
48	4.0000E+01	8.7660E+00	2.5187E+03	87	2.	-3.79
49	4.0000E+01	9.2105E+00	2.6487E+03	90	1.	1.17
50	4.1530E+01	6.1600E+00	2.3445E+03	78	3.	-1.10
51	4.2980E+01	7.4200E+00	2.1319E+03	78	3.	-1.56
52	4.4000E+01	7.1780E+00	2.0624E+03	87	2.	1.29
53	5.0000E+01	5.0921E+00	1.4651E+03	90	1.	0.31
54	5.1420E+01	4.7600E+00	1.3677E+03	78	3.	0.91
55	6.0000E+01	3.1651E+00	9.1514E+02	90	1.	0.77
56	8.8170E+01	1.0780E+01	3.0973E+03	78	3.	5.90
57	9.9500E+01	7.0500E+00	2.0285E+03	78	3.	-0.81
58	8.0000E+01	6.9825E+00	2.0062E+03	90	1.	-0.39
59	8.0000E+01	6.9577E+00	1.9916E+03	89	1.	-1.11
60	8.8973E+01	5.2100E+00	1.4969E+03	78	3.	-2.67
61	9.7110E+01	4.3200E+00	1.2412E+03	78	3.	0.66
62	1.0330E+02	3.8438E+00	1.1044E+03	10	1.	-3.59
63	1.0000E+02	3.8845E+00	1.1161E+03	89	1.	-2.57
64	1.5000E+02	1.3281E+00	3.8159E+02	89	1.	-6.60
65	1.5000E+02	1.3863E+00	3.9831E+02	89	1.	-2.50
66	1.8086E+02	9.2600E-01	2.6606E+02	10	1.	3.43
67	1.8200E+02	5.5000E-01	2.7296E+02	78	3.	7.74
68	2.0000E+02	6.8376E-01	1.9646E+02	90	1.	-2.09
69	2.0000E+02	6.6501E-01	1.9107E+02	89	1.	-5.55

70	3.0000E+02	2.8315E-01	8.1555E+01	89	1.	-2.92
71	3.0000E+02	2.8705E-01	8.2476E+01	90	1.	-1.59
72	4.0000E+02	1.7399E-01	4.9991E+01	10	1.	-0.66
73	5.0000E+02	1.2615E-01	3.6246E+01	89	1.	-0.54
74	6.0000E+02	1.0160E-01	2.9191E+01	89	1.	-0.11
75	6.6200E+02	9.1492E-02	2.6288E+01	89	1.	-0.15
76	7.0000E+02	8.6528E-02	2.4899E+01	89	1.	-0.00
77	8.0000E+02	7.6144E-02	2.1975E+01	89	1.	0.11
78	9.0000E+02	6.9162E-02	1.9872E+01	89	1.	0.08
79	1.0000E+03	6.3554E-02	1.8260E+01	89	1.	0.07

79 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR HAFNIUM

2 • 72

CONVERSION CONSTANT IS 2.964E+02

K-EDGES	65.351					
L-EDGES	11.272	10.739	9.561			
M-EDGES	2.612	2.564	2.110	1.718	1.662	
	KEV	CM2/GM	BARNs/AT	SOURCE	WEIGHT	DIFF
1	1.0000E+00	4.2995E+03	1.2743E+06	10	1.	0.05
2	1.0001E+00	4.2961E+03	1.2733E+06	90	1.	0.00
3	1.5000E+00	1.6627E+03	4.9290E+05	10	1.	3.15
4	1.5000E+00	1.5628E+03	4.6318E+05	89	1.	-3.05
5	3.0000E+00	2.0145E+03	5.9707E+05	10	1.	-5.00
6	3.0000E+00	2.3105E+03	6.8481E+05	90	1.	8.96
7	4.0000E+00	9.9778E+02	2.9573E+05	90	1.	-0.92
8	4.5090E+00	6.9989E+02	2.0744E+05	10	1.	-2.62
9	4.9320E+00	5.5539E+02	1.6461E+05	10	1.	-2.28
10	5.0000E+00	5.2578E+02	1.5584E+05	10	1.	-4.09
11	5.4120E+00	4.4179E+02	1.3094E+05	10	1.	-0.71
12	5.8950E+00	3.6267E+02	1.0749E+05	10	1.	2.06
13	5.9470E+00	3.4806E+02	1.0316E+05	10	1.	0.24
14	6.4000E+00	2.8934E+02	8.5758E+04	10	1.	1.05
15	6.4900E+00	2.7762E+02	8.2284E+04	10	1.	0.57
16	6.9250E+00	2.3613E+02	6.9987E+04	10	1.	1.39
17	7.0580E+00	2.2141E+02	6.5625E+04	10	1.	-0.09
18	7.4720E+00	1.9377E+02	5.7432E+04	10	1.	1.48
19	7.6490E+00	1.8212E+02	5.3977E+04	10	1.	1.38
20	8.0000E+00	1.5411E+02	4.5675E+04	10	1.	-3.58
21	8.0410E+00	1.5588E+02	4.6201E+04	10	1.	-1.16
22	8.2650E+00	1.4686E+02	4.3527E+04	10	1.	0.03
23	8.6510E+00	1.3098E+02	3.8822E+04	10	1.	-0.14
24	8.9050E+00	1.2179E+02	3.6098E+04	10	1.	0.70
25	9.5550E+00	1.0267E+02	3.0431E+04	90	1.	1.08
26	1.5000E+01	1.2863E+02	3.8124E+04	10	1.	1.45
27	1.7444E+01	8.7814E+01	2.6027E+04	10	1.	1.73
28	1.8000E+01	7.8610E+01	2.5308E+04	87	2.	-1.34
29	1.9600E+01	6.4311E+01	1.8984E+04	10	1.	-0.15
30	2.0000E+01	6.0322E+01	1.7971E+04	10	1.	-0.61
31	2.0169E+01	5.9520E+01	1.7641E+04	10	1.	-0.26
32	2.1000E+01	5.4140E+01	1.6046E+04	97	2.	0.87
33	2.1125E+01	5.2539E+01	1.5572E+04	10	1.	-0.58
34	2.2105E+01	4.6966E+01	1.3920E+04	10	1.	0.08
35	2.2724E+01	4.3605E+01	1.2924E+04	10	1.	-0.12
36	2.3819E+01	3.8780E+01	1.1494E+04	10	1.	0.46
37	2.4942E+01	3.3949E+01	1.0062E+04	10	1.	-0.83
38	2.5000E+01	3.3961E+01	1.0366E+04	10	1.	-0.19
39	2.5000E+01	3.4510E+01	1.0228E+04	48	3.	1.43
40	3.0000E+01	2.1145E+01	6.2656E+03	87	2.	-0.26
41	3.0040E+01	2.1370E+01	5.3358E+03	48	3.	1.18
42	3.5050E+01	1.3960E+01	4.1376E+03	48	3.	-0.20
43	4.0000E+01	9.7125E+00	2.8786E+03	10	1.	-1.64
44	4.0040E+01	9.8500E+00	2.9194E+03	48	3.	0.02
45	4.4000E+01	7.7730E+00	2.3038E+03	87	2.	1.72
46	5.0000E+01	5.3780E+00	1.5940E+03	48	3.	-0.68
47	6.0030E+01	3.3410E+00	9.9023E+02	40	5.	0.07
48	7.0040E+01	1.0452E+01	3.0978E+03	40	5.	0.23
49	7.9960E+01	7.4490E+00	2.2078E+03	40	5.	-0.02
50	8.9920E+01	5.4240E+00	1.6076E+03	40	5.	-1.22
51	1.0000E+02	4.1146E+00	1.2195E+03	10	1.	-1.40
52	1.0000E+02	4.1532E+00	1.2339E+03	89	1.	-0.23
53	1.0006E+02	4.2030E+00	1.2457E+03	40	5.	0.88
54	1.0999E+02	3.2710E+00	9.6948E+02	40	5.	0.74
55	1.2021E+02	2.5570E+00	7.5786E+02	40	5.	-0.67
56	1.3031E+02	2.1760E+00	6.4494E+02	40	5.	4.15
57	1.4560E+02	1.5550E+00	4.6088E+02	48	3.	-1.20
58	1.5000E+02	1.4825E+00	4.3940E+02	10	1.	1.55
59	1.5000E+02	1.4522E+00	4.3049E+02	90	1.	-0.53
60	1.5000E+02	1.4266E+00	4.2283E+02	89	1.	-2.28
61	2.0000E+02	7.2871E-01	2.1598E+02	90	1.	1.58
62	2.0000E+02	7.1254E-01	2.1119E+02	89	1.	-0.68
63	2.0830E+02	6.4110E-01	1.9001E+02	48	3.	-1.74
64	2.7910E+02	3.3920E-01	1.0053E+02	48	3.	-1.09
65	3.0000E+02	5.0042E-01	8.9040E+01	89	1.	1.35
66	4.0000E+02	1.8240E-01	5.4060E+01	10	1.	2.32
67	4.1118E+02	1.6770E-01	4.9794E+01	48	3.	-1.62
68	5.0000E+02	1.3109E-01	3.8853E+01	89	1.	1.38
69	6.0000E+02	1.0482E-01	3.1066E+01	89	1.	0.98

70	6.6200E+12	9.4065E-02	2.7880E+01	89	1.	0.50
71	7.0000E+02	8.8900E-02	2.6349E+01	89	1.	0.44
72	8.0000E+12	7.8147E-02	2.3162E+01	89	1.	0.14
73	9.0000E+02	7.0437E-02	2.0877E+01	89	1.	-0.27
74	1.0000E+03	6.4556E-02	1.9134E+01	89	1.	-0.53

74 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR TANTALUM

Z = 73

CONVERSION CONSTANT IS 3.005E+02

K-EDGE	67.414					
L-EDGES	11.680	11.136	9.881			
M-EDGES	2.703	2.469	2.194	1.793	1.735	
1	7.0000E-01	1.0995E+04	3.3034E+06	90	1.	-0.36
2	8.0000E-01	7.2992E+03	2.4034E+06	90	1.	0.81
3	1.0000E+00	4.5877E+03	1.3784E+06	90	1.	0.27
4	1.0000E+00	4.4752E+03	1.3446E+06	10	1.	-2.19
5	1.1000E+00	3.6058E+03	1.0874E+06	90	1.	-0.31
6	1.3000E+00	2.3741E+03	7.1332E+05	90	1.	-0.95
7	1.5000E+00	1.7456E+03	5.2448E+05	10	1.	3.54
8	1.5000E+00	1.6418E+03	4.9328E+05	89	1.	-2.62
9	3.0000E+00	2.0738E+03	6.2309E+05	10	1.	-4.09
10	3.0000E+00	2.4238E+03	7.2825E+05	90	1.	12.10
11	4.5110E+00	7.1760E+02	2.1561E+05	82	3.	-2.36
12	4.9520E+00	5.4900E+02	1.6495E+05	83	3.	-4.48
13	4.9530E+00	5.6920E+02	1.7102E+05	82	3.	-0.91
14	5.0000E+00	5.4899E+02	1.6495E+05	10	1.	-2.02
15	5.4140E+00	4.5438E+02	1.3650E+05	82	3.	-0.03
16	5.4150E+00	4.5800E+02	1.3761E+05	83	3.	0.82
17	5.8980E+00	3.6370E+02	1.0928E+05	82	3.	0.20
18	5.8990E+00	3.6610E+02	1.0997E+05	83	3.	0.88
19	6.4040E+00	2.9480E+02	8.8574E+04	67	3.	0.78
20	6.4040E+00	2.9900E+02	8.9836E+04	83	3.	2.21
21	7.0580E+00	2.2670E+02	6.8113E+04	39	5.	-0.06
22	7.0583E+00	2.2740E+02	6.8324E+04	67	3.	0.24
23	7.4780E+00	2.0000E+02	6.0091E+04	83	3.	2.51
24	8.0000E+00	1.6174E+02	4.8596E+04	10	1.	-1.20
25	8.0000E+00	1.6180E+02	4.8614E+04	39	5.	-1.16
26	8.0470E+00	1.6900E+02	5.0777E+04	66	3.	4.82
27	8.0480E+00	1.6080E+02	4.8313E+04	67	3.	-0.23
28	8.1460E+00	1.5710E+02	4.7202E+04	83	3.	0.59
29	8.3980E+00	1.4280E+02	4.2905E+04	39	5.	-1.03
30	8.6390E+00	1.3590E+02	4.0832E+04	82	3.	1.36
31	8.9050E+00	1.2360E+02	3.7136E+04	67	3.	-0.28
32	9.0000E+00	1.1950E+02	3.5904E+04	39	5.	-0.90
33	9.0230E+00	1.2000E+02	3.6055E+04	82	3.	0.17
34	9.2520E+00	1.1450E+02	3.4402E+04	83	3.	1.98
35	9.4420E+00	1.0450E+02	3.1398E+04	67	3.	-1.91
36	9.4420E+00	1.0720E+02	3.2209E+04	83	3.	0.63
37	9.5090E+00	1.0170E+02	3.0857E+04	39	5.	-2.06
38	9.7130E+00	9.3500E+01	2.9595E+04	83	3.	-0.53
39	9.8780E+00	9.8769E+01	2.9676E+04	90	1.	4.16
40	1.0268E+01	2.4300E+02	7.3011E+04	83	3.	12.05
41	1.0544E+01	2.0900E+02	6.2795E+04	83	3.	3.12
42	1.0550E+01	2.0490E+02	6.1563E+04	67	3.	1.24
43	1.0582E+01	2.0800E+02	6.2495E+04	83	3.	2.85
44	1.0839E+01	1.9290E+02	5.7958E+04	83	3.	2.11
45	1.0980E+01	1.8280E+02	5.4923E+04	67	3.	0.00
46	1.1071E+01	1.7880E+02	5.3721E+04	83	3.	-0.11
47	1.1220E+01	2.5890E+02	7.1779E+04	82	3.	-1.39
48	1.1220E+01	2.3670E+02	7.1118E+04	67	3.	-2.30
49	1.1440E+01	2.2800E+02	6.8504E+04	67	3.	-1.09
50	1.1442E+01	2.3070E+02	6.5315E+04	82	3.	0.13
51	1.1442E+01	2.3700E+02	7.1208E+04	83	3.	2.86
52	1.1920E+01	2.3770E+02	7.1418E+04	67	3.	-0.94
53	1.1921E+01	2.4120E+02	7.2470E+04	82	3.	0.54
54	1.2213E+01	2.2600E+02	6.7903E+04	83	3.	0.28
55	1.2523E+01	2.1580E+02	6.4237E+04	82	3.	1.21
56	1.3290E+01	1.8070E+02	5.4292E+04	67	3.	-0.27
57	1.5000E+01	1.3352E+02	4.0117E+04	10	1.	0.66
58	1.5000E+01	1.3190E+02	3.9630E+04	39	5.	-0.57
59	1.5780E+01	1.1310E+02	3.3982E+04	67	3.	-2.59
60	1.7480E+01	8.9200E+01	2.6801E+04	67	3.	0.16
61	1.7487E+01	8.9560E+01	2.6909E+04	82	3.	0.66
62	1.7520E+01	8.9100E+01	2.6771E+04	15	1.	0.64
63	1.9610E+01	6.4000E+01	1.9409E+04	67	3.	-2.24
64	2.0000E+01	6.3079E+01	1.8952E+04	10	1.	0.45
65	2.0000E+01	6.5446E+01	1.9663E+04	90	1.	4.22
66	2.0000E+01	6.3010E+01	1.8932E+04	39	5.	0.34
67	2.0250E+01	6.0770E+01	1.8259E+04	15	1.	-0.01
68	2.3174E+01	4.3060E+01	1.2938E+04	82	3.	0.97
69	2.3200E+01	4.2850E+01	1.2875E+04	15	1.	0.77

70	2.4240E+01	3.8710E+01	1.1631E+04	19	2.	2.11
71	2.4942E+01	3.5280E+01	1.0600E+04	39	5.	0.28
72	2.4940E+01	3.4500E+01	1.0366E+04	67	3.	-1.96
73	2.5000E+01	3.5367E+01	1.0626E+04	10	1.	1.14
74	2.5000E+01	3.5010E+01	1.0519E+04	39	5.	0.12
75	2.5251E+01	3.4060E+01	1.0234E+04	82	3.	-0.02
76	2.5390E+01	3.4640E+01	1.0408E+04	19	2.	2.20
77	2.6390E+01	3.0900E+01	9.2841E+03	19	2.	1.77
78	2.6390E+01	3.0390E+01	9.1308E+03	15	1.	0.09
79	2.7490E+01	2.8390E+01	8.5299E+03	19	2.	4.00
80	2.8620E+01	2.5030E+01	7.5174E+03	15	1.	1.78
81	2.8620E+01	2.5720E+01	7.7277E+03	19	2.	4.62
82	3.0000E+01	2.1150E+01	6.3546E+03	39	5.	-2.78
83	3.0970E+01	2.0580E+01	6.1834E+03	15	1.	2.87
84	3.0970E+01	2.0690E+01	6.2164E+03	19	2.	3.42
85	3.2180E+01	1.8450E+01	5.5434E+03	19	2.	2.01
86	3.3430E+01	1.6780E+01	5.0416E+03	19	2.	2.53
87	3.4700E+01	1.4700E+01	4.4157E+03	15	1.	-0.96
88	3.4700E+01	1.5300E+01	4.5970E+03	19	2.	3.08
89	3.5900E+01	1.4070E+01	4.2274E+03	19	2.	3.60
90	3.7320E+01	1.2810E+01	3.8488E+03	19	2.	4.36
91	3.9524E+01	1.0400E+01	3.1247E+03	28	5.	-1.67
92	4.0000E+01	1.0144E+01	3.0479E+03	10	1.	-1.04
93	4.0000E+01	1.0200E+01	3.0106E+03	39	5.	-2.26
94	4.0076E+01	1.0630E+01	3.1938E+03	19	2.	4.17
95	4.0120E+01	1.9100E+00	2.9775E+03	28	5.	-2.57
96	4.1530E+01	9.3600E+00	2.7221E+03	28	5.	-2.47
97	4.2980E+01	8.2800E+00	2.4878E+03	28	5.	-2.49
98	4.5400E+01	7.1700E+00	2.1545E+03	28	5.	-2.60
99	5.0000E+01	5.7497E+00	1.7275E+03	90	1.	0.28
100	5.0000E+01	5.3880E+00	1.7667E+03	28	5.	2.55
101	5.7460E+01	4.1860E+00	1.2577E+03	19	2.	4.64
102	5.7520E+01	3.9500E+00	1.1868E+03	28	5.	-0.99
103	5.9070E+01	3.9730E+00	1.1937E+03	19	2.	6.61
104	6.0750E+01	3.4670E+00	1.0417E+03	19	2.	-0.02
105	6.0750E+01	3.2880E+00	9.8790E+02	15	1.	-5.19
106	6.4640E+01	2.9440E+00	8.8454E+02	19	2.	-0.41
107	6.6500E+01	2.7740E+00	8.3346E+02	19	2.	0.90
108	6.7870E+01	1.1500E+01	3.4552E+03	28	5.	1.57
109	6.8840E+01	1.1100E+01	3.3351E+03	28	5.	1.71
110	7.0380E+01	9.4520E+00	2.8399E+03	19	2.	-8.43
111	7.0380E+01	1.0366E+01	3.1127E+03	15	1.	0.37
112	7.0810E+01	1.0300E+01	3.0947E+03	28	5.	1.33
113	7.2440E+01	9.3640E+00	2.8135E+03	15	1.	-2.45
114	7.2440E+01	9.1060E+00	2.7359E+03	19	2.	-5.14
115	7.4490E+01	8.7480E+00	2.6284E+03	15	1.	-2.28
116	7.4480E+01	8.7140E+00	2.6182E+03	19	2.	-2.66
117	7.6540E+01	8.2590E+00	2.4815E+03	15	1.	-1.20
118	7.6540E+01	8.0860E+00	2.4295E+03	19	2.	-3.27
119	8.0000E+01	7.6338E+00	2.3537E+03	90	1.	4.70
120	8.0000E+01	7.8471E+00	2.3577E+03	90	1.	4.88
121	8.0000E+01	7.8271E+00	2.3517E+03	90	1.	4.61
122	8.0260E+01	7.5300E+00	2.2624E+03	28	5.	1.48
123	8.6540E+01	6.1000E+00	1.8328E+03	28	5.	-0.26
124	9.1660E+01	5.4370E+00	1.6336E+03	19	2.	5.02
125	9.7130E+01	4.7460E+00	1.4260E+03	19	2.	4.18
126	1.0000E+02	4.3311E+00	1.5015E+03	90	1.	2.37
127	1.0000E+02	4.2599E+00	1.2799E+03	10	1.	0.69
128	1.0000E+02	4.3131E+00	1.2959E+03	89	1.	1.95
129	1.0310E+02	3.7730E+00	1.1327E+03	55	2.	-3.52
130	1.0500E+02	3.7310E+00	1.1357E+03	28	5.	1.44
131	1.1250E+02	3.1140E+00	9.0557E+02	55	2.	-3.29
132	1.2500E+02	2.5400E+00	7.6316E+02	28	5.	2.51
133	1.2370E+02	2.4350E+00	7.3161E+02	55	2.	-0.29
134	1.3750E+02	1.8190E+00	5.4653E+02	55	2.	-2.56
135	1.4500E+02	1.5875E+00	4.7697E+02	34	2.	-2.83
136	1.5000E+02	1.4798E+00	4.4463E+02	89	1.	-1.43
137	1.5000E+02	1.5541E+00	4.6092E+02	10	1.	2.18
138	1.5470E+02	1.3570E+00	4.0772E+02	55	2.	-2.52
139	1.5800E+02	1.3200E+00	3.9660E+02	28	5.	0.16
140	1.7670E+02	1.0180E+00	3.0586E+02	55	2.	1.82
141	2.0000E+02	7.3831E-01	2.2183E+02	89	1.	-1.56
142	2.0620E+02	6.8900E-01	2.0791E+02	55	2.	-0.35
143	2.4740E+02	4.5800E-01	1.3761E+02	55	2.	-0.12
144	3.0000E+02	3.0987E-01	9.3101E+01	89	1.	1.05
145	3.2000E+02	2.3394E-01	7.9301E+01	34	2.	-2.63
146	4.0000E+02	1.8638E-01	5.5998E+01	90	1.	1.77
147	4.0000E+02	1.8703E-01	5.6195E+01	10	1.	2.13
148	5.0000E+02	1.3386E-01	4.0220E+01	89	1.	1.51
149	6.0000E+02	1.0665E-01	3.2045E+01	89	1.	1.38

150	6.6169E+02	9.3590E-02	2.8093E+01	54	1.	-1.17
151	6.6200E+02	9.3462E-02	2.8081E+01	34	2.	-1.15
152	6.6200E+02	9.4460E-02	2.8381E+01	31	2.	-0.10
153	6.6200E+02	9.5569E-02	2.8713E+01	89	1.	1.07
154	7.0000E+02	9.0241E-02	2.7113E+01	89	1.	1.10
155	8.0000E+02	7.9168E-02	2.3787E+01	89	1.	0.92
156	8.4000E+02	7.2890E-02	2.1900E+01	52	1.	-2.95
157	9.0000E+02	7.1234E-02	2.1403E+01	89	1.	0.67
158	1.0000E+03	6.5193E-02	1.9588E+01	89	1.	0.50

158 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR TUNGSTEN

Z = 74

CONVERSION CONSTANT IS 3.054E+02

K-EDGE	69.524					
L-EDGES	12.098	11.542	10.204	1.071	1.809	
M-EDGES	2.818	2.575	2.281			
KEV	CH2/GM	BARNs/AT	SOURCE	WEIGHT	DIFF	
1	7.0000E+01	1.0490E+03	3.2035E+06	90	1.	-0.45
2	8.0000E+01	7.7066E+03	2.9535E+06	90	1.	-0.27
3	9.0000E+01	5.9056E+03	1.8075E+06	90	1.	0.46
4	1.0000E+00	4.7563E+03	1.4525E+06	90	1.	3.32
5	1.0000E+00	4.7137E+03	1.4395E+06	90	1.	2.40
6	1.0000E+00	4.6777E+03	1.4265E+06	90	1.	1.62
7	1.5000E+00	1.8262E+03	5.5771E+05	10	1.	1.50
8	1.5000E+00	1.8032E+03	5.5067E+05	90	1.	0.22
9	1.8070E+00	1.1559E+03	3.5227E+05	89	1.	-1.44
10	1.8100E+00	3.3605E+03	1.0223E+06	89	1.	-4.66
11	1.8690E+00	3.1673E+03	9.6725E+05	89	1.	-2.33
12	1.8720E+00	4.5852E+03	1.4002E+06	89	1.	0.54
13	2.2790E+00	2.8557E+03	8.7211E+05	89	1.	8.43
14	2.2820E+00	3.3469E+03	1.0221E+06	89	1.	-7.43
15	2.5730E+00	2.4922E+03	7.6101E+05	89	1.	-5.84
16	2.5760E+00	2.6730E+03	8.1801E+05	89	1.	-10.10
17	2.8160E+00	2.1250E+03	6.4894E+05	89	1.	-10.11
18	2.8190E+00	2.2036E+03	6.7294E+05	89	1.	-13.42
19	3.0000E+00	2.1247E+03	6.4886E+05	10	1.	-1.87
20	3.0450E+00	2.2571E+03	6.8929E+05	90	1.	4.24
21	3.0000E+00	2.2456E+03	6.8579E+05	90	1.	3.71
22	4.0000E+00	1.0652E+03	3.2529E+05	90	1.	3.72
23	4.0000E+00	1.0619E+03	3.2429E+05	90	1.	3.41
24	5.0000E+00	5.7141E+02	1.7450E+05	10	1.	-0.95
25	5.0000E+00	5.8589E+02	1.7892E+05	90	1.	1.55
26	5.0000E+00	5.8982E+02	1.8012E+05	90	1.	2.24
27	6.0000E+00	3.6505E+02	1.1148E+05	90	1.	1.19
28	8.0000E+00	1.6912E+02	5.1647E+04	10	1.	-2.09
29	8.0000E+00	1.6943E+02	5.1741E+04	89	1.	-1.92
30	8.0471E+00	1.7166E+02	5.2404E+04	11	10.	0.84
31	8.9040E+00	1.3310E+02	4.0647E+04	11	10.	1.19
32	9.8850E+00	9.9110E+01	3.0267E+04	11	10.	-1.81
33	1.0000E+01	9.7457E+01	2.9762E+04	10	1.	-0.58
34	1.0000E+01	9.7318E+01	2.9625E+04	89	1.	-1.04
35	1.0292E+01	9.4524E+01	2.8866E+04	85	1.	1.44
36	1.0206E+01	2.3534E+02	7.2176E+04	85	1.	-0.05
37	1.1000E+01	1.9675E+02	6.0084E+04	85	1.	0.76
38	1.1540E+01	1.7166E+02	5.2422E+04	85	1.	-0.66
39	1.1544E+01	2.3708E+02	7.2402E+04	85	1.	-1.96
40	1.2096E+01	2.0946E+02	6.3965E+04	85	1.	-2.33
41	1.2100E+01	2.4073E+02	7.3515E+04	85	1.	-2.91
42	1.2200E+01	2.3693E+02	7.2355E+04	85	1.	-2.38
43	1.2490E+01	2.2920E+02	6.9995E+04	11	10.	0.37
44	1.2750E+01	2.1476E+02	6.5584E+04	85	1.	-0.80
45	1.3390E+01	1.8940E+02	5.7840E+04	11	10.	-0.68
46	1.4960E+01	1.4380E+02	4.3915E+04	11	10.	0.45
47	1.5000E+01	1.3610E+02	4.2174E+04	10	1.	-2.86
48	1.5000E+01	1.4023E+02	4.2826E+04	85	1.	-1.36
49	1.5770E+01	1.3650E+02	3.8031E+04	11	10.	1.45
50	1.7480E+01	9.5970E+01	2.9308E+04	11	10.	0.77
51	1.7670E+01	9.3940E+01	2.8688E+04	11	10.	1.47
52	1.9610E+01	6.9600E+01	2.1255E+04	11	10.	-1.33
53	2.0000E+01	6.5411E+01	1.9976E+04	10	1.	-2.38
54	2.0210E+01	6.5380E+01	1.9966E+04	11	10.	0.31
55	2.2160E+01	5.1100E+01	1.5605E+04	11	10.	0.11
56	2.4240E+01	4.0960E+01	1.2509E+04	19	2.	1.73
57	2.4940E+01	3.6420E+01	1.1122E+04	11	10.	-2.48
58	2.5000E+01	3.6695E+01	1.1205E+04	10	1.	-1.12
59	2.5000E+01	3.5960E+01	1.0982E+04	48	3.	-3.10
60	2.5270E+01	3.5930E+01	1.0973E+04	11	10.	-0.40
61	2.5300E+01	3.6310E+01	1.1089E+04	19	2.	0.97
62	2.6390E+01	3.2730E+01	9.9923E+03	19	2.	1.68
63	2.7490E+01	2.9220E+01	8.9234E+03	19	2.	1.10
64	2.8480E+01	2.6690E+01	8.1508E+03	11	10.	1.53
65	2.8620E+01	2.5620E+01	7.8240E+03	15	1.	-1.47
66	2.8621E+01	2.6340E+01	8.0439E+03	19	2.	1.30
67	2.9190E+01	2.4700E+01	7.5451E+03	11	10.	0.03
68	3.0000E+01	2.2860E+01	6.9813E+03	85	1.	-0.54
69	3.0040E+01	2.2610E+01	6.9048E+03	48	3.	-1.20

70	3.0490E+01	2.2790E+01	6.9598E+03	11	10.	3.54
71	3.0970E+01	2.0770E+01	6.3429E+03	19	2.	-1.62
72	3.0970E+01	2.1400E+01	6.5555E+03	15	1.	1.36
73	3.2180E+01	1.9280E+01	5.8879E+03	19	2.	1.14
74	3.2640E+01	1.8530E+01	5.6497E+03	78	3.	0.78
75	3.3430E+01	1.7580E+01	5.3687E+03	15	1.	2.05
76	3.3430E+01	1.7010E+01	5.1946E+03	19	2.	-1.26
77	3.4700E+01	1.5670E+01	4.7854E+03	19	2.	0.42
78	3.4700E+01	1.5540E+01	4.7457E+03	15	1.	-0.41
79	3.5900E+01	1.4480E+01	4.4220E+03	19	2.	1.55
80	3.7320E+01	1.3740E+01	3.9945E+03	19	2.	1.61
81	4.0000E+01	1.0556E+01	3.2223E+03	10	1.	-1.58
82	4.0040E+01	1.0450E+01	3.1913E+03	48	3.	-2.31
83	4.0970E+01	1.0790E+01	3.2951E+03	19	2.	1.07
84	4.0120E+01	1.0500E+01	3.2066E+03	28	5.	-1.32
85	4.2980E+01	8.8200E+00	2.6935E+03	28	5.	-0.45
86	4.5400E+01	7.5500E+00	2.3057E+03	28	5.	-1.49
87	5.0000E+01	5.9829E+00	1.8271E+03	85	1.	0.60
88	5.0000E+01	5.9900E+00	1.8293E+03	28	5.	0.72
89	5.0080E+01	5.7460E+00	1.7548E+03	48	3.	-2.97
90	5.7460E+01	4.3390E+00	1.3251E+03	19	2.	5.20
91	5.7520E+01	4.1000E+00	1.2521E+03	28	5.	-0.33
92	5.9070E+01	4.0610E+00	1.2402E+03	19	2.	5.80
93	6.0030E+01	5.6230E+00	1.1064E+03	40	5.	-1.57
94	6.0750E+01	5.5890E+00	1.1960E+03	19	2.	0.62
95	6.4640E+01	3.0220E+00	9.2288E+02	19	2.	-0.31
96	6.6500E+01	2.7950E+00	8.5356E+02	19	2.	-0.73
97	6.7870E+01	2.6800E+00	8.1844E+02	28	5.	0.35
98	6.8170E+01	2.6200E+00	8.0011E+02	78	3.	-0.77
99	6.8520E+01	2.5400E+00	7.7568E+02	19	2.	-2.51
100	6.8840E+01	2.5900E+00	7.9095E+02	28	5.	0.61
101	6.9522E+01	2.5819E+00	7.8848E+02	85	1.	2.88
102	6.9526E+01	1.1405E+01	5.4825E+03	85	1.	3.43
103	7.0810E+01	1.0900E+01	3.3297E+03	28	5.	3.46
104	7.1000E+01	1.0729E+01	3.2766E+03	85	1.	2.52
105	7.2440E+01	9.4950E+00	2.8997E+03	19	2.	-4.64
106	7.4480E+01	9.0510E+00	2.7641E+03	19	2.	-2.62
107	7.6540E+01	8.1110E+00	2.5686E+03	19	2.	-3.18
108	7.9500E+01	7.9500E+00	2.4278E+03	78	3.	0.52
109	7.9960E+01	7.2920E+00	2.3603E+03	40	5.	-0.88
110	8.0000E+01	8.0778E+00	2.4669E+03	90	1.	3.73
111	8.1260E+01	7.7700E+00	2.3729E+03	28	5.	0.60
112	8.1000E+01	7.6467E+00	2.3352E+03	85	1.	1.34
113	8.6544E+01	6.4000E+00	1.9545E+03	28	5.	0.30
114	8.8970E+01	5.9700E+00	1.8232E+03	78	3.	0.35
115	8.9920E+01	5.8166E+00	1.7761E+03	40	5.	0.42
116	9.1680E+01	5.5330E+00	1.6897E+03	19	2.	0.33
117	9.7130E+01	4.8740E+00	1.4885E+03	19	2.	2.22
118	1.0000E+02	4.3949E+00	1.3422E+03	10	1.	-0.83
119	1.0000E+02	4.4781E+00	1.3676E+03	88	1.	1.05
120	1.0000E+02	4.4529E+00	1.3599E+03	89	1.	0.48
121	1.0406E+02	4.3620E+00	1.3321E+03	40	5.	-1.42
122	1.0300E+02	4.1324E+00	1.2620E+03	85	1.	0.67
123	1.0500E+02	3.8130E+00	1.1635E+03	28	5.	-2.44
124	1.1487E+02	5.1166E+00	9.5159E+02	40	5.	0.58
125	1.2300E+02	2.6900E+00	7.9095E+02	28	5.	-0.41
126	1.3031E+02	2.5222E+00	7.0911E+02	40	5.	3.39
127	1.4560E+02	1.6864E+00	5.1500E+02	48	3.	-0.74
128	1.5000E+02	1.5300E+00	4.6724E+02	89	1.	-3.02
129	1.5000E+02	1.5819E+00	4.8309E+02	10	1.	0.27
130	1.5800E+02	1.3700E+00	4.1833E+02	28	5.	-1.02
131	1.8086E+02	9.7500E-01	2.9775E+02	78	3.	-1.57
132	1.8200E+02	1.0000E+00	3.1539E+02	78	3.	2.51
133	2.0000E+02	7.6258E-01	2.3288E+02	89	1.	-1.89
134	2.0800E+02	7.1300E-01	2.1774E+02	28	5.	0.62
135	2.0850E+02	7.0390E-01	2.1496E+02	48	3.	-0.33
136	2.7900E+02	3.7344E-01	1.1404E+02	85	1.	1.43
137	2.7910E+02	3.6830E-01	1.1247E+02	48	3.	0.11
138	3.0000E+02	3.2092E-01	9.8006E+01	88	1.	1.22
139	3.0000E+02	3.1870E-01	9.7326E+01	89	1.	0.52
140	3.2000E+02	2.6780E-01	8.1785E+01	56	1.	-4.20
141	4.0000E+02	1.9127E-01	5.8411E+01	10	1.	2.13
142	4.1180E+02	1.7730E-01	5.4145E+01	48	3.	-0.78
143	4.1180E+02	1.7550E-01	5.3901E+01	54	1.	-1.23
144	4.1200E+02	1.8200E-01	5.5580E+01	28	5.	1.92
145	4.9600E+02	1.2940E-01	3.9517E+01	60	1.	-4.35
146	4.7700E+02	1.5210E-01	4.6449E+01	3	3.	6.38
147	5.0139E+02	1.3631E-01	4.1626E+01	88	1.	1.89
148	6.0000E+02	1.0789E-01	3.2948E+01	90	1.	1.65
149	6.6160E+02	9.4800E-02	2.8951E+01	54	1.	-0.45

150	6.6200E+02	9.6828E-02	2.9570E+01	88	1.	1.73
151	6.6200E+02	9.8400E-02	2.6996E+01	3	3.	-7.12
152	6.6200E+02	9.7025E-02	2.9630E+01	85	1.	1.94
153	6.6200E+02	9.2420E-02	2.8224E+01	56	1.	-2.90
154	7.0000E+02	9.1319E-02	2.7888E+01	88	1.	1.75
155	7.9600E+02	7.7900E-02	2.3790E+01	56	1.	-1.46
156	8.0000E+02	7.9879E-02	2.4394E+01	90	1.	1.52
157	8.0000E+02	7.9931E-02	2.4410E+01	88	1.	1.59
158	9.0000E+02	7.1793E-02	2.1925E+01	88	1.	1.32
159	1.0000E+03	6.5605E-02	2.0035E+01	88	1.	1.12
160	1.0000E+03	6.5720E-02	2.0070E+01	90	1.	1.30

160 DATA POINTS USED FOR FIT

5.

EXPERIMENTAL DATA FOR IRIDIUM

Z = 77

CONVERSION CONSTANT IS 3.191E+02

X-EDGE	76.112					
-EDGES	13.424	12.824	11.215			
+EDGES	3.172	2.909	2.550	2.116	2.041	
KEY	CM2/GM	BARNs/AT	SOURCE	WEIGHT	DIFF	
1	1.0000E+00	5.1803E+03	1.6632E+06	10	1.	-2.59
2	1.0001E+00	5.3308E+03	1.7038E+06	90	1.	0.42
3	1.5000E+00	2.0907E+03	6.6723E+05	10	1.	3.75
4	1.5000E+00	1.9229E+03	6.1367E+05	89	1.	-4.58
5	2.0000E+00	1.0209E+03	3.2581E+05	10	1.	0.59
6	4.0000E+00	1.2528E+03	3.9982E+05	90	1.	4.95
7	4.5090E+00	8.4193E+02	2.6869E+05	10	1.	-3.35
8	4.9320E+00	6.8147E+02	2.1748E+05	10	1.	-1.00
9	5.0000E+00	6.4562E+02	2.0604E+05	10	1.	-2.78
10	5.0000E+00	6.7251E+02	2.1462E+05	90	1.	1.27
11	5.4120E+00	5.3448E+02	1.7057E+05	10	1.	-0.95
12	5.8950E+00	4.3207E+02	1.3789E+05	10	1.	0.15
13	5.9470E+00	4.2129E+02	1.3445E+05	10	1.	-0.08
14	6.0000E+00	4.1256E+02	1.3166E+05	90	1.	0.14
15	6.4000E+00	3.4979E+02	1.1165E+05	10	1.	0.50
16	6.4900E+00	3.3588E+02	1.0719E+05	10	1.	0.09
17	6.9250E+00	2.8587E+02	9.1252E+04	10	1.	0.88
18	7.0580E+00	2.6950E+02	8.6006E+04	10	1.	-0.06
19	7.4720E+00	2.3583E+02	7.4625E+04	10	1.	0.56
20	7.6490E+00	2.1959E+02	7.0078E+04	10	1.	0.36
21	8.0000E+00	1.9333E+02	6.1602E+04	10	1.	-0.90
22	8.0000E+00	1.9611E+02	6.2584E+04	90	1.	0.68
23	8.0410E+00	1.9176E+02	6.1197E+04	10	1.	-0.23
24	8.2650E+00	1.7802E+02	5.6812E+04	10	1.	-0.51
25	8.6310E+00	1.5964E+02	5.0946E+04	10	1.	-0.22
26	8.9050E+00	1.4737E+02	4.7030E+04	10	1.	-0.14
27	9.5720E+00	1.2164E+02	3.3819E+04	10	1.	-0.69
28	1.0000E+01	1.0973E+02	3.5020E+04	10	1.	0.26
29	1.0000E+01	1.1123E+02	3.5498E+04	90	1.	1.62
30	1.1213E+01	8.7444E+01	2.5960E+04	90	1.	-0.25
31	1.5000E+01	1.5270E+02	4.8730E+04	10	1.	1.23
32	1.5000E+01	1.3505E+02	4.9480E+04	90	1.	2.79
33	1.7444E+01	1.0511E+02	3.3545E+04	10	1.	1.68
34	1.9628E+01	7.7146E+01	2.4620E+04	10	1.	-0.07
35	2.0000E+01	7.3064E+01	2.337E+04	10	1.	-0.57
36	2.0000E+01	7.4393E+01	2.3741E+04	90	1.	1.23
37	2.0000E+01	7.2580E+01	2.463E+04	87	2.	-1.23
38	2.0169E+01	7.1534E+01	2.2829E+04	10	1.	-0.52
39	2.1125E+01	6.3183E+01	2.0164E+04	10	1.	-0.96
40	2.2105E+01	5.6393E+01	1.7997E+04	10	1.	-0.63
41	2.2724E+01	5.2457E+01	1.6741E+04	10	1.	-0.75
42	2.3819E+01	4.6595E+01	1.4870E+04	10	1.	-0.48
43	2.4942E+01	4.1111E+01	1.3120E+04	10	1.	-1.15
44	2.4942E+01	4.2000E+01	1.3404E+04	87	2.	0.99
45	3.0000E+01	2.5220E+01	9.3677E+03	87	2.	1.17
46	2.5000E+01	1.0954E+01	1.3070E+04	10	1.	-0.94
47	3.0000E+01	1.5767E+01	8.2233E+03	90	1.	-0.58
48	3.4700E+01	1.7500E+01	5.5849E+03	19	2.	-0.88
49	3.5900E+01	1.6240E+01	5.1828E+03	19	2.	0.57
50	3.7320E+01	1.4570E+01	4.6198E+03	87	2.	-0.12
51	3.7320E+01	1.4520E+01	4.6358E+03	19	2.	-0.47
52	4.0000E+01	1.1887E+01	3.7936E+03	10	1.	-2.34
53	4.0070E+01	1.2120E+01	3.8679E+03	19	2.	0.04
54	4.0000E+01	1.2300E+01	3.9278E+03	90	1.	1.11
55	4.4000E+01	9.5900E+00	3.0605E+03	87	2.	1.60
56	5.7460E+01	4.7990E+00	1.5315E+03	19	2.	3.34
57	5.9070E+01	4.4820E+00	1.4304E+03	19	2.	3.83
58	6.0750E+01	4.0050E+00	1.2785E+03	19	2.	0.01
59	6.6500E+01	3.1500E+00	1.0085E+03	19	2.	0.60
60	6.6520E+01	2.8680E+00	9.1528E+02	19	2.	-1.12
61	7.0380E+01	2.6720E+00	8.5337E+02	19	2.	-1.01
62	7.2440E+01	2.4830E+00	7.9241E+02	19	2.	-0.80
63	7.4480E+01	2.2530E+00	7.3178E+02	19	2.	-1.45
64	7.6120E+01	9.6824E+00	3.0990E+03	90	1.	-0.11
65	8.0000E+01	8.6858E+00	2.7719E+03	89	1.	1.85
66	9.1680E+01	5.8230E+00	1.8583E+03	19	2.	-2.88
67	9.7170E+01	5.2130E+00	1.6637E+03	19	2.	0.87
68	1.0000E+02	4.8261E+00	1.5402E+03	10	1.	0.63
69	1.0000E+02	4.9013E+00	1.5642E+03	89	1.	2.19

70	1.5000E+02	1.7342E+00	5.5344E+02	10	1.	1.67
71	1.5000E+02	1.6965E+00	5.4140E+02	90	1.	-0.54
72	1.5000E+02	1.6921E+00	5.4001E+02	89	1.	-0.79
73	2.0000E+02	8.4820E-01	2.7059E+02	90	1.	0.18
74	2.0000E+02	8.4130E-01	2.6849E+02	89	1.	-0.63
75	3.0000E+02	3.4757E-01	1.1092E+02	89	1.	-0.12
76	4.0000E+02	2.0514E-01	6.5469E+01	10	1.	0.26
77	5.0000E+02	1.4463E-01	4.6157E+01	89	1.	-0.11
78	6.0000E+02	1.1366E-01	3.6273E+01	89	1.	-0.04
79	6.6200E+02	1.0118E-01	3.2290E+01	89	1.	-0.14
80	7.0000E+02	9.5205E-02	3.0383E+01	89	1.	-0.01
81	8.0000E+02	8.2419E-02	2.6427E+01	89	1.	0.01
82	9.0000E+02	7.4730E-02	2.3626E+01	89	1.	-0.33
83	1.0000E+03	6.7399E-02	2.1509E+01	89	1.	-0.03

83 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR PLATINUM

Z = 78

CONVERSION CONSTANT IS 3.239E+02

K-EDGE	78.395	L-EDGES	13.892	13.273	11.564		
M-EDGES	3.297			3.026	2.645	2.202	2.122

KEY	CM2/GM	BARNs/AT	SOURCE	WEIGHT	DIFF
1	1.0000E+00	5.3655E+03	1.7374E+05	10	1.
2	1.0001E+00	5.4762E+03	1.7739E+05	90	1.
3	1.5000E+00	2.1931E+03	7.0719E+05	10	1.
4	1.5000E+00	1.9874E+03	6.4378E+05	89	1.
5	2.0000E+00	1.0880E+03	3.5244E+05	10	1.
6	5.0000E+00	6.7164E+02	2.1757E+05	10	1.
7	5.0000E+00	6.9458E+02	2.2500E+05	93	1.
8	5.8989E+00	4.3860E+02	1.4208E+05	82	3.
9	6.2100E+00	4.0740E+02	1.3197E+05	43	1.
10	6.4040E+00	3.5370E+02	1.1458E+05	82	3.
11	6.8100E+00	3.2510E+02	1.0531E+05	43	1.
12	7.1300E+00	2.8310E+02	9.1766E+04	43	1.
13	7.4000E+00	2.5533E+02	8.2700E+04	43	1.
14	7.7500E+00	2.2590E+02	7.3177E+04	43	1.
15	7.9100E+00	2.1130E+02	6.9419E+04	43	1.
16	7.9900E+00	2.0990E+02	6.7994E+04	43	1.
17	8.3000E+00	2.0127E+02	6.5199E+04	10	1.
18	8.0470E+00	1.9840E+02	6.4269E+04	11	10.
19	8.0480E+00	1.9550E+02	6.3329E+04	92	3.
20	8.0600E+00	1.9630E+02	6.3588E+04	43	1.
21	8.2900E+00	1.8920E+02	6.1298E+04	43	1.
22	8.3800E+00	1.6320E+02	5.9345E+04	43	1.
23	8.5800E+00	1.7063E+02	5.5263E+04	43	1.
24	8.7400E+00	1.6440E+02	5.3255E+04	43	1.
25	8.9040E+00	1.5120E+02	4.8979E+04	11	10.
26	8.9200E+00	1.5700E+02	5.1985E+04	43	1.
27	9.0230E+00	1.4590E+02	4.7262E+04	82	3.
28	9.3200E+00	1.3800E+02	4.4703E+04	43	1.
29	9.7200E+00	1.2330E+02	3.9941E+04	43	1.
30	9.8850E+00	1.1520E+02	3.7317E+04	11	10.
31	1.0000E+01	1.1382E+02	3.6871E+04	10	1.
32	1.0170E+01	1.1070E+02	3.5863E+04	43	1.
33	1.0680E+01	9.5140E+01	3.1804E+04	43	1.
34	1.0980E+01	8.5120E+01	2.7557E+04	11	10.
35	1.1120E+01	8.0940E+01	2.7839E+04	43	1.
36	1.1220E+01	8.0650E+01	2.6226E+04	11	10.
37	1.1220E+01	8.0800E+01	2.6174E+04	82	3.
38	1.1310E+01	8.3750E+01	2.7123E+04	43	1.
39	1.1840E+01	8.8450E+02	5.9775E+04	43	1.
40	1.1921E+01	1.7580E+02	5.6948E+04	82	3.
41	1.2120E+01	1.7260E+02	5.5911E+04	43	1.
42	1.2400E+01	1.6370E+02	5.3028E+04	43	1.
43	1.2490E+01	1.5840E+02	5.1311E+04	11	10.
44	1.2523E+01	1.5650E+02	5.6696E+04	82	3.
45	1.2980E+01	1.4320E+02	4.6387E+04	43	1.
46	1.3390E+01	1.8420E+02	5.9569E+04	11	10.
47	1.3382E+01	1.7860E+02	5.7855E+04	82	3.
48	1.3440E+01	1.7990E+02	5.8276E+04	43	1.
49	1.3590E+01	1.7460E+02	5.6559E+04	43	1.
50	1.3910E+01	1.8280E+02	5.9215E+04	43	1.
51	1.4010E+01	1.9770E+02	6.1042E+04	43	1.
52	1.4169E+01	1.8260E+02	5.9150E+04	82	3.
53	1.4330E+01	1.8710E+02	5.6668E+04	43	1.
54	1.4600E+01	1.8070E+02	5.8535E+04	43	1.
55	1.4970E+01	1.6710E+02	5.4129E+04	43	1.
56	1.5000E+01	1.5758E+02	5.1047E+04	10	1.
57	1.5290E+01	1.6073E+02	5.2056E+04	43	1.
58	1.5640E+01	1.4890E+02	4.8234E+04	43	1.
59	1.5770E+01	1.4280E+02	4.6258E+04	11	10.
60	1.5773E+01	1.4360E+02	4.6517E+04	82	3.
61	1.6460E+01	1.3030E+02	4.2209E+04	43	1.
62	1.6760E+01	1.2710E+02	4.1172E+04	43	1.
63	1.7150E+01	1.1170E+02	3.6183E+04	43	1.
64	1.7480E+01	1.0720E+02	3.4726E+04	11	10.
65	1.7550E+01	1.0990E+02	3.5600E+04	43	1.
66	1.7670E+01	1.0300E+02	3.5365E+04	11	10.
67	1.8380E+01	9.9310E+01	3.2170E+04	43	1.
68	1.9250E+01	8.8310E+01	2.8607E+04	43	1.
69	1.9610E+01	7.9410E+01	2.5724E+04	11	10.

70	2.0000E+01	7.5725E+01	2.4530E+04	10	1.	-0.67
71	2.0210E+01	7.4340E+01	2.4081E+04	11	10.	0.23
72	2.2160E+01	5.7590E+01	1.8655E+04	11	10.	-1.05
73	2.2179E+01	5.9920E+01	1.9410E+04	82	3.	3.19
74	2.2720E+01	5.3440E+01	1.7311E+04	11	10.	-1.96
75	2.3174E+01	5.2950E+01	1.7152E+04	82	3.	2.32
76	2.4941E+01	4.2870E+01	1.3887E+04	11	10.	0.44
77	2.5000E+01	4.2392E+01	1.3732E+04	10	1.	-0.06
78	2.5210E+01	4.2210E+01	1.3673E+04	82	3.	2.15
79	2.5270E+01	4.1350E+01	1.3595E+04	11	10.	0.27
80	2.6390E+01	3.7460E+01	1.2135E+04	19	2.	1.75
81	2.8480E+01	3.0250E+01	9.7990E+03	11	10.	0.25
82	2.8620E+01	2.3450E+01	9.5431E+03	19	2.	-1.12
83	2.9193E+01	2.1510E+01	9.1878E+03	11	10.	-0.53
84	3.0490E+01	2.3400E+01	8.2279E+03	11	10.	0.60
85	3.0970E+01	2.3740E+01	7.6992E+03	19	2.	-2.00
86	3.2180E+01	2.1650E+01	7.0132E+03	19	2.	-1.08
87	3.3430E+01	1.9930E+01	6.4563E+03	19	2.	0.71
88	3.4700E+01	1.8360E+01	5.9474E+03	19	2.	2.37
89	3.5900E+01	1.6930E+01	5.4842E+03	19	2.	3.23
90	3.7320E+01	1.5120E+01	4.8979E+03	19	2.	2.09
91	3.9520E+01	1.2800E+01	4.1464E+03	28	5.	0.41
92	4.0000E+01	1.2342E+01	3.9979E+03	10	1.	-0.08
93	4.0070E+01	1.2490E+01	4.0459E+03	19	2.	1.59
94	4.0120E+01	1.2200E+01	3.9520E+03	28	5.	-0.44
95	4.1530E+01	1.1200E+01	3.6281E+03	28	5.	0.17
96	4.2980E+01	1.0100E+01	3.2717E+03	28	5.	-1.09
97	4.5400E+01	3.7200E+00	2.8247E+03	28	5.	-1.33
98	5.0000E+01	6.7700E+00	2.1930E+03	28	5.	-1.34
99	5.7460E+01	4.9900E+00	1.6164E+03	19	2.	4.80
100	5.7520E+01	4.0800E+00	1.5908E+03	28	5.	2.77
101	5.9070E+01	4.6740E+00	1.5141E+03	19	2.	5.49
102	6.0750E+01	4.1730E+00	1.3518E+03	19	2.	1.36
103	6.0750E+01	4.2500E+00	1.3767E+03	15	1.	3.24
104	6.4640E+01	3.5520E+00	1.1506E+03	19	2.	1.62
105	6.6500E+01	3.3270E+00	1.0777E+03	19	2.	2.53
106	6.7870E+01	3.0000E+00	9.7180E+02	28	5.	-2.49
107	6.8520E+01	3.0680E+00	9.9383E+02	19	2.	2.23
108	7.0380E+01	2.6590E+00	8.6134E+02	19	2.	-5.00
109	7.0810E+01	2.7400E+00	8.8758E+02	28	5.	-0.55
110	7.2440E+01	2.5570E+00	8.2853E+02	19	2.	-1.56
111	7.4480E+01	2.3590E+00	7.6416E+02	19	2.	-2.43
112	7.6540E+01	2.2860E+00	7.4051E+02	19	2.	1.41
113	8.0000E+01	9.2207E+00	2.9869E+03	90	1.	5.05
114	8.0260E+01	8.7900E+00	2.8474E+03	28	5.	1.00
115	8.5540E+01	7.1400E+00	2.3129E+03	28	5.	-0.00
116	9.1680E+01	5.8660E+00	1.9002E+03	19	2.	-4.44
117	9.7130E+01	5.2530E+00	1.7016E+03	19	2.	-0.50
118	9.7130E+01	5.2330E+00	1.6951E+03	15	1.	-0.88
119	1.0000E+02	4.9699E+00	1.6099E+03	10	1.	.55
120	1.0000E+02	5.0520E+00	1.6365E+03	89	1.	3.23
121	1.0000E+02	5.0538E+00	1.6371E+03	88	1.	3.27
122	1.0500E+02	4.2300E+00	1.3702E+03	28	5.	-1.77
123	1.2300E+02	2.8400E+00	5.1997E+02	28	5.	-0.49
124	1.4500E+02	1.7948E+00	5.8139E+02	34	2.	-4.19
125	1.5010E+02	1.7931E+00	5.8085E+02	90	1.	4.27
126	1.5000E+02	1.7471E+00	5.6595E+02	89	1.	1.60
127	1.5000E+02	1.7847E+00	5.7014E+02	10	1.	3.79
128	1.5800E+02	1.5100E+00	4.8914E+02	28	5.	0.01
129	2.0000E+02	8.6809E-01	2.8120E+02	89	1.	2.21
130	2.0800E+02	7.8700E-01	2.5494E+02	28	5.	1.51
131	3.0000E+02	3.539E-01	1.1577E+02	89	1.	2.60
132	3.0000E+02	3.5904E-01	1.1630E+02	88	1.	3.07
133	3.2000E+02	2.9491E-01	9.5531E+01	34	2.	-4.01
134	4.0000E+02	2.0983E-01	6.7970E+01	10	1.	2.31
135	4.1100E+02	1.9730E-01	6.3912E+01	50	1.	0.57
136	4.1200E+02	1.9300E-01	6.2519E+01	28	5.	-1.23
137	5.0000E+02	1.4740E-01	4.7747E+01	88	1.	1.40
138	6.0000E+02	1.1541E-01	3.7384E+01	88	1.	0.96
139	6.6200E+02	1.0256E-01	3.3222E+01	88	1.	0.58
140	6.6200E+02	1.0471E-01	3.2622E+01	34	2.	-1.24
141	6.6400E+02	1.0110E-01	3.2750E+01	50	1.	-0.52
142	7.0000E+02	9.6592E-02	3.1289E+01	88	1.	0.76
143	8.0000E+02	8.3755E-02	2.7131E+01	88	1.	0.39
144	9.0000E+02	7.4728E-02	2.4207E+01	88	1.	0.10
145	1.0000E+03	6.7921E-02	2.2002E+01	88	1.	-0.09

145 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR GOLD

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CONVERSION CONSTANT IS 3.274E+02

K-EDGE	80.725					
L-EDGES	14.355	13.733	11.918			
M-EDGES	3.425	3.149	2.743	2.291	2.206	
	KEV	CM2/GM	BARNs/AT	SOURCE	WEIGHT	DIFF
1	1.0000E+00	5.5718E+03	1.8244E+06	10	1.	-2.48
2	1.0001E+00	1.1858E+03	1.6980E+06	90	1.	-9.22
3	1.2540E+00	3.3500E+03	1.0904E+06	83	3.	-1.42
4	1.4870E+00	2.3295E+03	7.6277E+05	82	3.	2.38
5	1.4870E+00	2.3000E+03	7.5311E+05	83	3.	1.08
6	1.5000E+00	2.2873E+03	7.4895E+05	10	1.	2.57
7	1.5000E+00	2.3973E+03	7.8498E+05	90	1.	7.51
8	1.7400E+00	1.6140E+03	5.2848E+05	83	3.	2.05
9	1.7400E+00	1.5955E+03	5.2243E+05	82	3.	0.88
10	1.9250E+00	1.2650E+03	4.1421E+05	83	3.	0.78
11	2.0000E+00	1.1586E+03	3.7937E+05	10	1.	1.05
12	2.0140E+00	1.1284E+03	3.6948E+05	82	3.	0.02
13	2.1250E+00	9.8900E+02	3.2384E+05	83	3.	-1.01
14	2.1650E+00	9.3590E+02	3.0645E+05	82	3.	-2.00
15	2.1660E+00	9.4600E+02	3.0976E+05	83	3.	-0.33
16	2.2050E+00	9.2384E+02	3.0250E+05	90	1.	0.91
17	2.2050E+00	8.9300E+02	2.9240E+05	83	3.	-2.46
18	2.2060E+00	1.9951E+03	6.5000E+05	90	1.	-3.47
19	2.2570E+00	1.8600E+03	6.0903E+05	83	3.	-4.09
20	2.2570E+00	1.8750E+03	6.1395E+05	82	3.	-3.31
21	2.2900E+00	1.8324E+03	6.0000E+05	90	1.	-1.93
22	2.2920E+00	5.2678E+03	1.0700E+06	90	1.	-1.03
23	2.2930E+00	2.0500E+03	6.7125E+05	83	3.	-37.84
24	2.3080E+00	2.0740E+03	6.7911E+05	82	3.	-36.05
25	2.3950E+00	2.9100E+03	9.5284E+05	38	1.	-1.52
26	2.4230E+00	2.9100E+03	9.5284E+05	83	3.	1.67
27	2.5260E+00	2.6100E+03	8.9461E+05	83	3.	1.48
28	2.5590E+00	2.5200E+03	8.2514E+05	83	3.	1.31
29	2.6220E+00	2.5500E+03	8.3497E+05	38	1.	9.12
30	2.6224E+00	2.4220E+03	7.9305E+05	82	3.	3.64
31	2.6970E+00	2.3500E+03	7.6293E+05	83	3.	7.19
32	2.7420E+00	2.1989E+03	7.2000E+05	90	1.	5.55
33	2.7430E+00	2.6591E+03	8.7070E+05	90	1.	0.03
34	2.8160E+00	2.4220E+03	7.9305E+05	82	3.	-2.54
35	2.8210E+00	2.4500E+03	8.0222E+05	38	1.	-0.96
36	2.8390E+00	2.5100E+03	7.8258E+05	83	3.	-1.79
37	2.9840E+00	2.1500E+03	7.0399E+05	83	3.	0.40
38	3.1340E+00	1.4110E+03	5.9299E+05	83	3.	-4.08
39	3.1510E+00	1.9660E+03	6.4374E+05	85	3.	-6.47
40	3.1510E+00	2.0500E+03	6.7125E+05	38	1.	-2.48
41	3.1710E+00	1.9620E+03	6.4242E+05	83	3.	-5.14
42	3.3140E+00	1.8020E+03	5.9004E+05	82	3.	-2.43
43	3.3370E+00	1.8190E+03	5.9561E+05	83	3.	0.26
44	3.4440E+00	1.7350E+03	5.6810E+05	83	3.	-3.94
45	3.6050E+00	1.5630E+03	5.1179E+05	83	3.	-2.70
46	3.6910E+00	1.4700E+03	4.8133E+05	38	1.	-2.79
47	3.6926E+00	1.47066E+03	4.8155E+05	82	3.	-2.68
48	3.9440E+00	1.3350E+03	4.3713E+05	83	3.	-2.03
49	4.0120E+00	1.9266E+03	3.9050E+05	82	3.	-2.34
50	4.0900E+00	1.2520E+03	4.0995E+05	38	1.	7.71
51	4.0910E+00	1.1630E+03	3.7993E+05	83	3.	-0.14
52	4.5100E+00	2.2500E+02	3.0208E+05	38	1.	2.22
53	4.5110E+00	3.3000E+02	3.0452E+05	83	3.	2.83
54	4.5110E+00	8.6930E+02	2.8464E+05	42	3.	-3.89
55	4.5110E+00	9.0000E+02	2.9486E+05	82	3.	-0.49
56	4.9520E+00	7.3600E+02	2.4099E+05	83	3.	3.29
57	4.9520E+00	7.0400E+02	2.3052E+05	42	3.	-1.20
58	4.9520E+00	7.2000E+02	2.3576E+05	38	1.	1.05
59	5.0000E+00	7.0126E+02	2.2962E+05	10	1.	0.97
60	5.4140E+00	5.8500E+02	1.9155E+05	38	1.	3.19
61	5.4150E+00	5.6990E+02	1.8661E+05	42	3.	0.48
62	5.4150E+00	5.8000E+02	1.8991E+05	83	3.	2.26
63	5.4346E+00	5.4100E+02	1.7714E+05	25	2.	-3.76
64	5.8990E+00	4.6500E+02	1.5226E+05	42	3.	1.98
65	5.8990E+00	4.5500E+02	1.5226E+05	83	3.	1.98
66	6.4030E+00	3.8730E+02	1.2672E+05	38	1.	4.57
67	6.4040E+00	3.7600E+02	1.2312E+05	83	3.	1.64
68	6.4040E+00	3.7720E+02	1.2351E+05	82	3.	1.96
69	6.4040E+00	3.7560E+02	1.2299E+05	42	3.	1.53

70	6.494E+11	3.5670E+02	1.1680E+05	25	2.	-0.10
71	6.930E+13	3.0000E+02	1.0085E+05	83	3.	1.74
72	6.9300E+00	3.0000E+02	1.0085E+05	42	3.	1.74
73	7.1300E+00	2.9440E+02	9.6398E+04	43	1.	4.53
74	7.4770E+00	2.5900E+02	8.4806E+04	38	1.	3.72
75	7.4780E+00	2.5400E+02	8.3169E+04	83	3.	1.76
76	7.4780E+00	2.5410E+02	8.3202E+04	42	3.	1.80
77	7.5020E+00	2.4350E+02	7.9731E+04	25	2.	-1.66
78	8.0000E+00	2.1054E+02	6.8938E+04	10	1.	0.04
79	8.0400E+00	2.0889E+02	6.8369E+04	82	3.	0.47
80	8.0470E+00	2.0789E+02	6.8142E+04	11	10.	0.21
81	8.0480E+01	2.1000E+02	6.8762E+04	83	3.	1.30
82	8.0480E+00	2.1040E+02	6.8893E+04	42	3.	1.49
83	8.0480E+00	2.0584E+02	6.7440E+04	37	2.	-0.71
84	8.3800E+00	1.9740E+02	6.3981E+04	43	1.	4.39
85	8.6390E+00	1.7454E+02	5.7771E+04	82	3.	0.73
86	8.6390E+00	1.7590E+02	5.7596E+04	42	3.	1.48
87	8.6390E+00	1.7590E+02	5.7596E+04	83	3.	1.48
88	8.6690E+00	1.6690E+02	5.4649E+04	25	2.	-2.87
89	8.6690E+00	1.6890E+02	5.5304E+04	19	2.	-1.73
90	8.9040E+00	1.5990E+02	5.2351E+04	11	10.	-0.45
91	9.0000E+00	1.6530E+02	5.3372E+04	45	2.	4.26
92	9.2920E+00	1.3140E+02	4.6300E+04	19	2.	-1.99
93	9.5000E+00	1.4240E+02	4.6496E+04	45	2.	4.05
94	9.7130E+00	1.2920E+02	4.2305E+04	83	3.	0.10
95	9.7130E+00	2920E+02	4.2305E+04	42	3.	0.10
96	9.8500E+00	1.2710E+02	4.1617E+04	43	1.	1.99
97	9.8850E+00	1.2180E+02	3.9882E+04	11	10.	-1.39
98	9.9150E+00	1.1980E+02	3.9227E+04	19	2.	-2.27
99	1.0000E+01	1.1848E+02	3.8735E+04	10	1.	-1.25
100	1.0000E+01	1.2583E+02	4.1200E+04	37	2.	4.87
101	1.0000E+01	1.2200E+02	3.9947E+04	45	2.	1.68
102	1.0310E+01	1.1530E+02	3.7754E+04	43	1.	3.75
103	1.0500E+01	1.1000E+02	3.6018E+04	45	2.	3.63
104	1.0550E+01	1.0740E+02	3.5167E+04	43	1.	2.39
105	1.0550E+01	1.0390E+02	3.4021E+04	42	3.	-0.95
106	1.0552E+01	1.0390E+02	3.4021E+04	83	3.	-0.90
107	1.0570E+01	1.0040E+02	3.2875E+04	19	2.	-3.83
108	1.0570E+01	1.0280E+02	3.3661E+04	25	2.	-1.53
109	1.0800E+01	1.0210E+02	3.3431E+04	43	1.	3.22
110	1.0980E+01	9.1700E+01	3.0026E+04	11	10.	-3.37
111	1.1000E+01	9.9100E+01	3.2449E+04	45	2.	4.90
112	1.1220E+01	8.8030E+01	2.8815E+04	82	3.	-2.11
113	1.1250E+01	8.8890E+01	2.9076E+04	25	2.	-0.56
114	1.1250E+01	8.4750E+01	2.7750E+04	19	2.	-5.10
115	1.1300E+01	8.8100E+01	2.8847E+04	45	2.	-0.25
116	1.1310E+01	9.0370E+01	2.9591E+04	43	1.	2.55
117	1.1442E+01	8.2600E+01	2.7046E+04	82	3.	-3.51
118	1.1500E+01	8.6100E+01	2.8192E+04	45	2.	1.86
119	1.1730E+01	8.1100E+01	2.6555E+04	43	1.	0.81
120	1.2120E+01	1.8490E+02	6.0543E+04	43	1.	5.66
121	1.2213E+01	1.8660E+02	6.100E+04	83	3.	8.73
122	1.2210E+01	1.8660E+02	6.100E+04	42	3.	8.66
123	1.2550E+01	1.7000E+02	5.5664E+04	45	2.	1.90
124	1.2400E+01	1.7340E+02	5.6778E+04	42	3.	5.01
125	1.2497E+01	1.5440E+02	5.0556E+04	11	10.	-4.76
126	1.2500E+01	1.6278E+02	5.3300E+04	37	2.	0.61
127	1.2523E+01	1.6840E+02	5.5141E+04	82	3.	4.57
128	1.2690E+01	1.6790E+02	5.4977E+04	43	1.	7.83
129	1.2700E+01	1.6510E+02	5.4027E+04	45	2.	6.18
130	1.2970E+01	1.5650E+02	4.9512E+04	42	3.	2.22
131	1.2980E+01	1.5780E+02	5.1670E+04	43	1.	7.32
132	1.3000E+01	1.4700E+02	4.8133E+04	45	1.	0.37
133	1.3200E+01	1.4500E+02	4.7478E+04	45	2.	2.91
134	1.3300E+01	1.3800E+02	4.5186E+04	45	2.	-0.17
135	1.3380E+01	1.3140E+02	4.3025E+04	42	3.	-3.48
136	1.3582E+01	1.3710E+02	4.4859E+04	82	3.	0.67
137	1.3590E+01	1.3761E+02	4.5121E+04	11	10.	1.41
138	1.3430E+01	1.3720E+02	4.3615E+04	19	2.	-1.23
139	1.3430E+01	1.3650E+02	4.4728E+04	25	2.	1.29
140	1.3610E+01	1.3120E+02	4.2960E+04	42	3.	0.62
141	1.3900E+01	1.8000E+02	5.0939E+04	45	2.	4.16
142	1.3970E+01	1.7580E+02	5.7554E+04	43	1.	3.05
143	1.4100E+01	1.6500E+02	5.4027E+04	45	2.	-0.96
144	1.4160E+01	1.6910E+02	5.5370E+04	42	3.	2.60
145	1.4169E+01	1.6700E+02	5.4682E+04	82	3.	1.50
146	1.4180E+01	1.5960E+02	5.2259E+04	19	2.	-2.81
147	1.4180E+01	1.5900E+02	5.2063E+04	25	2.	-3.17
148	1.4200E+01	1.6000E+02	5.2390E+04	45	2.	-2.21
149	1.4230E+01	1.6560E+02	5.4224E+04	43	1.	1.76

150	1.440E+01	1.8101E+02	5.9270E+04	41	1.	-0.86
151	1.465E+01	1.8410E+02	6.0281E+04	43	1.	5.01
152	1.4960E+01	1.6960E+02	5.5533E+04	42	3.	2.41
153	1.4960E+01	1.6390E+02	5.3667E+04	11	10.	-1.01
154	1.4980E+01	1.5640E+02	5.1211E+04	25	2.	-5.21
155	1.5000E+01	1.637E+02	5.3428E+04	10	1.	-0.77
156	1.5000E+01	1.6500E+02	5.4027E+04	45	2.	0.34
157	1.5300E+01	1.6064E+02	5.2600E+04	37	2.	-2.31
158	1.5300E+01	1.6100E+02	5.2717E+04	45	2.	3.06
159	1.5500E+01	1.5300E+02	5.0098E+04	45	2.	1.29
160	1.5770E+01	1.4510E+02	4.7511E+04	11	10.	0.45
161	1.5773E+01	1.4620E+02	4.7871E+04	82	3.	1.26
162	1.5810E+01	1.4080E+02	4.6103E+04	19	2.	-1.89
163	1.6000E+01	1.3900E+02	4.5514E+04	45	2.	-0.10
164	1.6300E+01	1.3800E+02	4.5186E+04	43	1.	4.06
165	1.6500E+01	1.2700E+02	4.1505E+04	45	2.	-1.17
166	1.6650E+01	1.2140E+02	3.9751E+04	19	2.	-3.29
167	1.7000E+01	1.2200E+02	3.9947E+04	45	2.	2.55
168	1.7133E+01	1.2220E+02	4.0013E+04	43	1.	4.29
169	1.7483E+01	1.1090E+02	3.6313E+04	11	10.	0.17
170	1.7483E+01	1.1170E+02	3.6575E+04	42	3.	0.94
171	1.7487E+01	1.1340E+02	3.7131E+04	82	3.	2.54
172	1.7520E+01	1.0680E+02	3.4970E+04	25	2.	-2.96
173	1.7520E+01	1.0330E+02	3.5691E+04	19	2.	-0.96
174	1.7670E+01	1.0590E+02	3.5003E+04	11	10.	-0.71
175	1.7900E+01	1.5700E+02	3.4610E+04	45	1.	1.51
176	1.8000E+01	9.3110E+01	3.0488E+04	43	1.	1.48
177	1.9310E+01	8.5590E+01	2.7371E+04	19	2.	-2.39
178	1.9610E+01	8.2890E+01	2.7141E+04	11	10.	3.71
179	2.0090E+01	7.8777E+01	2.5795E+04	10	1.	0.69
180	2.0090E+01	7.6045E+01	2.4390E+04	37	2.	-2.80
181	2.0210E+01	7.6920E+01	2.5187E+04	11	10.	1.05
182	2.0250E+01	7.4900E+01	2.4525E+04	19	2.	-1.09
183	2.1210E+01	6.6770E+01	2.1863E+04	19	2.	-0.46
184	2.2160E+01	5.7000E+01	1.9548E+04	42	3.	-0.19
185	2.2160E+01	5.5710E+01	1.9951E+04	11	10.	-0.17
186	2.2179E+01	6.0750E+01	1.9885E+04	82	3.	1.76
187	2.2200E+01	5.8310E+01	1.9093E+04	19	2.	-2.05
188	2.2720E+01	5.6660E+01	1.8356E+04	11	10.	0.04
189	2.3174E+01	5.4150E+01	1.7731E+04	82	3.	1.76
190	2.5290E+01	5.1800E+01	1.6961E+04	25	2.	-2.37
191	2.3210E+01	5.3010E+01	1.7357E+04	19	2.	0.02
192	2.4240E+01	4.6810E+01	1.5327E+04	19	2.	-1.08
193	2.4940E+01	4.4190E+01	1.4469E+04	11	10.	0.57
194	2.4942E+01	4.4180E+01	1.4466E+04	39	5.	0.57
195	2.5000E+01	4.3480E+01	1.4237E+04	48	3.	-0.42
196	2.5000E+01	4.4028E+01	1.4417E+04	10	1.	0.84
197	2.5000E+01	4.3672E+01	1.4300E+04	37	2.	0.02
198	2.5251E+01	4.2990E+01	1.4077E+04	82	3.	1.05
199	2.5270E+01	4.2680E+01	1.4041E+04	11	10.	0.99
200	2.5300E+01	4.0430E+01	1.3238E+04	19	2.	-4.48
201	2.6390E+01	3.7960E+01	1.2430E+04	19	2.	0.08
202	2.7190E+01	3.3130E+01	1.0848E+04	19	2.	-2.87
203	2.7490E+01	3.2000E+01	1.0478E+04	25	2.	-6.18
204	2.8490E+01	3.1730E+01	1.0390E+04	11	10.	1.97
205	2.8620E+01	3.0360E+01	9.9410E+03	19	2.	-1.19
206	2.9190E+01	2.9340E+01	9.6070E+03	11	10.	0.50
207	3.0000E+01	2.7669E+01	9.0600E+03	37	2.	1.73
208	3.0000E+01	2.7390E+01	8.9685E+03	39	5.	0.71
209	3.0048E+01	2.6866E+01	8.7950E+03	48	3.	-0.89
210	3.0490E+01	2.6770E+01	8.7655E+03	11	10.	2.72
211	3.0970E+01	2.4860E+01	8.1401E+03	19	2.	-0.69
212	3.2180E+01	2.2390E+01	7.5313E+03	19	2.	-0.98
213	3.3430E+01	2.0340E+01	6.6601E+03	19	2.	-0.58
214	3.4700E+01	1.8150E+01	5.9433E+03	25	2.	-2.18
215	3.4700E+01	1.8020E+01	5.9304E+03	15	1.	-2.88
216	3.4700E+01	1.8600E+01	6.3933E+03	19	2.	0.25
217	3.5000E+01	1.8171E+01	5.9500E+03	37	2.	0.17
218	3.5900E+01	1.7121E+01	5.6254E+03	19	2.	1.21
219	3.7320E+01	1.5830E+01	5.0032E+03	19	2.	-0.39
220	4.0000E+01	1.2575E+01	4.2098E+03	10	1.	0.39
221	4.0000E+01	1.2940E+01	4.1237E+03	39	1.	1.04
222	4.0000E+01	1.2766E+01	4.1800E+03	37	2.	-0.32
223	4.0040E+01	1.2793E+01	4.1875E+03	48	3.	0.13
224	4.0070E+01	1.2630E+01	4.1355E+03	19	2.	-0.92
225	4.0120E+01	1.2700E+01	4.1595E+03	28	5.	-0.05
226	4.2980E+01	1.0570E+01	3.4381E+03	28	5.	-0.95
227	4.4000E+01	1.0210E+01	3.3431E+03	87	2.	2.42
228	4.5400E+01	9.2700E+00	3.1190E+03	28	5.	0.39
229	5.0080E+01	6.9910E+00	2.2908E+03	48	3.	-1.64

230	5.7460E+01	5.1780E+00	1.6955E+03	19	2.	4.23
231	5.7520E+01	5.9300E+00	1.6306E+03	28	5.	0.51
232	5.9070E+01	4.9360E+00	1.6162E+03	19	2.	6.72
233	6.0030E+01	4.3650E+00	1.4295E+03	40	5.	-1.61
234	6.0750E+01	4.0900E+00	1.3592E+03	25	2.	-4.87
235	6.0750E+01	4.1900E+00	1.3392E+03	15	1.	-4.87
236	6.0750E+01	4.4670E+00	1.4627E+03	19	2.	3.90
237	6.4640E+01	3.6740E+00	1.2030E+03	19	2.	0.54
238	6.6500E+01	5.4750E+00	1.1372E+03	19	2.	2.33
239	6.6500E+01	3.1880E+00	1.0439E+03	15	1.	-6.06
240	6.7870E+01	2.9100E+00	9.5284E+02	28	5.	-9.59
241	6.8520E+01	3.3370E+00	1.0927E+03	19	2.	6.27
242	7.0040E+01	2.8920E+00	9.4695E+02	40	5.	-2.52
243	7.0380E+01	3.0700E+00	1.0052E+03	19	2.	4.78
244	7.0810E+01	2.8800E+00	9.4302E+02	28	5.	-0.11
245	7.2440E+01	2.7100E+00	8.8736E+02	19	2.	-0.36
246	7.4480E+01	2.4580E+00	8.0484E+02	19	2.	-2.95
247	7.6540E+01	2.5210E+00	7.5998E+02	19	2.	-1.74
248	8.0260E+01	2.2800E+00	7.4656E+02	28	5.	8.90
249	8.3723E+01	8.3940E+00	2.7485E+03	62	2.	-5.04
250	8.3725E+01	8.9890E+00	2.9433E+03	90	1.	3.84
251	8.4930E+01	7.6020E+00	2.4892E+03	40	5.	-0.30
252	8.6540E+01	7.4500E+00	2.4394E+03	28	5.	2.15
253	8.9920E+01	6.5900E+00	2.1578E+03	40	5.	-0.72
254	9.1680E+01	6.0130E+00	1.9689E+03	19	2.	-4.99
255	9.7130E+01	5.3290E+00	1.7449E+03	19	2.	-3.00
256	1.0030E+02	5.1560E+00	1.5817E+03	10	1.	0.39
257	1.0000E+02	5.2255E+00	1.1110E+03	89	1.	2.14
258	1.0000E+02	5.2014E+00	1.7031E+03	88	1.	1.66
259	1.0000E+02	5.0320E+00	1.6477E+03	40	5.	-1.50
260	1.0500E+02	4.8600E+00	1.5913E+03	28	5.	7.56
261	1.1487E+02	3.5880E+00	1.1748E+03	40	5.	-0.28
262	1.2300E+02	3.0200E+00	9.8866E+02	28	5.	-0.28
263	1.3031E+02	2.6550E+00	8.6280E+02	40	5.	0.55
264	1.4560E+02	1.9814E+00	6.4879E+02	40	3.	-0.41
265	1.5000E+02	1.8432E+00	6.0355E+02	19	1.	-0.31
266	1.5000E+02	1.8144E+00	5.9280E+02	89	1.	-2.08
267	2.0000E+02	6.1930E-01	2.9437E+02	89	1.	-1.29
268	2.0830E+02	8.2350E-01	2.6954E+02	46	5.	-0.42
269	2.7910E+02	4.2470E-01	1.3935E+02	48	3.	-0.37
270	3.0000E+02	3.6884E-01	1.2077E+02	89	1.	0.82
271	3.0000E+02	3.7032E-01	1.2126E+02	88	1.	1.22
272	4.0000E+02	2.1545E-01	7.0547E+01	10	1.	1.70
273	5.0000E+02	2.1625E-01	7.0810E+01	88	1.	2.48
274	4.1100E+02	1.9930E-01	6.5160E+01	50	1.	-1.67
275	4.1180E+02	1.9980E-01	6.5422E+01	48	3.	-0.96
276	5.0000E+02	1.5183E-01	4.9387E+01	88	1.	1.45
277	6.0000E+02	1.1786E-01	3.8592E+01	88	1.	1.34
278	6.6200E+02	1.0147E-01	3.3225E+01	31	2.	-2.07
279	6.6200E+02	1.0446E-01	3.4205E+01	88	1.	0.82
280	7.0000E+02	9.8215E-02	3.2159E+01	88	1.	0.91
281	8.0000E+02	8.4996E-02	2.7831E+01	88	1.	0.53
282	9.0000E+02	7.5703E-02	2.4788E+01	88	1.	-0.01
283	1.0000E+03	6.8761E-02	2.2515E+01	88	1.	-0.30

283 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR MERCURY

Z = 80

CONVERSION CONSTANT IS 3.331E+02

K-EDGE	63.103					
L-EDGES	14.846	14.209	12.284			
M-EDGES	3.562	3.280	2.847	2.385	2.295	
1	1.0000E+00	5.7473E+03	1.9144E+06	10	1.	-5.50
2	1.0000E+00	5.5984E+03	1.8981E+06	90	1.	-6.31
3	1.5000E+00	2.3794E+03	7.9257E+05	10	1.	0.33
4	1.5000E+00	2.5538E+03	7.8758E+05	90	1.	-0.33
5	2.0000E+00	1.2201E+03	4.0642E+05	10	1.	0.14
6	2.0000E+00	1.2168E+03	4.0530E+05	90	1.	-0.14
7	4.0000E+00	1.5214E+03	4.4016E+05	90	1.	1.12
8	4.5090E+00	9.3972E+02	3.1302E+05	10	1.	-1.93
9	4.9320E+00	7.6548E+02	2.5498E+05	10	1.	2.73
10	5.0000E+00	7.2716E+02	2.4222E+05	10	1.	-0.87
11	5.4120E+00	5.9838E+02	1.9932E+05	10	1.	0.09
12	5.8950E+00	4.7905E+02	1.5957E+05	10	1.	-0.12
13	5.9470E+00	4.7091E+02	1.5686E+05	10	1.	0.43
14	6.4000E+00	3.9093E+02	1.3022E+05	10	1.	0.72
15	6.4900E+00	3.7556E+02	1.2510E+05	10	1.	0.30
16	6.9250E+00	3.1948E+02	1.0642E+05	10	1.	0.79
17	7.0580E+00	3.0245E+02	1.0075E+05	10	1.	0.20
18	7.4720E+00	2.6094E+02	6.5919E+04	10	1.	-0.04
19	7.6490E+00	2.4497E+02	8.1598E+04	10	1.	-0.28
20	8.0000E+00	2.1862E+02	7.2821E+04	10	1.	-0.19
21	8.0410E+00	2.1547E+02	7.1772E+04	10	1.	-3.34
22	8.2650E+00	1.9901E+02	6.6289E+04	10	1.	-1.25
23	8.6310E+00	1.7859E+02	5.9489E+04	10	1.	-1.92
24	8.9050E+00	1.6459E+02	5.4826E+04	10	1.	-1.21
25	9.5720E+00	1.3733E+02	4.5744E+04	10	1.	-0.95
26	1.0000E+01	1.2247E+02	4.0795E+04	10	1.	-1.29
27	1.0000E+01	1.3281E+02	4.4240E+04	89	1.	7.04
28	1.2282E+01	7.2517E+01	2.4155E+04	90	1.	-1.67
29	1.5000E+01	1.6774E+02	5.5873E+04	10	1.	-0.36
30	1.7444E+01	1.1610E+02	3.8673E+04	10	1.	1.21
31	1.9638E+01	8.5665E+01	2.8535E+04	10	1.	0.43
32	2.0000E+01	8.1400E+01	2.7114E+04	10	1.	0.34
33	2.0000E+01	8.2648E+01	2.7533E+04	89	1.	1.87
34	2.0169E+01	7.9732E+01	2.6412E+04	10	1.	-0.11
35	2.1125E+01	5.9335E+01	2.3312E+04	10	1.	-0.51
36	2.2105E+01	5.2706E+01	2.0794E+04	10	1.	-0.50
37	2.2724E+01	5.8070E+01	1.9343E+04	10	1.	-0.41
38	2.3819E+01	5.1510E+01	1.7158E+04	10	1.	-0.25
39	2.4942E+01	4.5671E+01	1.5213E+04	10	1.	-0.41
40	2.5000E+01	4.5396E+01	1.5121E+04	10	1.	-0.42
41	3.0000E+01	2.8793E+01	9.5210E+03	89	1.	0.86
42	4.0000E+01	1.3297E+01	4.4294E+03	10	1.	-1.50
43	4.0000E+01	1.3573E+01	4.5210E+03	89	1.	0.53
44	5.0000E+01	7.5955E+00	2.5502E+03	89	1.	0.80
45	6.0000E+01	4.7403E+00	1.5790E+03	89	1.	1.26
46	8.0000E+01	2.2675E+00	7.5530E+02	89	1.	2.37
47	8.3100E+01	1.9514E+00	6.5000E+02	90	1.	-2.92
48	8.3110E+01	8.1057E+00	2.7000E+03	90	1.	-5.91
49	1.0000E+02	5.2705E+00	1.7555E+03	10	1.	1.93
50	1.0000E+02	5.3673E+00	1.7878E+03	89	1.	3.80
51	1.0000E+02	5.4045E+00	1.8002E+03	90	1.	4.52
52	1.4200E+02	1.9380E+00	6.3555E+02	3	3.	-4.98
53	1.5000E+02	1.8903E+00	5.2964E+02	10	1.	6.83
54	1.5000E+02	1.8632E+00	6.2063E+02	89	1.	5.50
55	2.0000E+02	9.2481E-01	3.0805E+02	89	1.	5.93
56	2.7900E+02	3.9900E-01	1.3291E+02	3	3.	-4.82
57	3.0000E+02	3.7824E-01	1.2599E+02	89	1.	4.73
58	3.2300E+02	3.1280E-01	1.0419E+02	3	3.	-0.21
59	4.0000E+02	2.1980E-01	7.3216E+01	10	1.	2.90
60	5.0000E+02	1.5542E-01	5.1103E+01	89	1.	1.39
61	5.1103E+02	1.4510E-01	4.8333E+01	57	1.	-1.13
62	6.0000E+02	1.1942E-01	3.9780E+01	89	1.	0.68
63	6.6200E+02	1.0530E-01	3.5075E+01	3	3.	-1.20
64	6.6200E+02	1.0582E-01	3.5240E+01	89	1.	0.29
65	7.0000E+02	2.9302E-02	3.3078E+01	89	1.	0.28
66	8.0000E+02	8.5811E-02	2.8584E+01	89	1.	-0.31
67	9.0000E+02	7.6351E-02	2.5435E+01	89	1.	-0.19
68	1.0000E+03	6.9245E-02	2.3065E+01	89	1.	-0.29

EXPERIMENTAL DATA FOR THALLIUM

Z = 81

CONVERSION CONSTANT IS 3.394E+02

K-EDGE	85.528					
L-EDGES	15.344	14.698	12.657			
M-EDGES	3.700	3.416	2.956	2.485	2.389	
	KEV	CM2/GM	BARNs/AT	SOURCE	WEIGHT	DIFF
1	1.0000E+00	5.9147E+03	2.0073E+06	10	1.	-3.64
2	1.0000E+00	5.9850E+03	1.9172E+06	90	1.	-4.12
3	1.0000E+00	5.9056E+03	2.0042E+06	90	1.	-3.79
4	1.5000E+00	2.4695E+03	8.3810E+05	10	1.	0.62
5	1.5000E+00	2.4394E+03	8.2786E+05	90	1.	-0.61
6	2.0000E+00	1.2900E+03	4.3778E+05	90	1.	0.51
7	2.0000E+00	1.2770E+03	4.3538E+05	10	1.	-0.50
8	4.5096E+00	9.7028E+02	3.2929E+05	10	1.	-2.06
9	4.9320E+00	7.9101E+02	2.6845E+05	10	1.	0.77
10	5.0000E+00	7.5250E+02	2.5538E+05	10	1.	-0.67
11	5.4122E+00	6.1837E+02	2.0986E+05	10	1.	0.22
12	5.8950E+00	4.9358E+02	1.6751E+05	10	1.	-0.40
13	5.9470E+00	4.8619E+02	1.6500E+05	10	1.	0.57
14	6.4000E+00	4.0365E+02	1.3699E+05	10	1.	0.93
15	6.4900E+00	3.8186E+02	1.3163E+05	10	1.	0.55
16	6.9250E+00	3.2987E+02	1.1195E+05	10	1.	1.09
17	7.1580E+00	3.1269E+02	1.0612E+05	10	1.	0.65
18	7.4720E+00	2.6928E+02	9.1387E+C4	10	1.	0.35
19	7.6415E+00	2.5278E+02	8.5787E+C4	10	1.	0.34
20	8.0000E+00	2.2645E+02	7.6852E+04	10	1.	0.56
21	8.0410E+00	2.2271E+02	7.5582E+04	10	1.	1.21
22	8.2650E+00	2.0545E+02	6.9728E+04	10	1.	-0.80
23	8.6310E+00	1.8436E+02	6.2559E+04	10	1.	-0.53
24	8.9050E+00	1.6989E+02	5.7655E+04	10	1.	-0.71
25	9.5720E+00	1.4209E+02	4.8222E+04	10	1.	-0.13
26	1.0000E+01	1.2653E+02	4.2873E+04	10	1.	-0.74
27	1.2655E+01	6.9989E+01	2.3753E+04	90	1.	-0.02
28	1.5010E+01	1.5731E+02	5.6782E+04	10	1.	9.55
29	1.5710E+01	1.5465E+02	5.2468E+04	79	1.	-0.35
30	1.7444E+01	1.1930E+02	4.0489E+04	10	1.	-2.10
31	1.7480E+01	1.2270E+02	4.1641E+04	79	1.	3.30
32	1.9608E+01	8.8799E+01	2.9936E+04	10	1.	-0.03
33	2.0000E+01	8.1952E+01	2.8491E+04	10	1.	0.14
34	2.0169E+01	8.1588E+01	2.7689E+04	10	1.	-0.52
35	2.0210E+01	6.4630E+01	2.8721E+04	79	1.	3.74
36	2.1125E+01	7.1988E+01	2.4430E+04	10	1.	-0.94
37	2.1180E+01	7.2400E+01	2.4571E+04	79	1.	0.31
38	2.2105E+01	6.4015E+01	2.1725E+04	10	1.	-0.84
39	2.2724E+01	5.9704E+01	2.0252E+04	10	1.	-0.61
40	2.3176E+01	5.7098E+01	1.9375E+04	79	1.	-0.03
41	2.3819E+01	5.2935E+01	1.7955E+04	10	1.	-0.39
42	2.4942E+01	4.7010E+01	1.5954E+04	10	1.	-1.28
43	2.5009E+01	4.6696E+01	1.5847E+04	10	1.	-0.34
44	2.5270E+01	4.7449E+01	1.6100E+04	79	1.	4.11
45	2.7470E+01	3.1170E-01	1.0578E+04	79	1.	-15.05
46	3.0970E+01	2.0440E+01	9.6519E+03	79	1.	5.79
47	3.4720E+01	2.4760E+01	7.0455E+03	79	1.	4.02
48	4.0000E+01	1.5724E+01	4.6557E+03	10	1.	-0.77
49	4.0120E+01	1.3940E+01	4.7309E+03	79	1.	1.58
50	5.2360E+01	6.9450E+00	2.3570E+03	79	1.	0.87
51	5.7520E+01	5.5540E+00	1.8849E+03	79	1.	2.76
52	6.1130E+01	4.6760E+00	1.5869E+03	79	1.	1.16
53	6.6820E+01	3.5980E+00	1.2211E+03	79	1.	-2.09
54	7.0820E+01	3.2030E+00	1.0870E+03	79	1.	1.15
55	7.4960E+01	2.7960E+00	9.1835E+02	79	1.	-1.28
56	7.7100E+01	2.5300E+00	8.5862E+02	79	1.	-0.93
57	1.0000E+02	5.3979E+00	1.8319E+03	10	1.	-0.93
58	1.5000E+02	5.5125E+00	1.8674E+C3	89	1.	0.99
59	1.5000E+02	1.9350E+00	6.5669E+02	10	1.	0.97
60	1.5000E+02	1.8967E+00	6.4371E+02	90	1.	-1.02
61	1.5000E+02	1.9143E+00	6.4956E+02	89	1.	-0.11
62	2.0000E+02	9.4571E-01	3.2095E+02	90	1.	-0.11
63	2.0370E+02	9.4987E-01	3.2236E+02	89	1.	0.35
64	2.7900E+02	4.4500E-01	1.5702E+02	89	1.	-0.79
65	3.0000E+02	3.8748E-01	1.3150E+02	89	1.	0.50
66	4.0000E+02	2.2396E-01	7.6907E+C1	10	1.	0.21
67	5.0000E+02	1.5585E-01	5.2892E+01	89	1.	-0.10
68	6.0000E+02	1.2093E-01	4.1041E+01	89	1.	-0.09
69	6.6200E+02	1.0701E-01	3.6317E+01	89	1.	-0.16

70	7.0000E+02	1.0035E-01	3.4055E+01	89	1.	-0.01
71	8.0000E+02	8.6547E-02	2.9372E+01	89	1.	-0.01
72	9.0000E+02	7.6656E-02	2.6089E+01	89	1.	-0.03
73	1.0000E+03	6.9587E-02	2.3616E+01	89	1.	-0.00

73 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR LEAD

Z = 82

CONVERSION CONSTANT IS 3.441E+02

K-EDGE	88.005					
L-EDGES	15.860	15.198	13.035			
M-EDGES	7.950	5.554	3.066	2.586	2.484	
	KEV	CM2/GM	BARNs/AT	SOURCE	WEIGHT	DIFF
1	1.0000E+00	5.1133E+03	2.1033E+06	10	1.	-1.99
2	1.0001E+00	5.3250E+03	1.9773E+06	90	1.	-9.79
3	1.2540E+00	3.7700E+03	1.2971E+06	83	3.	0.52
4	1.4870E+00	2.6400E+03	9.0831E+05	83	3.	3.19
5	1.5000E+00	2.5741E+03	8.8956E+05	10	1.	2.59
6	1.5000E+00	2.3373E+03	8.0416E+05	89	1.	-6.85
7	1.7400E+00	1.8700E+03	6.4339E+05	83	3.	3.94
8	2.0000E+00	1.3371E+03	4.6005E+05	10	1.	1.49
9	2.0420E+00	1.2900E+03	4.4384E+05	83	3.	2.56
10	2.2950E+00	9.8200E+02	3.3787E+05	83	3.	1.14
11	2.3460E+00	9.2400E+02	3.1791E+05	83	3.	0.14
12	2.3950E+00	8.6800E+02	2.9864E+05	83	3.	-1.53
13	2.4230E+00	8.3800E+02	2.8832E+05	83	3.	-2.41
14	2.4450E+00	8.1900E+02	2.8178E+05	83	3.	-2.86
15	2.5266E+00	1.8370E+03	6.2963E+05	83	3.	-11.11
16	2.5590E+00	1.8560E+03	6.3651E+05	83	3.	-7.06
17	2.6830E+00	2.4200E+03	8.3262E+05	83	3.	-0.92
18	2.6970E+00	2.4100E+03	8.2918E+05	83	3.	0.02
19	2.8350E+00	2.2100E+03	7.5037E+05	83	3.	-4.83
20	2.9840E+00	1.9800E+03	6.8124E+05	83	3.	6.92
21	3.1340E+00	2.0700E+03	7.1220E+05	83	3.	-5.37
22	3.1710E+00	2.0000E+03	6.8812E+05	83	3.	-5.74
23	3.4870E+00	1.6600E+03	5.7114E+05	83	3.	0.19
24	3.6050E+00	1.6650E+03	5.7286E+05	83	3.	-2.92
25	3.6630E+00	1.5600E+03	5.3673E+05	83	3.	-5.19
26	3.8440E+00	1.4800E+03	5.0921E+05	83	3.	1.98
27	4.0910E+00	1.2690E+03	4.3661E+05	83	3.	-4.75
28	4.5110E+00	1.0210E+03	3.5128E+05	83	3.	-1.21
29	4.9520E+00	8.1200E+02	2.7938E+05	83	3.	0.09
30	5.0000E+00	7.8210E+02	2.6912E+05	10	1.	-1.14
31	5.4150E+00	6.4700E+02	2.2261E+05	83	3.	0.55
32	5.8990E+00	5.2600E+02	1.8097E+05	83	3.	2.02
33	6.9300E+00	3.5500E+02	1.2214E+05	83	3.	4.37
34	7.0580E+00	3.2980E+02	1.1547E+05	39	5.	1.64
35	8.0000E+00	2.3440E+02	8.0647E+04	39	5.	-0.31
36	8.0000E+00	2.3552E+02	8.1032E+04	10	1.	0.17
37	8.0720E+00	2.4200E+02	8.3252E+04	25	2.	5.32
38	8.3980E+00	2.0680E+02	7.1151E+04	39	5.	-0.38
39	8.6690E+00	1.9970E+02	6.8709E+04	25	2.	4.36
40	9.0000E+00	1.7270E+02	5.9419E+04	39	5.	-0.66
41	9.5000E+00	1.5080E+02	5.1804E+04	39	5.	-0.41
42	9.9620E+00	1.3220E+02	4.5485E+04	39	5.	-1.45
43	1.0000E+01	1.3089E+02	4.5033E+04	10	1.	-1.48
44	1.0300E+01	1.3090E+02	4.5037E+04	39	5.	-1.47
45	1.0570E+01	1.2030E+02	4.1390E+04	25	2.	4.30
46	1.1960E+01	8.5720E+01	2.9486E+04	25	2.	1.69
47	1.2500E+01	7.3153E+01	2.5168E+04	39	5.	-2.94
48	1.5430E+01	5.3000E+02	5.2641E+04	25	2.	2.32
49	1.5500E+01	1.0640E+02	5.1058E+04	39	5.	0.58
50	1.4180E+01	1.3290E+02	4.5725E+04	25	2.	2.22
51	1.4500E+01	1.2290E+02	4.2285E+04	39	5.	0.11
52	1.4980E+01	1.1420E+02	3.9271E+04	25	2.	1.15
53	1.5000E+01	1.1230E+02	3.8638E+04	39	5.	-0.20
54	1.5500E+01	1.4350E+02	4.9372E+04	39	5.	-0.65
55	1.5810E+01	1.3620E+02	4.6861E+04	25	2.	-0.73
56	1.6500E+01	1.4990E+02	4.8478E+04	39	5.	-0.72
57	1.6650E+01	1.3330E+02	4.5863E+04	25	2.	-3.83
58	2.0000E+01	8.6990E+01	2.9930E+04	10	1.	1.13
59	2.0000E+01	8.6810E+01	2.9868E+04	39	5.	0.92
60	2.1210E+01	7.3900E+01	2.5426E+04	25	2.	0.25
61	2.3200E+01	5.9000E+01	2.0299E+04	25	2.	1.25
62	2.4942E+01	4.8580E+01	1.6749E+04	39	5.	0.95
63	2.5000E+01	4.8254E+01	1.6595E+04	10	1.	0.65
64	2.5000E+01	4.8240E+01	1.6597E+04	39	5.	0.66
65	2.5300E+01	4.8210E+01	1.6597E+04	39	5.	0.66
66	2.5300E+01	5.0780E+01	1.7471E+04	48	3.	5.96
67	3.0000E+01	2.9910E+01	1.1291E+04	39	5.	0.35
68	3.1140E+01	3.1600E+01	1.1672E+04	48	3.	6.39
69	5.1970E+01	2.6160E+01	9.1006E+03	25	2.	-4.57

70	3.2640E+01	2.0900E+01	7.1908E+03	78	3.	-12.49
71	3.4700E+01	2.1380E+01	7.3560E+03	25	2.	5.09
72	3.5000E+01	1.8960E+01	6.5234E+03	19	2.	1.85
73	3.7320E+01	1.7060E+01	5.6696E+03	19	2.	1.41
74	3.9520E+01	1.4200E+01	4.8856E+03	28	5.	-2.33
75	4.0000E+01	1.4220E+01	4.8924E+03	10	1.	1.23
76	4.0000E+01	1.4160E+01	4.8719E+03	39	5.	0.84
77	4.0040E+01	1.4900E+01	5.1265E+03	48	3.	6.35
78	4.0070E+01	1.4250E+01	4.9063E+03	19	2.	1.98
79	4.0120E+01	1.3400E+01	4.6104E+03	28	5.	-3.85
80	4.1530E+01	1.3300E+01	4.5760E+03	78	3.	4.48
81	4.1530E+01	1.2600E+01	4.3351E+03	26	5.	-1.02
82	4.2980E+01	1.1370E+01	3.8879E+03	28	5.	-2.89
83	4.5400E+01	9.8000E+00	3.3993E+03	28	5.	-2.05
84	5.0080E+01	7.5480E+00	2.7346E+03	49	3.	1.66
85	5.0060E+01	7.3600E+00	2.5667E+03	29	5.	-4.97
86	5.7460E+01	5.7810E+00	1.9890E+03	19	2.	5.68
87	5.7520E+01	5.3300E+00	1.8338E+03	28	5.	-2.30
88	5.9070E+01	5.4080E+00	1.8607E+03	19	2.	0.16
89	5.9300E+01	5.1080E+00	1.7575E+03	55	2.	1.28
90	6.0030E+01	4.8750E+00	1.6773E+03	40	5.	-0.25
91	6.0750E+01	4.7540E+00	1.6357E+03	10	2.	0.35
92	6.0750E+01	4.8600E+00	1.6721E+03	25	2.	2.59
93	6.0750E+01	4.7270E+00	1.6754E+03	15	1.	-0.22
94	6.4640E+01	3.7400E+00	1.4244E+03	19	2.	2.70
95	6.6500E+01	3.7230E+00	1.2809E+03	15	1.	-0.61
96	6.6500E+01	3.8270E+00	1.3167E+03	19	2.	2.17
97	6.7870E+01	3.7730E+00	1.3005E+03	28	5.	6.37
98	6.8170E+01	3.5700E+00	1.2293E+03	78	3.	1.61
99	6.8520E+01	3.5050E+00	1.2059E+03	15	1.	1.08
100	6.8520E+01	3.5620E+00	1.2255E+03	19	2.	2.73
101	6.8840E+01	3.2800E+00	1.1285E+03	28	5.	-4.26
102	7.0040E+01	3.2510E+00	1.1185E+03	40	5.	-0.79
103	7.0380E+01	3.3060E+00	1.1375E+03	15	1.	2.15
104	7.0380E+01	3.2110E+00	1.1044E+03	25	2.	-0.82
105	7.0380E+01	3.3420E+00	1.1498E+03	19	2.	3.26
106	7.0810E+01	3.0720E+00	1.0563E+03	28	5.	-3.65
107	7.2440E+01	3.1060E+00	1.3686E+03	19	2.	3.33
108	7.2440E+01	3.0700E+00	1.3590E+03	15	1.	2.40
109	7.4480E+01	2.8920E+00	9.3502E+02	19	2.	3.29
110	7.6540E+01	2.6770E+00	7.2104E+02	19	2.	2.48
111	7.6540E+01	2.7900E+00	9.5992E+02	25	2.	6.81
112	7.6540E+01	2.7510E+00	9.4651E+02	15	1.	3.32
113	7.9500E+01	2.4100E+00	8.2918E+02	78	3.	1.57
114	7.9963E+01	2.3180E+00	7.9753E+02	40	5.	-0.87
115	8.0260E+01	2.2600E+00	7.7757E+02	28	5.	-2.43
116	8.6540E+01	1.8500E+00	6.3651E+02	28	5.	-3.47
117	9.4000E+01	6.4620E+00	2.2233E+03	40	5.	1.59
118	9.5200E+01	6.4120E+00	2.2061E+03	55	2.	4.91
119	1.0000E+02	5.5502E+00	1.9096E+03	10	1.	1.63
120	1.0000E+02	5.6633E+00	1.9485E+03	89	1.	3.70
121	1.0000E+02	5.6200E+00	1.9356E+03	86	1.	2.91
122	1.0310E+02	5.1500E+00	1.7719E+03	55	2.	1.85
123	1.0500E+02	4.5900E+00	1.5792E+03	28	5.	-4.95
124	1.0999E+02	4.3210E+00	1.4887E+03	40	5.	0.69
125	1.1250E+02	4.0190E+00	1.4034E+03	55	2.	0.45
126	1.2500E+02	3.1500E+00	1.0838E+03	28	5.	-3.06
127	1.2370E+02	3.2480E+00	1.1175E+03	55	2.	1.38
128	1.3031E+02	2.8780E+00	9.9029E+02	40	5.	2.23
129	1.3750E+02	2.4900E+00	8.5671E+02	55	2.	1.00
130	1.4560E+02	2.1459E+00	7.3832E+02	48	5.	0.19
131	1.5000E+02	1.9743E+00	6.7928E+02	89	1.	-0.87
132	1.5000E+02	1.9880E+00	6.8400E+02	10	1.	-0.18
133	1.5470E+02	1.8290E+00	6.2928E+02	55	2.	-0.86
134	1.5800E+02	1.7200E+00	5.9178E+02	28	5.	-1.77
135	1.7670E+02	1.4550E+00	5.0061E+02	55	2.	9.29
136	1.9925E+02	1.0100E+00	3.4750E+02	78	3.	1.26
137	2.0000E+02	9.7927E-01	3.3693E+02	89	1.	-0.95
138	2.0620E+02	9.0000E-01	3.0765E+02	55	2.	-2.17
139	2.0800E+02	8.9400E-01	3.0759E+02	28	5.	-0.81
140	2.0830E+02	9.0170E-01	3.1024E+02	48	3.	0.38
141	2.3600E+02	6.9900E-01	2.4050E+02	61	1.	3.87
142	2.4740E+02	6.0000E-01	2.0644E+02	55	2.	-0.80
143	2.5500E+02	5.9600E-01	2.0506E+02	61	1.	5.44
144	2.7900E+02	4.6500E-01	1.5999E+02	63	2.	0.21
145	2.7900E+02	4.5420E-01	1.5627E+02	60	1.	-2.12
146	2.7910E+02	4.6210E-01	1.5899E+02	48	5.	-0.34
147	2.9700E+02	3.9800E-01	1.3694E+02	61	1.	-1.99
148	3.0000E+02	3.9832E-01	1.3705E+02	89	1.	0.19
149	3.0000E+02	3.9838E-01	1.3707E+02	88	1.	0.20

150	3.0930E+02	3.9400E-01	1.3556E+02	55	2.	5.49
151	3.2000E+02	3.2540E-01	1.1127E+02	34	2.	-7.24
152	3.2200E+02	3.5200E-01	1.2111E+02	61	1.	2.23
153	3.2500E+02	3.3520E-01	1.1533E+02	60	1.	-0.83
154	3.9800E+02	2.5000E-01	7.3153E+01	61	1.	0.36
155	4.0000E+02	2.2908E-01	7.8816E+01	10	1.	0.57
156	4.1100E+02	2.1310E-01	7.3319E+01	50	1.	-1.92
157	4.1180E+02	2.1300E-01	7.3284E+01	48	3.	-1.63
158	4.1240E+02	2.2069E-01	7.5693E+01	55	2.	1.86
159	4.1200E+02	2.1600E-01	7.4317E+01	28	5.	-0.16
160	4.3600E+02	1.9220E-01	5.6128E+01	61	1.	-2.18
161	4.9100E+02	1.7570E-01	5.0451E+01	61	1.	3.35
162	4.9600E+02	1.5130E-01	5.2056E+01	60	1.	-5.22
163	4.9900E+02	1.7480E-01	6.0141E+01	61	1.	10.53
164	5.0000E+02	1.5898E-01	5.4697E+01	88	1.	0.83
165	5.1100E+02	1.5190E-01	5.2265E+01	49	1.	-0.48
166	5.4300E+02	1.5330E-01	5.2744E+01	61	1.	9.72
167	5.7300E+02	1.3610E-01	4.6826E+01	61	1.	5.04
168	6.0000E+02	1.2304E-01	4.2332E+01	88	1.	1.08
169	6.6160E+02	1.0720E-01	3.6883E+01	50	1.	-0.46
170	6.6160E+02	9.6000E-02	3.5718E+01	63	2.	-9.00
171	6.6160E+02	1.0486E-01	3.6078E+01	56	1.	-2.63
172	6.6160E+02	1.1110E-01	3.8225E+01	51	1.	3.16
173	6.6200E+02	1.0548E-01	3.6230E+01	34	2.	-1.99
174	6.6200E+02	1.0867E-01	3.7390E+01	68	1.	0.98
175	7.0000E+02	1.0177E-01	3.5014E+01	88	1.	1.07
176	7.9500E+02	8.5556E-02	2.9434E+01	56	1.	-1.85
177	8.0000E+02	8.7596E-02	3.0138E+01	88	1.	1.04
178	8.0000E+02	8.7581E-02	3.0133E+01	90	1.	1.03
179	8.4000E+02	8.2980E-02	2.8550E+01	52	1.	0.63
180	9.0000E+02	7.7624E-02	2.6707E+01	88	1.	0.80
181	1.0000E+03	7.0238E-02	2.4166E+01	88	1.	0.76
182	1.0870E+03	7.0433E-02	2.4233E+01	90	1.	1.04

182 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR BISMUTH

Z = 83

CONVERSION CONSTANT IS 3.470E+02

K-EDGES	93.527					
L-EDGES	16.385	15.708	13.418			
M-EDGES	5.999	3.696	3.177	2.687	2.579	
1	1.0000E+00	5.1505E+03	2.1344E+06	90	1.	-10.54
2	1.0000E+03	6.1419E+03	2.1314E+06	90	1.	-0.67
3	1.0000E+03	6.1534E+03	2.1354E+06	90	1.	-10.50
4	1.0000E+00	6.3465E+03	2.2024E+06	10	1.	-7.69
5	1.2540E+00	4.0100E+03	1.3916E+06	83	3.	-1.75
6	1.5000E+00	2.6186E+03	9.0875E+05	90	1.	-3.11
7	1.5000E+00	2.6152E+03	9.0755E+05	90	1.	-3.24
8	1.5000E+00	2.6948E+03	9.3518E+05	10	1.	-0.29
9	1.7400E+00	1.9580E+03	6.7949E+05	83	3.	1.89
10	1.9230E+00	1.5660E+03	5.4345E+05	83	3.	2.51
11	2.0000E+00	1.4251E+03	4.9455E+05	90	1.	2.07
12	2.0000E+00	1.4011E+03	4.8621E+05	10	1.	0.35
13	2.0420E+00	1.3570E+03	4.7092E+05	83	3.	1.94
14	2.1560E+00	1.1850E+03	4.1158E+05	83	3.	1.97
15	2.2930E+00	1.0320E+03	3.5814E+05	83	3.	1.09
16	2.4230E+00	8.9600E+02	3.1094E+05	83	3.	-0.45
17	2.5260E+00	7.9500E+02	2.7589E+05	83	3.	-2.86
18	2.5530E+00	7.7300E+02	2.6825E+05	83	3.	-2.71
19	3.1340E+00	1.7990E+03	6.2451E+05	83	3.	8.94
20	3.3170E+00	1.9270E+03	6.6873E+05	83	3.	9.02
21	3.4440E+00	1.7950E+03	6.2292E+05	83	3.	2.64
22	3.6050E+00	1.6250E+03	5.6393E+05	83	3.	4.51
23	3.6630E+00	1.5590E+03	5.4102E+05	83	3.	4.46
24	3.8440E+00	1.4710E+03	5.1048E+05	83	3.	-1.14
25	3.9050E+00	1.4110E+03	4.8966E+05	83	3.	-1.25
26	4.0910E+03	1.3130E+03	4.5555E+05	83	3.	-4.05
27	4.5110E+03	1.0350E+03	3.5918E+05	83	3.	-2.77
28	5.0061E+02	8.1682E+02	2.8346E+05	10	1.	-0.56
29	5.4150E+02	6.7200E+02	2.3520E+05	83	3.	0.87
30	5.4540E+00	6.8100E+02	2.3653E+05	25	2.	3.14
31	5.8690E+00	5.3900E+02	1.8705E+05	83	3.	0.73
32	6.4040E+00	4.4710E+02	1.5504E+05	83	3.	1.68
33	6.4940E+00	4.4300E+02	1.5373E+05	25	2.	5.85
34	6.9300E+00	3.5900E+02	1.2424E+05	83	3.	0.97
35	7.4780E+00	2.9400E+02	1.0203E+05	83	3.	0.65
36	7.5020E+00	2.8760E+02	9.9875E+04	25	2.	-0.66
37	8.0000E+00	2.4595E+02	8.5366E+04	10	1.	-0.33
38	8.0480E+00	2.4300E+02	8.4328E+04	83	3.	0.27
39	8.6390E+00	2.0400E+02	7.0704E+04	83	3.	0.77
40	8.6690E+00	1.9930E+02	6.9153E+04	25	2.	-0.69
41	1.0000E+01	1.3623E+02	4.7276E+04	10	1.	-2.59
42	1.0570E+01	1.2089E+02	4.9212E+04	25	2.	-0.65
43	1.1960E+01	8.9500E+01	5.1059E+04	25	2.	0.44
44	1.3410E+01	6.4200E+01	2.2279E+04	25	2.	-4.09
45	1.4180E+01	1.3560E+02	4.7057E+04	25	2.	3.08
46	1.4980E+01	1.1550E+02	4.0092E+04	25	2.	0.73
47	1.5810E+01	1.3460E+02	4.6710E+04	25	2.	-3.73
48	1.6650E+01	1.4170E+02	4.9174E+04	25	2.	-0.04
49	1.7520E+01	1.2390E+02	4.2997E+04	25	2.	-0.49
50	2.0000E+01	9.0574E+01	3.1432E+04	10	1.	1.86
51	2.1210E+01	7.6800E+01	2.6652E+04	25	2.	0.47
52	2.5000E+01	5.0055E+01	1.7364E+04	10	1.	-0.15
53	2.7490E+01	3.9400E+01	1.3673E+04	25	2.	0.25
54	4.0000E+01	1.4797E+01	5.1351E+03	10	1.	-1.22
55	4.0090E+01	1.4580E+01	5.0444E+03	25	2.	-1.43
56	6.0750E+01	5.2200E+00	1.8115E+03	25	2.	2.75
57	8.0000E+01	2.5044E+00	8.7048E+02	90	1.	-0.46
58	9.0510E+01	1.8273E+00	6.3412E+02	90	1.	-1.14
59	1.0000E+02	5.7325E+00	1.9893E+03	10	1.	-1.31
60	1.0000E+02	5.8553E+00	2.0320E+03	89	1.	0.81
61	1.5000E+02	2.0516E+00	7.1198E+02	10	1.	-1.26
62	1.5000E+02	2.1338E+00	7.1055E+02	89	1.	2.70
63	2.0000E+02	1.0143E+00	3.6198E+02	89	1.	-0.80
64	3.0000E+02	4.1141E-01	1.4277E+02	89	1.	0.68
65	4.0000E+02	2.3548E-01	8.1719E+01	10	1.	0.70
66	4.1100E+02	2.1720E-01	7.5375E+01	50	1.	-2.63
67	5.0000E+02	1.6297E-01	5.6554E+01	89	1.	0.71
68	6.0000E+02	1.2572E-01	4.3529E+01	89	1.	0.64
69	6.6200E+02	1.1092E-01	3.8491E+01	89	1.	0.41

70	6.6400E+02	1.0830E-01	3.7585E+01	50	1.	-1.59
71	7.0000E+02	1.0385E-01	3.6031E+01	89	1.	0.47
72	8.0000E+02	8.9155E-02	3.0939E+01	89	1.	0.27
73	9.0000E+02	7.8941E-02	2.7395E+01	89	1.	-0.06
74	1.0000E+03	7.1307E-02	2.4746E+01	89	1.	-0.25

74 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR THORIUM

Z = 90

CONVERSION CONSTANT IS 5.852E+02

K-EDGE	109.649	L-EDGES	20.470	M-EDGES	19.692	16.309	4.046	3.491	3.332	
					KEV	CM2/GM	BARNs/AT	SOURCE	HEIGHT	DIFF
1	1.0000E+00				5.7757E+03	2.6101E+06	90	1.	2.41	
2	1.5000E+00				5.4889E+03	1.340E+06	10	1.	11.55	
3	1.5000E+00				5.0240E+03	1.1649E+06	89	1.	-3.31	
4	2.0000E+00				1.6581E+03	6.3874E+05	10	1.	-8.35	
5	2.0000E+00				1.7814E+03	6.8625E+05	90	1.	-1.55	
6	3.0000E+00				7.3607E+02	2.8355E+05	10	1.	-12.22	
7	3.0000E+00				6.3321E+02	3.2097E+05	90	1.	-0.64	
8	3.0000E+00				8.9084E+02	3.4317E+05	89	1.	6.23	
9	3.3300E+00				7.6322E+02	2.9401E+05	8	1.	10.87	
10	5.4000E+00				7.9600E+02	3.0664E+05	24	2.	-6.22	
11	5.9400E+00				6.4400E+02	2.4808E+05	24	2.	-3.13	
12	5.0000E+00				6.7012E+02	2.5815E+05	90	1.	5.43	
13	6.4000E+00				5.3630E+02	2.0725E+05	24	2.	-2.04	
14	7.0580E+00				4.4310E+02	1.7069E+05	39	5.	3.61	
15	7.0600E+00				4.2200E+02	1.6256E+05	24	2.	-1.25	
16	8.0000E+00				3.1198E+02	1.2018E+05	10	1.	0.40	
17	8.0000E+00				3.1570E+02	1.2161E+05	39	5.	1.60	
18	8.0000E+00				3.1520E+02	1.2142E+05	90	1.	1.44	
19	8.0465E+00				2.9500E+02	1.1364E+05	24	2.	-3.85	
20	8.9000E+00				2.2800E+02	8.7830E+04	24	2.	-3.76	
21	9.0000E+00				2.3450E+02	9.0334E+04	39	5.	1.83	
22	9.9620E+00				1.8070E+02	6.9609E+04	39	5.	1.50	
23	1.0000E+01				1.7009E+02	6.5523E+04	10	1.	-3.55	
24	1.0000F+01				1.7514E+02	6.7053E+04	90	1.	-0.10	
25	1.0000E+01				1.8030E+02	6.9340E+04	24	2.	2.09	
26	1.0000E+01				1.7990E+02	6.9301E+04	87	2.	2.03	
27	1.1000E+01				1.4400E+02	5.5472E+04	24	2.	3.95	
28	1.2030E+01				1.1500E+02	4.4300E+04	24	2.	3.39	
29	1.2503E+01				9.6600E+01	3.7212E+04	39	5.	-3.77	
30	1.3000E+01				9.5200E+01	3.6673E+04	24	2.	4.65	
31	1.4000E+01				7.6200E+01	2.9354E+04	24	2.	0.84	
32	1.5000E+01				6.8800E+01	2.6195E+04	24	2.	6.89	
33	1.5000E+01				5.5555E+01	2.2942E+04	10	1.	-6.39	
34	1.5000E+01				6.1120E+01	2.3545E+04	39	5.	-3.93	
35	1.5000E+01				5.9420E+01	2.2891E+04	87	2.	-6.60	
36	1.6000E+01				5.7200E+01	2.2035E+04	24	2.	5.62	
37	1.7470E+01				3.3600E+01	3.6057E+04	24	2.	-5.54	
38	1.9610E+01				7.4000E+01	2.8506E+04	24	2.	0.91	
39	2.0000E+01				9.2600E+01	3.5671E+04	87	2.	-4.66	
40	2.3000E+01				8.1500E+01	3.1395E+04	24	2.	4.82	
41	2.4942E+01				6.2060E+01	2.3907E+04	87	2.	-1.30	
42	2.5010E+01				6.0620E+01	2.3352E+04	10	1.	-3.00	
43	2.5000E+01				6.0620E+01	2.3352E+04	48	3.	-3.00	
44	2.6000E+01				5.7600E+01	2.2189E+04	24	2.	2.13	
45	3.0000E+01				3.8890E+01	1.4981E+04	87	2.	0.16	
46	3.0040E+01				3.8040E+01	1.4654E+04	48	3.	-1.68	
47	4.0000E+01				8.952E+01	7.0697E+03	10	1.	-0.05	
48	4.0000E+01				1.6500E+01	7.1266E+03	87	2.	0.76	
49	4.0040E+01				1.8030E+01	6.9455E+03	48	3.	-1.54	
50	4.0120E+01				1.8400E+01	7.0981E+03	28	5.	1.00	
51	4.2980E+01				1.5600E+01	6.0094E+03	28	5.	2.39	
52	4.5400E+01				1.3000E+01	5.0079E+03	28	5.	-1.67	
53	5.0000E+01				1.0600E+01	4.0835E+03	28	5.	2.85	
54	5.0080E+01				1.0120E+01	3.8984E+03	48	3.	-1.40	
55	5.7520E+01				7.1200E+00	2.7428E+03	28	5.	-0.92	
56	6.0030E+01				6.4870E+00	2.4989E+03	48	5.	0.70	
57	6.7870E+01				4.7200E+00	1.8182E+03	28	5.	0.30	
58	7.0040E+01				4.2980E+00	1.6557E+03	40	5.	-1.06	
59	7.0810E+01				4.2200E+00	1.6256E+03	28	5.	-0.12	
60	7.9960E+01				3.1010E+00	1.1946E+03	40	5.	-0.27	
61	8.6540E+01				2.5600E+00	9.8617E+02	28	5.	0.36	
62	8.9920E+01				2.2640E+00	8.7984E+02	40	5.	-1.52	
63	1.0000E+02				1.7058E+00	6.8791E+02	10	1.	0.00	
64	1.0006E+02				1.7610E+00	6.7837E+02	40	5.	-1.24	
65	1.0500E+02				1.6300E+00	6.2791E+02	28	5.	2.72	
66	1.0964E+02				1.4175E+00	5.4606E+02	90	1.	-0.90	
67	1.0955E+02				5.6509E+00	2.1768E+03	40	5.	5.49	
68	1.1487E+02				4.7250E+00	1.8202E+03	40	5.	-0.71	
69	1.2021E+02				4.2660E+00	1.6434E+03	40	5.	0.61	

70	1.2300E+02	3.9000E+00	1.5024E+03	28	5.	-2.51
71	1.3031E+02	3.5160E+00	1.3544E+03	40	5.	1.71
72	1.4560E+02	2.6163E+00	1.0079E+03	48	3.	0.01
73	1.5000E+02	2.4085E+00	9.2779E+02	10	1.	-0.84
74	1.5000E+02	2.4777E+00	9.5444E+02	89	1.	-2.01
75	1.5800E+02	2.1300E+00	8.2052E+02	28	5.	-0.24
76	2.0040E+02	1.2283E+00	4.7316E+02	89	1.	2.20
77	2.0830E+02	1.0907E+00	4.2016E+02	88	3.	-0.13
78	2.7910E+02	5.5660E-01	2.1441E+02	48	3.	-0.72
79	3.0000E+02	4.9099E-01	1.8879E+02	89	1.	2.31
80	4.0000E+02	2.7191E-01	1.0474E+02	13	1.	0.21
81	4.1180E+02	2.5450E-01	9.8039E+01	48	3.	-1.14
82	5.0000E+02	1.5350E-01	7.1458E+01	89	1.	0.50
83	6.0000E+02	1.1042E-01	5.4094E+01	89	1.	0.33
84	6.6200E+02	1.2252E-01	4.7199E+01	89	1.	0.24
85	7.0000E+02	1.1389E-01	4.3874E+01	89	1.	0.33
86	8.0000E+02	5.6044E-02	3.6998E+01	89	1.	0.11
87	9.0000E+02	8.4443E-02	3.2529E+01	89	1.	-0.15
88	1.0000E+03	7.5885E-02	2.9133E+01	89	1.	-0.28

88 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR URANIUM

Z = 92

CONVERSION CONSTANT IS 3.953E+02

K-EDGE	115.603					
L-EDGES	21.756	20.947	17.167	4.504	3.728	3.552
M-EDGES	5.549	5.181				
	KEV	CM2/GM	BARNs/AT	SOURCE	WEIGHT	DIFF
1	1.0000E+00	7.1930E+03	2.8454E+06	10	1.	-2.04
2	1.0010E+00	6.7956E+03	2.6864E+06	89	1.	-7.31
3	1.0430E+00	6.1861E+03	2.4454E+06	89	1.	-7.96
4	1.0440E+00	6.5504E+03	2.5894E+06	10	1.	-2.34
5	1.0460E+00	6.3379E+03	2.5054E+06	89	1.	-5.12
6	1.2500E+00	5.0272E+03	1.9875E+06	85	1.	9.73
7	1.2710E+00	4.4150E+03	1.7452E+06	89	1.	-0.18
8	1.2720E+00	4.6756E+03	1.8482E+06	10	1.	5.89
9	1.2740E+00	4.4909E+03	1.7752E+06	89	1.	2.05
10	1.4390E+00	3.5800E+03	1.4152E+06	89	1.	5.24
11	1.4400E+00	3.7925E+03	1.4992E+06	10	1.	11.65
12	1.4420E+00	3.6660E+03	1.4492E+06	89	1.	5.72
13	1.5000E+00	3.5041E+03	1.3852E+06	10	1.	9.83
14	1.5000E+00	3.4054E+03	1.3462E+06	89	1.	6.74
15	2.0000E+00	1.6889E+03	6.6761E+05	10	1.	-2.84
16	2.0000E+00	1.8457E+03	7.2960E+05	90	1.	6.18
17	2.0000E+00	1.8453E+03	7.2970E+05	90	1.	6.19
18	3.0000E+00	7.9535E+02	3.1440E+05	10	1.	7.29
19	3.0000E+00	7.9207E+02	3.1310E+05	89	1.	6.84
20	3.1000E+00	6.2400E+02	2.4667E+05	24	2.	-9.84
21	3.4000E+00	5.2500E+02	2.0753E+05	24	2.	-7.98
22	3.5500E+00	5.1043E+02	2.1363E+05	89	1.	5.66
23	3.5510E+00	5.4169E+02	2.1413E+05	10	1.	3.96
24	3.5530E+00	1.2753E+03	5.0413E+05	89	1.	7.11
25	3.6000E+00	9.1600E+02	3.6229E+05	24	2.	-13.02
26	3.8000E+00	1.0650E+03	4.2099E+05	24	2.	-14.50
27	4.2000E+00	9.0500E+02	3.5775E+05	24	2.	-6.23
28	4.3050E+00	1.2897E+03	5.0981E+05	89	1.	5.73
29	4.5000E+00	9.2800E+02	3.6684E+05	24	2.	-14.81
30	5.0000E+00	7.5500E+02	2.9766E+05	24	2.	-9.58
31	5.0000E+00	8.9184E+02	3.5255E+05	89	1.	7.09
32	5.1790E+00	8.2438E+02	3.2588E+05	89	1.	8.26
33	5.1820E+00	8.7376E+02	3.4557E+05	89	1.	1.04
34	5.4000E+00	6.9481E+02	2.7434E+05	24	2.	-10.86
35	5.5470E+00	7.3145E+02	2.8914E+05	89	1.	0.60
36	5.5500E+00	7.5383E+02	3.0194E+05	89	1.	-2.51
37	5.9400E+00	6.0290E+02	2.3797E+05	24	2.	-8.66
38	6.0000E+00	6.7569E+02	2.6710E+05	90	1.	5.17
39	6.0000E+00	6.8429E+02	2.7050E+05	90	1.	6.51
40	6.4000E+00	5.1900E+02	2.0516E+05	24	2.	-4.80
41	8.0000E+00	3.3302E+02	1.3164E+05	10	1.	7.56
42	8.0000E+00	3.2670E+02	1.2914E+05	90	1.	5.51
43	8.0000E+00	3.1379E+02	1.2404E+05	89	1.	1.35
44	9.0000E+00	2.1401E+02	8.4600E+04	73	5.	-6.92
45	9.9620E+00	1.8390E+02	7.2696E+04	39	5.	3.28
46	1.0000E+01	1.8124E+02	7.1644E+04	10	1.	2.76
47	1.0000E+01	1.8082E+02	7.1476E+04	89	1.	2.52
48	1.0000E+01	1.8080E+02	7.1470E+04	39	5.	2.51
49	1.2000E+01	1.1591E+02	4.5819E+04	85	1.	3.84
50	1.4500E+01	7.2856E+01	2.8800E+04	73	3.	4.53
51	1.5000E+01	6.6826E+01	2.6416E+04	85	1.	4.26
52	1.5000E+01	6.4590E+01	2.5532E+04	39	5.	0.78
53	1.7000E+01	4.5310E+01	1.7911E+04	39	5.	-3.65
54	1.7060E+01	4.5420E+01	1.7955E+04	39	5.	-2.57
55	1.7230E+01	9.8490E+01	3.8933E+04	39	5.	-1.17
56	1.7260E+01	9.9210E+01	3.9218E+04	39	5.	-0.02
57	1.7380E+01	1.0030E+02	3.9649E+04	39	5.	2.81
58	1.8000E+01	9.2420E+01	3.6534E+04	39	5.	3.22
59	1.8300E+01	8.1710E+01	3.2300E+04	73	3.	-4.98
60	2.0000E+01	7.2305E+01	2.8582E+04	85	1.	4.46
61	2.0000E+01	6.9840E+01	2.7608E+04	39	5.	0.90
62	2.3940E+01	6.4290E+01	2.5414E+04	39	5.	2.76
63	2.0860E+01	6.4660E+01	2.5556E+04	39	5.	3.60
64	2.0960E+01	8.1890E+01	3.2371E+04	39	5.	-4.67
65	2.1000E+01	8.3660E+01	3.3071E+04	39	5.	-2.15
66	2.1060E+01	8.4020E+01	3.3213E+04	39	5.	-1.03
67	2.1140E+01	8.4740E+01	3.3498E+04	39	5.	0.76
68	2.1250E+01	8.4080E+01	3.5237E+04	39	5.	1.27
69	2.1360E+01	8.2080E+01	3.2446E+04	39	5.	0.13

70	2.1460E+01	8.1330E+01	3.2150E+04	39	5.	0.37
71	2.1590E+01	8.1500E+01	3.2138E+04	39	5.	1.85
72	2.1600E+01	8.0840E+01	3.1956E+04	39	5.	1.39
73	2.1630E+01	8.0310E+01	3.1747E+04	39	5.	1.07
74	2.1780E+01	8.9890E+01	3.5533E+04	39	5.	-0.35
75	2.1850E+01	8.8780E+01	3.5095E+04	39	5.	-0.76
76	2.2000E+01	8.7252E+01	3.3700E+04	39	5.	-3.08
77	2.2000E+01	8.0340E+01	3.5118E+04	39	5.	1.00
78	2.2130E+01	8.7560E+01	3.4612E+04	39	5.	1.02
79	2.4942E+01	6.5170E+01	2.5762E+04	39	5.	1.43
80	2.5000E+01	6.3906E+01	2.5262E+04	39	5.	0.04
81	2.5000E+01	6.4590E+01	2.5552E+04	39	5.	1.11
82	2.5000E+01	6.6109E+01	2.6133E+04	39	5.	3.49
83	2.5000E+01	6.3750E+01	2.5200E+04	39	5.	-0.20
84	2.6400E+01	5.3377E+01	2.1100E+04	39	5.	-4.26
85	3.0000E+01	4.0800E+01	1.6128E+04	39	5.	0.64
86	3.0040E+01	4.1080E+01	1.6239E+04	39	5.	1.67
87	3.5000E+01	2.7080E+01	1.0705E+04	39	5.	-1.32
88	3.5050E+01	2.8320E+01	1.1195E+04	39	5.	3.57
89	4.0000E+01	1.9490E+01	7.7045E+03	39	5.	-0.56
90	4.0000E+01	1.9440E+01	7.6845E+03	39	5.	-0.82
91	4.0040E+01	1.9600E+01	7.7479E+03	39	5.	0.25
92	5.0000E+01	1.1160E+01	4.4114E+03	39	5.	0.48
93	5.0080E+01	1.1150E+01	4.4076E+03	39	5.	0.80
94	5.9600E+01	6.9947E+00	2.7650E+03	39	5.	-1.36
95	6.1820E+01	6.4760E+00	2.5600E+03	39	5.	0.35
96	7.0200E+01	4.6700E+00	1.8460E+03	39	5.	0.25
97	8.0160E+01	3.3970E+00	1.3428E+03	39	5.	2.13
98	8.8000E+01	2.5424E+00	1.0050E+03	39	5.	-3.06
99	9.0180E+01	2.4460E+00	9.6690E+02	39	5.	-0.78
100	9.7400E+01	1.9352E+00	7.6550E+02	39	5.	-4.76
101	1.0000E+02	1.8686E+00	7.3865E+02	39	5.	-1.80
102	1.0C38E+02	1.9180E+00	7.5818E+02	39	5.	1.76
103	1.0320E+02	1.7910E+00	7.0800E+02	39	5.	1.82
104	1.1040E+02	1.5070E+00	5.9572E+02	39	5.	1.20
105	1.1560E+02	5.2610E+00	2.0797E+03	39	5.	5.60
106	1.1560E+02	5.2357E+00	2.0697E+03	39	5.	5.69
107	1.2060E+02	4.2770E+00	1.6907E+03	39	5.	-4.36
108	1.2510E+02	4.2450E+00	1.6780E+03	39	5.	0.03
109	1.2710E+02	3.8700E+00	1.5298E+03	39	5.	-1.08
110	1.3030E+02	3.8400E+00	1.5180E+03	39	5.	4.55
111	1.3140E+02	3.6180E+00	1.4302E+03	39	5.	-0.63
112	1.3400E+02	3.3721E+00	1.3330E+03	39	5.	-1.43
113	1.4560E+02	2.7455E+00	1.0853E+03	39	5.	-1.13
114	1.5000E+02	2.5205E+00	9.9635E+02	39	5.	-2.09
115	1.5030E+02	2.5702E+00	1.0160E+03	39	5.	-0.15
116	1.5000E+02	2.6195E+00	1.0553E+03	39	5.	1.74
117	2.0100E+02	1.2991E+00	5.1353E+02	39	5.	2.54
118	2.0000E+02	1.2790E+00	5.0560E+02	39	5.	0.76
119	2.0830E+02	1.1522E+00	4.5564E+02	39	5.	-0.08
120	2.7910E+02	5.8570E-01	2.3153E+02	39	5.	-0.62
121	2.7950E+02	5.7931E-01	2.2900E+02	39	5.	-1.39
122	3.0000E+02	5.5807E-01	2.0084E+02	39	5.	1.05
123	5.0000E+02	5.1646E-01	2.0416E+02	39	5.	2.72
124	4.0000E+02	2.8416E-01	1.1235E+02	39	5.	0.18
125	4.1180E+02	2.6640E-01	1.0531E+02	39	5.	-0.97
126	5.0000E+02	1.9344E-01	7.6466E+01	39	5.	0.69
127	6.0000E+02	1.4586E-01	5.7657E+01	39	5.	0.53
128	6.6200E+02	1.2666E-01	5.0067E+01	39	5.	0.25
129	7.0000E+02	1.1740E-01	4.5407E+01	39	5.	0.24
130	8.0000E+02	9.8573E-02	3.8966E+01	39	5.	0.55
131	9.0000E+02	8.6723E-02	3.4282E+01	39	5.	-0.09
132	1.0000E+03	7.7776E-02	3.0745E-01	39	5.	-0.38

132 DATA POINTS USED FOR FIT

EXPERIMENTAL DATA FOR PLUTONIUM

Z = 94

CONVERSION CONSTANT IS 3.970E+12

K-EDGES	121.760					
L-EDGES	23.095	22.263	18.053	3.969	3.774	
M-EDGES	5.914	5.540	4.555			
KEV	CM2/GM	BARNs/AT	SOURCE	WEIGHT	DIFF	
1.	1.0000E+00	7.1929E+03	2.0556E+06	89	1.	3.37
2.	1.5000E+00	3.5400E+03	1.4054E+06	89	1.	6.66
3.	2.0000E+00	1.7337E+03	6.0028E+05	10	1.	-11.04
4.	2.0000E+00	1.9361E+03	7.6855E+05	90	1.	-0.65
5.	3.0000E+00	8.8128E+02	3.4988E+05	10	1.	-3.78
6.	3.0000E+00	9.9909E+02	3.9656E+05	89	1.	9.08
7.	3.7720E+00	6.0265E+02	2.3926E+05	89	1.	0.61
8.	5.9470E+00	7.7520E+02	3.1804E+05	10	1.	0.56
9.	6.0000E+00	7.4422E+02	2.9546E+05	90	1.	-1.29
10.	6.4000E+00	6.4754E+02	2.5708E+05	10	1.	1.56
11.	6.4900E+00	6.2333E+02	2.4727E+05	10	1.	1.38
12.	6.9250E+00	5.2981E+02	2.1034E+05	10	1.	1.96
13.	7.0580E+00	5.0074E+02	1.9880E+05	10	1.	1.24
14.	7.4720E+00	4.2953E+02	1.7335E+05	10	1.	0.54
15.	7.6490E+00	4.0294E+02	1.5597E+05	10	1.	0.32
16.	8.0000E+00	3.6227E+02	1.4382E+05	10	1.	-1.29
17.	8.1000E+00	3.5458E+02	1.4077E+05	90	1.	-0.86
18.	8.0410E+00	3.5294E+02	1.4012E+05	10	1.	-0.01
19.	8.2650E+00	3.2785E+02	1.3015E+05	10	1.	-0.28
20.	8.6310E+00	2.9075E+02	1.1543E+05	10	1.	-1.09
21.	8.9050E+00	2.7037E+02	1.0734E+05	10	1.	-0.30
22.	9.5720E+00	2.2448E+02	8.9708E+04	10	1.	-0.32
23.	1.0000E+01	1.9699E+02	7.8208E+04	10	1.	-2.10
24.	1.0060E+01	1.6973E+02	7.5534E+04	89	1.	-5.71
25.	1.5000E+01	7.1291E+01	2.8303E+04	10	1.	-0.29
26.	1.8050E+01	2.6446E+01	1.8440E+04	90	1.	3.65
27.	2.3819E+01	8.1283E+01	3.2277E+04	10	1.	3.75
28.	2.4942E+01	7.2789E+01	2.8898E+04	10	1.	4.35
29.	2.5000E+01	6.8656E+01	2.7259E+04	10	1.	-0.99
30.	2.5300E+01	6.7533E+01	2.6814E+04	48	3.	-2.62
31.	3.0000E+01	4.4126E+01	1.7519E+04	89	1.	0.61
32.	3.0044E+01	4.2989E+01	1.7063E+04	48	3.	-1.67
33.	4.0000E+01	2.1101E+01	8.3773E+03	10	1.	0.10
34.	4.0000E+01	2.1268E+01	8.4436E+03	89	1.	0.89
35.	4.0044E+01	2.1770E+01	8.6423E+03	48	3.	3.54
36.	5.0000E+01	1.1984E-01	4.7578E+03	89	1.	0.89
37.	5.0008E+01	1.1700E+01	4.6456E+03	48	3.	-1.09
38.	6.0000E+01	7.5166E-00	2.9842E-03	89	1.	1.35
39.	6.0035E+01	7.4000E+00	2.9579E+03	40	5.	-0.69
40.	7.0040E+01	4.9533E+00	1.9564E+03	40	5.	-0.13
41.	7.9960E+01	3.5433E+00	1.4066E+03	40	5.	0.45
42.	8.0000E+01	3.6023E+00	1.4301E+03	89	1.	2.24
43.	8.9920E+01	2.5940E+00	1.0298E+03	40	5.	-0.47
44.	1.0000E+02	1.9626E+00	7.7925E+02	10	1.	-1.34
45.	1.0000E+02	1.9860E+00	7.7655E+02	40	5.	-1.53
46.	1.0999E+02	1.5533E+00	6.1556E+02	40	5.	-0.73
47.	1.2176E+02	1.2759E+00	5.0654E+02	90	1.	4.87
48.	1.2176E+02	1.2825E+00	5.0915E+02	90	1.	5.43
49.	1.2176E+02	4.9612E+00	1.9596E+03	90	1.	7.52
50.	1.2177E+02	5.0317E+00	1.9975E+03	90	1.	9.07
51.	1.3031E+02	3.7180E+00	1.4761E+03	40	5.	-4.20
52.	1.4566E+02	2.9286E+00	1.1626E+03	40	5.	-0.03
53.	7.5000E+02	2.6698E+00	1.0679E+03	10	1.	-1.03
54.	1.5000E+03	2.8243E+00	1.1213E+03	89	1.	3.92
55.	2.0000E+02	1.4021E+00	5.5652E+02	89	1.	4.21
56.	2.0836E+02	1.2136E+00	4.8157E+02	48	3.	-0.85
57.	2.7910E+02	6.2900E-01	2.4972E+02	48	3.	0.04
58.	3.0000E+02	5.5557E-01	2.2057E+02	89	1.	3.49
59.	4.0000E+02	3.0320E-01	1.2037E+02	10	1.	-0.19
60.	4.1163E+02	2.8440E-01	1.1291E+02	40	3.	-1.27
61.	5.0000E+02	2.0575E-01	8.1685E+01	89	1.	0.24
62.	6.0000E+02	1.5429E-01	6.1255E+01	89	1.	0.01
63.	6.6200E+02	1.3379E-01	5.3114E+01	89	1.	0.09
64.	7.0000E+02	1.2383E-01	4.9163E+01	89	1.	0.23
65.	8.0000E+02	1.0324E-01	4.0987E+01	89	1.	0.05
66.	9.0000E+02	9.0514E-02	3.5935E+01	89	1.	-0.05
67.	1.0000E+03	8.1199E-02	3.2237E+01	89	1.	-0.06

67 DATA POINTS USED FOR FIT