$b(E) \times 10^6$ [cm^{2}g^{-1}] for
UM rock for Doug
$\langle Z/A \rangle = 0.49407$

E [GeV]	$b_{\rm brems}$	$b_{\rm pair}$	$b_{\rm nucl}$	$b_{\rm tot}$
2.	0.4505	0.2073	0.4452	1.1030
5.	0.6119	0.5092	0.4728	1.5939
10.	0.7436	0.7544	0.4603	1.9584
20.	0.8804	1.0153	0.4405	2.3361
50.	1.0631	1.3867	0.4187	2.8686
100.	1.1966	1.6452	0.4081	3.2499
200.	1.3226	1.8781	0.4028	3.6036
500.	1.4688	2.1158	0.4022	3.9868
1000.	1.5610	2.2505	0.4088	4.2203
2000.	1.6360	2.3471	0.4195	4.4026
5000.	1.7092	2.4304	0.4393	4.5789
10000.	1.7472	2.4696	0.4594	4.6762
20000.	1.7739	2.4946	0.4828	4.7512
50000.	1.7955	2.5144	0.5194	4.8293
100000.	1.8060	2.5225	0.5507	4.8792