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Available K500 Heavy Ion Beams

(LET and range values are for Si)

	Ion	Mass [amu]	A MeV	Total Energy [MeV]	Energy at Bragg Peak [MeV]	Range to Bragg Peak [microns]	Range in vacuum [microns]	LET in vacuum [MeV/(mg/cm2)]	Range after window [microns]	LET after window [MeV/(mg/cm^2)]	Range after 3 cm air [microns]	LET after 3 cm air [MeV/(mg/cm2)]	Range at Bragg [microns]	LET at Bragg Peak [MeV/(mg/cm2)]
15 A MeV	^{4}He	4.003	15	60	0.5	1446.9	1449.2	0.10	1430	0.10	1412	0.10	2.3	1.5
	^{14}N	14.003	15	210	4	418.0	421.7	1.3	403	1.3	385	1.3	3.7	6.1
	^{20}Ne	19.992	15	300	14	302.9	311.3	2.5	292	2.6	274	2.7	8.4	9.0
	^{40}Ar	39.962	15	599	45	217.5	231.0	7.6	212	7.9	194	8.2	13.5	18.7
	^{63}Cu	62.930	15	944	130	151.7	174.4	17.1	155	18.0	137	18.9	22.7	34.0
	^{84}Kr	83.912	15	1259	180	142.0	168.0	25.7	149	27.0	131	28.6	26.0	41.0
	^{109}Ag	108.905	15	1634	351	112.9	148.5	40.0	130	42.3	111	44.9	35.6	59.4
	^{129}Xe	128.905	15	1934	451	107.0	145.5	50.4	126	53.1	108	56.1	38.5	69.3
	^{141}Pr	140.908	15	2114	651	99.2	154.8	55.8	135	58.4	117	61.3	55.6	70.8
	^{165}Ho	164.930	15	2474	699	102.4	150.8	67.0	132	69.6	114	72.4	48.4	82.3
	^{181}Ta	180.948	15	2714	698	110.9	158.9	70.0	140	72.3	122	74.8	48.0	87.7
	^{197}Au	196.967	15	2954	800	107.6	158.7	77.9	140	80.5	121	83.3	51.1	94.4
25 A MeV	^{4}He	4.003	24.8	99	0.5	3520.5	3523.0	0.07	3504	0.07	3486	0.07	2.3	1.5
	^{14}N	14.003	24.8	347	4	1004.9	1008.6	0.8	990	0.9	972	0.9	3.7	6.1
	^{22}Ne	21.991	24.8	545	16	794.8	804.2	1.7	785	1.7	768	1.7	9.4	9.0
	^{40}Ar	39.962	24.8	991	45	485.2	498.7	5.4	480	5.5	462	5.6	13.5	18.7
	^{63}Cu	62.930	24.8	1561	130	333.9	356.6	12.7	338	13.0	320	13.3	22.7	34.0
	^{84}Kr	83.912	24.8	2081	180	305.3	331.3	18.9	312	19.3	295	19.9	26.0	41.0
	^{107}Ag	106.905	24.8	2651	351	240.5	275.9	30.7	257	31.6	239	32.6	35.4	59.4
	^{129}Xe	128.905	24.8	3197	451	230.3	268.7	39.3	250	40.5	232	41.8	38.4	69.3
40 A MeV	^{14}N	14.003	40	560	4	2345.1	2348.7	0.6	2330	0.6	2312	0.6	3.6	6.1
	^{20}Ne	19.992	40	800	14	1670.4	1678.9	1.2	1660	1.2	1642	1.2	8.1	9.0
	^{40}Ar	39.962	40	1598	45	1064.7	1078.2	3.9	1060	3.9	1042	3.9	13.5	18.7
	^{78}Kr	77.920	40	3117	170	602.4	626.9	13.9	608	14.1	590	14.3	24.5	41.0

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