

$b(E) \times 10^6$  [cm<sup>2</sup>g<sup>-1</sup>] for  
glutamine (C<sub>5</sub>H<sub>10</sub>N<sub>2</sub>O<sub>3</sub>)  
 $\langle Z/A \rangle = 0.53371$

E [GeV]	$b_{\text{brems}}$	$b_{\text{pair}}$	$b_{\text{nucl}}$	$b_{\text{tot}}$
2.	0.2631	0.1148	0.4711	0.8490
5.	0.3568	0.2838	0.4984	1.1391
10.	0.4344	0.4298	0.4834	1.3477
20.	0.5163	0.5891	0.4610	1.5665
50.	0.6280	0.8130	0.4366	1.8777
100.	0.7115	0.9717	0.4247	2.1080
200.	0.7907	1.1181	0.4187	2.3274
500.	0.8846	1.2691	0.4177	2.5714
1000.	0.9449	1.3618	0.4245	2.7312
2000.	0.9951	1.4272	0.4359	2.8581
5000.	1.0452	1.4849	0.4572	2.9873
10000.	1.0719	1.5122	0.4787	3.0628
20000.	1.0907	1.5294	0.5040	3.1242
50000.	1.1070	1.5430	0.5437	3.1936
100000.	1.1145	1.5485	0.5778	3.2408