



Available K150 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/cm ²)]	Range after window [mm]	LET after window [MeV/(mg/cm ²)]	Range after 2 cm air [microns]	LET after 2cm air [MeV/(mg/cm ²)]	Range at Bragg [microns]	LET at Bragg Peak [MeV/(mg/cm ²)]
9.4 A MeV	⁴ He	4.003	9.4	38	0.5	37.5	641.1	0.15	622	0.15	609	0.15	2.0	1.5
	¹⁴ N	14.003	9.4	132	3.8	129.7	194.0	1.8	174	1.9	162	2.0	4.0	6.1
	²⁰ Ne	19.992	9.4	188	14.0	184.0	148.0	3.6	129	3.9	117	4.0	8.0	9.0
	⁴⁰ Ar	39.962	9.4	376	45.0	364.8	119.7	10.1	101	10.8	88	11.4	14.0	18.7
	⁵¹ V	50.944	9.4	479	90.0	462.5	105.0	15.1	86	16.4	74	17.5	19.0	25.6
	⁶³ Cu	62.930	9.4	592	130.0	567.3	95.5	22.0	76	24.2	64	25.9	23.0	34.0
	⁸⁴ Kr	83.912	9.4	789	180.0	754.3	97.1	32.1	78	34.5	66	36.3	26.0	41.0
	⁹⁰ Zr	89.905	9.4	845	299.4	803.5	91.0	37.9	72	41.6	60	44.3	36.7	48.6
	¹⁰⁷ Ag	106.905	9.4	1005	351.0	952.0	87.1	48.8	68	52.9	56	55.9	35.4	59.4
¹²⁴ Xe	123.906	9.4	1165	449.8	1100.4	85.2	59.9	66	64.3	54	67.1	37.9	69.4	
15 A MeV	⁴ He	4.003	15	60	0.5	59.9	1449.0	0.1	1430	0.1	1418	0.1	2.0	1.5
	¹⁴ N	14.003	15	210	3.8	208.7	422.0	1.3	403	1.3	391	1.3	4.0	6.1
	²⁰ Ne	19.992	15	300	14.0	297.3	311.0	2.5	292	2.6	280	2.7	8.0	9.0
	⁴⁰ Ar	39.962	15	599	45.0	591.5	231.0	7.6	212	7.9	200	8.1	14.0	18.7
	⁵¹ V	50.944	15	764	90.2	752.2	200.0	11.5	181	12.0	168	12.3	19.0	25.6
	⁶³ Cu	62.930	15	944	130.0	925.9	174.0	17.1	155	18.0	143	18.6	23.0	34.0
	⁷⁸ Kr	77.920	15	1169	170.0	1141.7	156.0	25.7	137	27.1	125	28.2	24.0	41.0