

$b(E) \times 10^6$  [cm<sup>2</sup>g<sup>-1</sup>] for  
ms20 tissue substitute  
 $\langle Z/A \rangle = 0.53886$

E [GeV]	$b_{\text{brems}}$	$b_{\text{pair}}$	$b_{\text{nucl}}$	$b_{\text{tot}}$
2.	0.2717	0.1191	0.4711	0.8620
5.	0.3687	0.2946	0.4984	1.1617
10.	0.4489	0.4456	0.4834	1.3780
20.	0.5336	0.6099	0.4610	1.6045
50.	0.6489	0.8411	0.4366	1.9266
100.	0.7352	1.0047	0.4246	2.1645
200.	0.8166	1.1554	0.4186	2.3905
500.	0.9132	1.3104	0.4176	2.6413
1000.	0.9753	1.4055	0.4243	2.8051
2000.	1.0268	1.4724	0.4358	2.9349
5000.	1.0783	1.5315	0.4570	3.0668
10000.	1.1057	1.5594	0.4785	3.1437
20000.	1.1252	1.5770	0.5039	3.2061
50000.	1.1417	1.5909	0.5435	3.2762
100000.	1.1493	1.5966	0.5776	3.3236