

Element	A	Z	N	T1/2 s	RIBs at 40 KeV	Re-accelerated RIBs	RIBs at 40 KeV	Re-accelerated RIBs	q+ 2014	A/Q 2014	Energy Max Mev/A	Surface Ion Source SIS	Laser Ion Source LIS	Plasma Ion Source FEBIAD	HRMS	Comments
					1+ a 200µA	C.B. eff=3-4 % Linac tr.=50% a 200µA	1+ a 5 µA	C.B. eff=3-4 % Linac tr.=50% a 5 µA				±10 %	Legend	Legend		
					Estimated Data		Experimental Data		*Based on Comunian Formula							
					** (see attached Notes)		** (see attached Notes)									
					***		***									
					****		****									
					1		1									
					2		2									
					4		4									
					4		4									
					6		6									
					6		6									
					6		6									
					6		6									
					6		6									
					7		7									
					7		7									
					7		7									
					8		8									
Be*		7	4	3	4.60E+06				1	7,0	9		2		2	B ₄ C target – oxides LIS-FEBIAD q dato stimato; per l'isotopo di massa 7 è sufficiente che il fascio passi attraverso il breeder spento
Be*		10	4	6					2	5,0	13		2		2	B ₄ C target – oxides
F*		17	9	8	6.48E+01				4	4,3	15		4		4	HfO ₂ ZrO ₂ target
F*		18	9	9	6.58E+03				4	4,5	14		4		4	Al ₂ O ₃ target FEBIAD
Na*		21	11	10	2.25E+01				6	3,5	18		5			Al ₂ O ₃ – SiC - CeS target SIS
Na*		22	11	11	2.60E+00				6	3,7	17		5			Al ₂ O ₃ – SiC - CeS target
Mg*		22	12	10	3.86E+00				6	3,7	17		5		4	Al ₂ O ₃ – SiC - CeS target LIS-FEBIAD
Mg*		23	12	11	1.13E+01				6	3,8	16		5		4	Al ₂ O ₃ – SiC - CeS target
Al*		24	13	11	2.05E+00				6	4,0	16		1	1		SiC , CeS, Nb ₅ Si ₃ target SIS + LIS
Al*		25	13	12	7.18E+00				6	4,2	15		1	1		SiC , CeS, Nb ₅ Si ₃ target
Al*		26	13	13	6.35E+00				6	4,3	15		1	1		SiC , CeS, Nb ₅ Si ₃ target
Si*		26	14	12	2.21E+00				7	3,7	17				4	Al ₂ O ₃ – CeS target FEBIAD
Si*		27	14	13	4.16E+00				7	3,9	16				4	Al ₂ O ₃ – CeS target
P*		29	15	14	4.10E+00				7	4,1	15				4	SiC, CeS target FEBIAD
Cl*		34	17	17	1.53E+00				8	4,3	15				4	Ce ₂ S ₃ e CeO ₂ target – (hygrosc.)
Ni		68	28	40	1.90E+01	3,19E+05	6,38E+03	7,98E+03	1,60E+02	12	5,7	11		3		LIS source xx
Ni		69	28	41	1.14E+01	2,34E+05	4,68E+03	5,85E+03	1,17E+02	12	5,8	11		3		
Ni		70	28	42	6.00E+00	6,18E+05	1,24E+04	1,55E+04	3,10E+02	12	5,8	11		3		
Ni		71	28	43	1.86E+00	1,62E+04		4,05E+02						3		
Ni		72	28	44	2.10E+00	9,11E+03		2,28E+02			51			3		
Cu		69	29	40	1.71E+02	9,87E+06	1,97E+05	2,47E+05	4,93E+03	12	5,8	11		3		LIS source xx
Cu		70	29	41	4.50E+00	7,89E+06	1,58E+05	1,97E+05	3,95E+03	12	5,8	11		3		
Cu		71	29	42	1.95E+01	1,69E+07	3,39E+05	4,23E+05	8,48E+03	12	5,9	11		3		
Cu		72	29	43	6.60E+00	1,39E+07	2,78E+05	3,48E+05	6,95E+03	12	6,0	11		3		
Cu		73	29	44	3.90E+00	9,17E+06	1,83E+05	2,29E+05	4,58E+03	12	6,1	11		3		
Cu		74	29	45	1.59E+00	3,81E+06	7,61E+04	9,53E+04	1,90E+03	12	6,2	11		3		
Cu		75	29	46	1.20E+00	1,43E+06	2,86E+04	3,58E+04	7,15E+02	12	6,3	10		3		
Cu		76	29	47	6.41E-01	3,46E+05	6,92E+03	8,65E+03	1,73E+02	12	6,3	10		3		

Cu	77	29	48	4.69E-01	7,89E+04	1,58E+03	1,97E+03	3,95E+01	12	●	6,4	10	●	3			
Cu	78	29	49	3.42E-01	1,79E+04		4,48E+02							●	3		
Zn	71	30	41	1.47E+02	7,61E+06	1,52E+05	1,90E+05	3,80E+03	10	●	7,1	9	●	2			LIS source xx
Zn	72	30	42	1.67E+05	1,83E+07	3,66E+05	4,58E+05	9,15E+03	10	■	7,2	9	●	2			
Zn	73	30	43	2.35E+01	2,64E+07	5,28E+05	6,60E+05	1,32E+04	10	■	7,3	9	●	2			
Zn	74	30	44	9.56E+01	3,58E+07	7,16E+05	8,95E+05	1,79E+04	10	■	7,4	9	●	2			
Zn	75	30	45	1.02E+01	2,32E+07	4,64E+05	5,80E+05	1,16E+04	10	■	7,5	9	●	2			
Zn	76	30	46	5.70E+00	1,18E+07	2,37E+05	2,95E+05	5,93E+03	10	●	7,6	9	●	2			
Zn	77	30	47	2.08E+00	3,27E+06	6,53E+04	8,18E+04	1,63E+03	10	●	7,7	8	●	2			
Zn	78	30	48	1.47E+00	1,04E+06	2,08E+04	2,60E+04	5,20E+02	10	●	7,8	8	●	2			
Zn	79	30	49	9.95E-01	3,23E+05	6,47E+03	8,08E+03	1,62E+02	10	●	7,9	8	●	2			
Zn	80	30	50	5.45E-01	5,11E+04	1,02E+03	1,28E+03	2,55E+01	10	●	8,0	8	●	2			
Zn	81	30	51	2.90E-01	7,22E+03		1,81E+02						●	2			
Zn	82	30	52	6.70E-02	3,78E+02		9,45E+00						●	2			
Ga	72	31	41	5.08E+04	1,07E+07	2,14E+05	2,68E+05	5,35E+03	11	●	6,5	10	●	2			LIS source xx
Ga	73	31	42	1.75E+04	3,98E+07	7,96E+05	9,95E+05	1,99E+04	11	●	6,6	10	●	2			
Ga	74	31	43	4.87E+02	1,06E+08	2,12E+06	2,65E+06	5,30E+04	11	●	6,7	10	●	2			
Ga	75	31	44	1.26E+02	2,02E+08	4,04E+06	5,05E+06	1,01E+05	11	●	6,8	10	●	2			
Ga	76	31	45	3.26E+01	2,71E+08	5,42E+06	6,78E+06	1,36E+05	11	●	6,9	10	●	2			
Ga	77	31	46	1.32E+01	2,56E+08	5,12E+06	6,40E+06	1,28E+05	11	●	7,0	9	●	2			
Ga	78	31	47	5.09E+00	1,63E+08	3,26E+06	4,08E+06	8,15E+04	11	●	7,1	9	●	2			
Ga	79	31	48	2.85E+00	8,28E+07	1,66E+06	2,07E+06	4,15E+04	11	●	7,2	9	●	2			
Ga	80	31	49	1.70E+00	3,05E+07	6,10E+05	7,63E+05	1,53E+04	11	■	7,3	9	●	2			
Ga	81	31	50	1.22E+00	1,13E+07	2,27E+05	2,83E+05	5,68E+03	11	■	7,4	9	●	2			
Ga	82	31	51	5.99E-01	3,29E+06	6,58E+04	8,23E+04	1,65E+03	11	■	7,5	9	●	2			
Ga	83	31	52	3.10E-01	6,06E+05	1,21E+04	1,52E+04	3,03E+02	11	■	7,5	9	●	2			
Ga	84	31	53	8.50E-02	4,02E+04		1,01E+03						●	2			
Ga	85	31	54	7.00E-02	3,62E+03		9,05E+01						●	2			
Ge	75	32	43	4.97E+03	7,01E+07	1,40E+06	1,75E+06	3,50E+04	15	●	5,0	13	●	4			LIS source xx
Ge	77	32	45	4.07E+04	4,73E+08	9,46E+06	1,18E+07	2,37E+05	15	●	5,1	12	●	4			
Ge	78	32	46	5.28E+03	7,31E+08	1,46E+07	1,83E+07	3,65E+05	15	●	5,2	12	●	4			
Ge	79	32	47	1.90E+01	1,38E+08	2,76E+06	3,45E+06	6,90E+04	15	●	5,3	12	●	4			
Ge	80	32	48	2.95E+01	1,62E+08	3,23E+06	4,05E+06	8,08E+04	15	●	5,3	12	●	4			
Ge	81	32	49	7.60E+00	3,21E+07	6,41E+05	8,03E+05	1,60E+04	15	●	5,4	12	●	4			
Ge	82	32	50	4.60E+00	1,16E+07	2,32E+05	2,90E+05	5,80E+03	15	●	5,5	12	●	4			
Ge	83	32	51	1.85E+00	2,47E+08	4,94E+06	6,18E+06	1,24E+05	15	●	5,5	12	●	4			
Ge	84	32	52	9.47E-01	6,61E+05	1,32E+04	1,65E+04	3,30E+02	15	●	5,6	12	●	4			
Ge	85	32	53	5.35E-01	1,11E+05	2,22E+03	2,78E+03	5,55E+01	15	●	5,7	11	●	4			
Ge	86	32	54	1.23E-01	5,18E+03		1,30E+02						●	4			
Ge	87	32	55	1.30E-01	3,71E+02		9,28E+00						●	4			
As	76	33	43	9.31E+04	1,17E+07	2,34E+05	2,93E+05	5,85E+03	15	●	5,1	13	●	4	●	5	FEBIAD source
As	77	33	44	1.40E+05	5,67E+07	1,13E+06	1,42E+06	2,83E+04	15	●	5,1	12	●	4	●	5	
As	78	33	45	5.44E+03	1,73E+08	3,46E+06	4,33E+06	8,65E+04	15	●	5,2	12	●	4	●	5	
As	79	33	46	5.41E+02	2,75E+08	5,50E+06	6,88E+06	1,38E+05	15	●	5,3	12	●	4	●	5	
As	80	33	47	1.52E+01	7,68E+07	1,54E+06	1,92E+06	3,85E+04	15	●	5,3	12	●	4	●	5	
As	81	33	48	3.33E+01	1,63E+08	3,26E+06	4,08E+06	8,15E+04	15	●	5,4	12	●	4	●	5	
As	82	33	49	1.91E+01	1,07E+08	2,13E+06	2,68E+06	5,33E+04	15	●	5,5	12	●	4	●	5	

As	83	33	50	1.34E+01	6,33E+07	1,27E+06	1,58E+06	3,18E+04	15	●	5,5	12			●	4	●	5	
As	84	33	51	4.50E+00	1,86E+07	3,72E+05	4,65E+05	9,30E+03	15	●	5,6	12			●	4	●	5	
As	85	33	52	2.02E+00	5,83E+06	1,17E+05	1,46E+05	2,93E+03	15	●	5,7	11			●	4	●	5	
As	86	33	53	9.45E-01	1,54E+06	3,08E+04	3,85E+04	7,70E+02	15	●	5,7	11			●	4	●	5	
As	87	33	54	4.80E-01	2,07E+05	4,14E+03	5,18E+03	1,04E+02	15	●	5,8	11			●	4	●	5	
As	88	33	55	2.33E-01	3,53E+04		8,83E+02								●	4	●	5	
As	89	33	56	8.30E-02	3,27E+03		8,18E+01								●	4	●	5	
Se	79	34	45	3.57E+13	1,64E+07	3,28E+05	4,10E+05	8,20E+03	15	●	5,3	12			●	4	●	5	FEBIAD source
Se	81	34	47	1.11E+03	1,29E+08	2,58E+06	3,23E+06	6,45E+04	15	●	5,4	12			●	4	●	5	
Se	82	34	48	3.41E+27	3,73E+08	7,46E+06	9,33E+06	1,87E+05	15	●	5,5	12			●	4	●	5	
Se	83	34	49	1.34E+03	4,07E+08	8,14E+06	1,02E+07	2,04E+05	15	●	5,5	12			●	4	●	5	
Se	84	34	50	1.86E+02	1,45E+08	2,90E+06	3,63E+06	7,25E+04	15	●	5,6	12			●	4	●	5	
Se	85	34	51	3.17E+01	2,16E+07	4,32E+05	5,40E+05	1,08E+04	15	●	5,7	11			●	4	●	5	
Se	86	34	52	1.53E+01	6,67E+06	1,33E+05	1,67E+05	3,33E+03	15	●	5,7	11			●	4	●	5	
Se	87	34	53	5.29E+00	1,15E+06	2,30E+04	2,88E+04	5,75E+02	15	●	5,8	11			●	4	●	5	
Se	88	34	54	1.53E+00	1,36E+05	2,71E+03	3,40E+03	6,78E+01	15	●	5,9	11			●	4	●	5	
Se	89	34	55	4.10E-01	1,51E+04		3,78E+02								●	4	●	5	
Se	90	34	56	1.82E-01	1,84E+03		4,60E+01								●	4	●	5	
Se	91	34	57	2.70E-01	4,81E+02		1,20E+01								●	4	●	5	
Br	82	35	47	1.27E+05	9,95E+07	1,99E+06	2,49E+06	4,98E+04	15	●	5,5	12			●	2	●	5	FEBIAD source
Br	83	35	48	8.64E+03	3,20E+08	6,40E+06	8,00E+06	1,60E+05	15	●	5,5	12			●	2	●	5	
Br	84	35	49	1.91E+03	7,31E+08	1,46E+07	1,83E+07	3,65E+05	15	●	5,6	12			●	2	●	5	
Br	85	35	50	1.74E+02	9,83E+08	1,97E+07	2,46E+07	4,93E+05	15	●	5,7	11			●	2	●	5	
Br	86	35	51	5.51E+01	7,73E+08	1,55E+07	1,93E+07	3,88E+05	15	●	5,7	11			●	2	●	5	
Br	87	35	52	5.56E+01	6,67E+08	1,33E+07	1,67E+07	3,33E+05	15	●	5,8	11			●	2	●	5	
Br	88	35	53	1.63E+01	1,76E+08	3,52E+06	4,40E+06	8,80E+04	15	●	5,9	11			●	2	●	5	
Br	89	35	54	4.35E+00	2,23E+07	4,46E+05	5,58E+05	1,12E+04	15	●	5,9	11			●	2	●	5	
Br	90	35	55	1.91E+00	4,31E+06	8,62E+04	1,08E+05	2,16E+03	15	●	6,0	11			●	2	●	5	
Br	91	35	56	5.41E-01	2,91E+05	5,81E+03	7,28E+03	1,45E+02	15	●	6,1	11			●	2	●	5	
Br	92	35	57	3.43E-01	4,45E+04	8,90E+02	1,11E+03	2,23E+01							●	2	●	5	
Br	93	35	58	1.02E-01	1,83E+03		4,58E+01								●	2	●	5	
Br	94	35	59	7.00E-02	1,82E+02		4,55E+00								●	2	●	5	
Kr	81	36	45	7.23E+12	4,44E+05	8,88E+03	1,11E+04	2,22E+02	17	●	4,8	13			●	1	●	5	FEBIAD source test
Kr	85	36	49	3.39E+08	5,93E+08	1,19E+07	1,48E+07	2,98E+05	17	●	5,0	13			●	1	●	5	
Kr	87	36	51	4.58E+03	2,97E+09	5,94E+07	7,43E+07	1,49E+06	17	●	5,1	12			●	1	●	5	
Kr	88	36	52	1.02E+04	4,04E+09	8,08E+07	1,01E+08	2,02E+06	17	●	5,2	12			●	1	●	5	
Kr	89	36	53	1.89E+02	3,99E+09	7,98E+07	9,98E+07	2,00E+06	17	●	5,2	12			●	1	●	5	
Kr	90	36	54	3.23E+01	4,37E+09	8,74E+07	1,09E+08	2,19E+06	17	●	5,3	12			●	1	●	5	
Kr	91	36	55	8.57E+00	2,12E+09	4,24E+07	5,30E+07	1,06E+06	18	●	5,1	13			●	1	●	5	
Kr	92	36	56	1.84E+00	6,89E+08	1,38E+07	1,72E+07	3,45E+05	18	●	5,1	12			●	1	●	5	
Kr	93	36	57	1.29E+00	2,28E+08	4,57E+06	5,70E+06	1,14E+05	18	●	5,2	12			●	1	●	5	
Kr	94	36	58	2.00E-01	2,49E+07	4,99E+05	6,23E+05	1,25E+04	18	●	5,2	12			●	1	●	5	
Kr	95	36	59	7.80E-01	1,14E+07	2,29E+05	2,85E+05	5,73E+03	18	●	5,3	12			●	1	●	5	
Kr	96	36	60	3.20E-01	1,47E+06	2,94E+04	3,68E+04	7,35E+02	18	●	5,3	12			●	1	●	5	
Kr	97	36	61	3.17E-01	4,84E+04	9,69E+02	1,21E+03	2,42E+01							●	1	●	5	
Rb	86	37	49	1.61E+06	1,90E+09	3,80E+07	4,75E+07	9,50E+05	17	●	5,1	13	●	1					FEBIAD Source
Rb	87	37	50	1.50E+18	7,99E+09	1,60E+08	2,00E+08	4,00E+06	17	●	5,1	12	●	1					

Rb	88	37	51	1.07E+03	2,21E+10	4,42E+08	5,53E+08	1,11E+07	17	●	5,2	12	●	1				
Rb	89	37	52	9.09E+02	4,75E+10	9,50E+08	1,19E+09	2,38E+07	17	●	5,2	12	●	1				
Rb	90	37	53	1.58E+02	9,62E+10	1,92E+09	2,41E+09	4,80E+07	17	●	5,3	12	●	1				
Rb	91	37	54	5.84E+01	9,62E+10	1,92E+09	2,41E+09	4,80E+07	17	●	5,4	12	●	1				
Rb	92	37	55	4.49E+00	5,09E+10	1,02E+09	1,27E+09	2,55E+07	17	●	5,4	12	●	1				
Rb	93	37	56	5.84E+00	3,38E+10	6,76E+08	8,45E+08	1,69E+07	17	●	5,5	12	●	1				
Rb	94	37	57	2.70E+00	1,37E+10	2,74E+08	3,43E+08	6,85E+06	17	●	5,5	12	●	1				
Rb	95	37	58	3.78E-01	2,94E+09	5,88E+07	7,35E+07	1,47E+06	17	●	5,6	12	●	1				
Rb	96	37	59	1.99E-01	9,89E+08	1,98E+07	2,47E+07	4,95E+05	17	●	5,6	11	●	1				
Rb	97	37	60	1.70E-01	1,08E+08	2,17E+06	2,70E+06	5,43E+04	17	●	5,7	11	●	1				
Rb	98	37	61	1.14E-01	4,44E+07	8,88E+05	1,11E+06	2,22E+04	17	●	5,8	11	●	1				
Rb	99	37	62	5.03E-02	3,27E+06	6,54E+04	8,18E+04	1,64E+03	17	●	5,8	11	●	1				
Rb	100	37	63	5.10E-02	4,49E+05	8,99E+03	1,12E+04	2,25E+02	17	●	5,9	11	●	1				
Rb	101	37	64	3.20E-02									●	1				
Rb	102	37	65	3.70E-02									●	1				
Sr	89	38	51	4.37E+06	8,45E+08	1,69E+07	2,11E+07	4,23E+05	14	●	6,4	10	●	2				SIS + LIS source xxx
Sr	90	38	52	9.09E+08	4,16E+09	8,32E+07	1,04E+08	2,08E+06	14	●	6,4	10	●	2				
Sr	91	38	53	3.47E+04	1,01E+10	2,02E+08	2,53E+08	5,05E+06	14	●	6,5	10	●	2				
Sr	92	38	54	9.76E+03	1,76E+10	3,52E+08	4,40E+08	8,80E+06	14	●	6,6	10	●	2				
Sr	93	38	55	4.45E+02	2,13E+10	4,26E+08	5,33E+08	1,07E+07	14	●	6,6	10	●	2				
Sr	94	38	56	7.53E+01	1,27E+10	2,54E+08	3,18E+08	6,35E+06	14	●	6,7	10	●	2				
Sr	95	38	57	2.39E+01	3,00E+09	6,00E+07	7,50E+07	1,50E+06	14	●	6,8	10	●	2				
Sr	96	38	58	1.07E+00	1,57E+07	3,14E+05	3,93E+05	7,85E+03	14	●	6,9	10	●	2				
Sr	97	38	59	4.26E-01	1,31E+06	2,62E+04	3,28E+04	6,55E+02	14	●	6,9	10	●	2				
Sr	98	38	60	6.53E-01	6,16E+05	1,23E+04	1,54E+04	3,08E+02	14	●	7,0	9	●	2				
Sr	99	38	61	2.69E-01	2,80E+04		7,00E+02						●	2				
Sr	100	38	62	2.02E-01	2,30E+03		5,75E+01						●	2				
Y	88	39	49	9.21E+06	4,46E+05	8,92E+03	1,12E+04	2,23E+02	14	●	6,3	10	●	2				LIS source xxx
Y	90	39	51	2.30E+05	5,11E+07	1,02E+06	1,28E+06	2,55E+04	14	●	6,4	10	●	2				
Y	91	39	52	5.06E+06	2,73E+08	5,46E+06	6,83E+06	1,37E+05	14	●	6,5	10	●	2				
Y	92	39	53	1.27E+04	1,05E+09	2,10E+07	2,63E+07	5,25E+05	14	●	6,6	10	●	2				
Y	93	39	54	3.66E+04	2,92E+09	5,84E+07	7,30E+07	1,46E+06	14	●	6,6	10	●	2				
Y	94	39	55	1.12E+03	5,39E+09	1,08E+08	1,35E+08	2,70E+06	14	●	6,7	10	●	2				
Y	95	39	56	6.18E+02	7,29E+09	1,46E+08	1,82E+08	3,65E+06	14	●	6,8	10	●	2				
Y	96	39	57	5.34E+00	4,47E+08	8,94E+06	1,12E+07	2,24E+05	14	●	6,9	10	●	2				
Y	97	39	58	3.75E-00	2,44E+08	4,89E+06	6,10E+06	1,22E+05	14	●	6,9	10	●	2				
Y	98	39	59	5.48E-01	2,12E+07	4,24E+05	5,30E+05	1,06E+04	14	●	7,0	9	●	2				
Y	99	39	60	1.47E+00	2,69E+07	5,38E+05	6,73E+05	1,35E+04	14	●	7,1	9	●	2				
Y	100	39	61	7.35E-01	5,52E+06	1,10E+05	1,38E+05	2,75E+03	14	●	7,1	9	●	2				
Y	101	39	62	4.50E-01	1,19E+06	2,39E+04	2,98E+04	5,98E+02	14	■	7,2	9	●	2				
Y	102	39	63	3.60E-01	2,76E+05	5,52E+03	6,90E+03	1,38E+02	14	■	7,3	9	●	2				
Y	103	39	64	2.30E-01	4,10E+04		1,03E+03						●	2				
Y	104	39	65	2.36E-01	5,14E+03		1,29E+02						●	2				
Ag	108	47	61	1.42E+02	2,58E+06	5,16E+04	6,45E+04	1,29E+03	17	●	6,4	10	●	2				LIS source xx
Ag	110	47	63	2.46E+01	9,60E+07	1,92E+06	2,40E+06	4,80E+04	17	●	6,5	10	●	2				
Ag	111	47	64	6.44E+05	4,11E+08	8,22E+06	1,03E+07	2,06E+05	17	●	6,5	10	●	2				
Ag	112	47	65	1.13E+04	1,27E+09	2,54E+07	3,18E+07	6,35E+05	17	●	6,6	10	●	2				
Ag	113	47	66	1.93E+04	3,17E+09	6,34E+07	7,93E+07	1,59E+06	17	●	6,6	10	●	2				

Ag	114	47	67	4.60E+00	2,83E+09	5,66E+07	7,08E+07	1,42E+06	17	●	6,7	10	●	2		
Ag	115	47	68	1.20E+03	1,06E+10	2,12E+08	2,65E+08	5,30E+06	17	●	6,8	10	●	2		
Ag	116	47	69	1.61E+02	1,41E+10	2,82E+08	3,53E+08	7,05E+06	17	●	6,8	10	●	2		
Ag	117	47	70	7.28E+01	1,51E+10	3,02E+08	3,78E+08	7,55E+06	17	●	6,9	10	●	2		
Ag	118	47	71	3.76E+00	5,17E+09	1,03E+08	1,29E+08	2,58E+06	17	●	6,9	10	●	2		
Ag	119	47	72	2.10E+00	2,12E+09	4,24E+07	5,30E+07	1,06E+06	17	●	7,0	9	●	2		
Ag	120	47	73	1.23E+00	6,72E+08	1,34E+07	1,68E+07	3,35E+05	17	●	7,1	9	●	2		
Ag	121	47	74	7.80E-01	1,82E+08	3,64E+06	4,55E+06	9,10E+04	17	●	7,1	9	●	2		
Ag	122	47	75	4.80E-01	3,76E+07	7,52E+05	9,40E+05	1,88E+04	17	●	7,2	9	●	2		
Ag	123	47	76	3.09E-01	6,67E+06	1,33E+05	1,67E+05	3,33E+03	17	■	7,2	9	●	2		
Ag	124	47	77	1.72E-01	7,94E+05	1,59E+04	1,99E+04	3,98E+02	17	■	7,3	9	●	2		
Ag	125	47	78	1.66E-01	1,62E+05	3,23E+03	4,05E+03	8,08E+01	17	■	7,4	9	●	2		
Ag	126	47	79	1.07E-01	1,52E+04	3,04E+02	3,80E+02	7,60E+00					●	2		
Ag	127	47	80	1.09E-01	2,15E+03	4,30E+01	5,38E+01	1,08E+00					●	2		
Ag	128	47	81	5.80E-02	1,02E+02	2,03E+00	2,55E+00	5,08E-02					●	2		
Cd	113	48	65	2.43E+23	9,14E+06	1,83E+05	2,29E+05	4,58E+03	17	●	6,6	10	●	2		US source xx
Cd	115	48	67	1.92E+05	1,13E+08	2,26E+06	2,83E+06	5,65E+04	17	●	6,8	10	●	2		
Cd	117	48	69	8.95E+03	6,16E+08	1,23E+07	1,54E+07	3,08E+05	17	●	6,9	10	●	2		
Cd	118	48	70	3.02E+03	1,06E+09	2,12E+07	2,65E+07	5,30E+05	17	●	6,9	10	●	2		
Cd	119	48	71	1.61E+02	1,47E+09	2,94E+07	3,68E+07	7,35E+05	17	●	7,0	9	●	2		
Cd	120	48	72	5.08E+01	1,66E+09	3,32E+07	4,15E+07	8,30E+05	17	●	7,1	9	●	2		
Cd	121	48	73	1.35E+01	1,45E+09	2,90E+07	3,63E+07	7,25E+05	17	●	7,1	9	●	2		
Cd	122	48	74	5.24E+00	9,07E+08	1,81E+07	2,27E+07	4,53E+05	17	●	7,2	9	●	2		
Cd	123	48	75	2.10E+00	3,34E+08	6,68E+06	8,35E+06	1,67E+05	17	■	7,2	9	●	2		
Cd	124	48	76	1.25E+00	1,02E+08	2,04E+06	2,55E+06	5,10E+04	17	■	7,3	9	●	2		
Cd	125	48	77	6.50E-01	1,87E+07	3,74E+05	4,68E+05	9,35E+03	17	■	7,4	9	●	2		
Cd	126	48	78	5.06E-01	4,34E+06	8,68E+04	1,09E+05	2,17E+03	17	■	7,4	9	●	2		
Cd	127	48	79	3.70E-01	7,44E+05	1,49E+04	1,86E+04	3,73E+02	17	■	7,5	9	●	2		
Cd	128	48	80	3.40E-01	1,43E+05	2,87E+03	3,58E+03	7,18E+01	17	■	7,5	9	●	2		
Cd	129	48	81	2.70E-01	1,27E+04	2,54E+02	3,18E+02	6,35E+00					●	2		
Cd	130	48	82	2.00E-01	9,94E+02		2,49E+01						●	2		
In	114	49	65	7.19E+01	4,61E+05	9,22E+03	1,15E+04	2,31E+02	18	●	6,3	10	●	2		BB+US source xx
In	115	49	66	1.39E+22	4,23E+06	8,46E+04	1,06E+05	2,12E+03	18	●	6,4	10	●	2		
In	116	49	67	1.41E+01	7,38E+06	1,48E+05	1,85E+05	3,70E+03	18	●	6,4	10	●	2		
In	117	49	68	2.59E+03	8,29E+07	1,66E+06	2,07E+06	4,15E+04	18	●	6,5	10	●	2		
In	118	49	69	5.00E+00	5,35E+07	1,07E+06	1,34E+06	2,68E+04	18	●	6,6	10	●	2		
In	119	49	70	1.44E+02	5,88E+08	1,18E+07	1,47E+07	2,95E+05	18	●	6,6	10	●	2		
In	120	49	71	3.08E+00	2,27E+08	4,54E+06	5,68E+06	1,14E+05	18	●	6,7	10	●	2		
In	121	49	72	2.31E+01	1,32E+09	2,64E+07	3,30E+07	6,60E+05	18	●	6,7	10	●	2		
In	122	49	73	1.50E+00	3,51E+08	7,02E+06	8,78E+06	1,76E+05	18	●	6,8	10	●	2		
In	123	49	74	5.98E+00	1,08E+09	2,16E+07	2,70E+07	5,40E+05	18	●	6,8	10	●	2		
In	124	49	75	3.11E+00	6,67E+08	1,33E+07	1,67E+07	3,33E+05	18	●	6,9	10	●	2		
In	125	49	76	2.36E+00	4,25E+08	8,50E+06	1,06E+07	2,13E+05	18	●	6,9	10	●	2		
In	126	49	77	1.60E+00	2,00E+08	4,00E+06	5,00E+06	1,00E+05	18	●	7,0	9	●	2		
In	127	49	78	1.09E+00	7,58E+07	1,52E+06	1,90E+06	3,80E+04	18	●	7,1	9	●	2		
In	128	49	79	8.40E-01	2,53E+07	5,07E+05	6,33E+05	1,27E+04	18	●	7,1	9	●	2		
In	129	49	80	6.10E-01	5,44E+06	1,09E+05	1,36E+05	2,73E+03	18	●	7,2	9	●	2		
In	130	49	81	3.20E-01	7,72E+05	1,54E+04	1,93E+04	3,85E+02	18	■	7,2	9	●	2		
In	131	49	82	2.82E-01	1,38E+05	2,76E+03	3,45E+03	6,90E+01	18	■	7,3	9	●	2		

In	132	49	83	2.01E-01	9,89E+04	1,98E+03	2,47E+03	4,95E+01											
In	133	49	84	1.80E-01	1,02E+04		2,55E+02												
Sn	121	50	71	9.74E+04	2,02E+09	4,04E+07	5,05E+07	1,01E+06	21	●	5,8	11	●	1				LIS source 11	
Sn	123	50	73	1.12E+07	1,28E+10	2,56E+08	3,20E+08	6,40E+06	21	●	5,9	11	●	1					
Sn	125	50	75	8.33E+05	3,50E+10	7,00E+08	8,75E+08	1,75E+07	21	●	6,0	11	●	1					
Sn	126	50	76	3.16E+12	4,21E+10	8,42E+08	1,05E+09	2,11E+07	21	●	6,0	11	●	1					
Sn	127	50	77	7.56E+03	4,08E+10	8,16E+08	1,02E+09	2,04E+07	21	●	6,0	11	●	1					
Sn	128	50	78	3.54E+03	3,18E+10	6,36E+08	7,95E+08	1,59E+07	21	●	6,1	11	●	1					
Sn	129	50	79	1.34E+02	1,75E+10	3,50E+08	4,38E+08	8,75E+06	21	●	6,1	11	●	1					
Sn	130	50	80	2.23E+02	7,89E+09	1,58E+08	1,97E+08	3,95E+06	21	●	6,2	11	●	1					
Sn	131	50	81	5.60E+01	3,42E+09	6,83E+07	8,55E+07	1,71E+06	21	●	6,2	10	●	1					
Sn	132	50	82	3.97E+01	1,56E+09	3,11E+07	3,90E+07	7,78E+05	21	●	6,3	10	●	1					
Sn	133	50	83	1.45E+00	1,38E+08	2,76E+06	3,45E+06	6,90E+04	21	●	6,3	10	●	1					
Sn	134	50	84	1.12E+00	2,49E+07	4,99E+05	6,23E+05	1,25E+04	21	●	6,4	10	●	1					
Sn	135	50	85	2.50E-01	3,11E+05	6,21E+03	7,78E+03	1,55E+02	21	●	6,4	10	●	1					
Sn	136	50	86	9.20E-02	4,99E+03		1,25E+02			●			●	1					
Sb	119	51	68	1.37E+05	1,50E+05	3,00E+03	3,75E+03	7,50E+01	20	●	6,0	11	●	2				LIS source 11	
Sb	120	51	69	9.53E+02	8,21E+05	1,64E+04	2,05E+04	4,10E+02	20	●	6,0	11	●	2					
Sb	122	51	71	2.35E+05	4,35E+07	8,70E+05	1,09E+06	2,18E+04	20	●	6,1	11	●	2					
Sb	124	51	73	5.20E+06	6,87E+08	1,37E+07	1,72E+07	3,43E+05	20	●	6,2	11	●	2					
Sb	125	51	74	8.70E+07	1,98E+09	3,96E+07	4,95E+07	9,90E+05	20	●	6,3	10	●	2					
Sb	126	51	75	1.08E+06	4,53E+09	9,06E+07	1,13E+08	2,27E+06	20	●	6,3	10	●	2					
Sb	127	51	76	3.33E+05	8,37E+09	1,67E+08	2,09E+08	4,18E+06	20	●	6,4	10	●	2					
Sb	128	51	77	3.24E+04	1,19E+10	2,38E+08	2,98E+08	5,95E+06	20	●	6,4	10	●	2					
Sb	129	51	78	1.58E+04	1,39E+10	2,78E+08	3,48E+08	6,95E+06	20	●	6,5	10	●	2					
Sb	130	51	79	2.37E+03	1,03E+10	2,06E+08	2,58E+08	5,15E+06	20	●	6,5	10	●	2					
Sb	131	51	80	1.38E+03	6,06E+09	1,21E+08	1,52E+08	3,03E+06	20	●	6,6	10	●	2					
Sb	132	51	81	1.67E+02	1,90E+09	3,80E+07	4,75E+07	9,50E+05	20	●	6,6	10	●	2					
Sb	133	51	82	1.50E+02	8,06E+08	1,61E+07	2,02E+07	4,03E+05	20	●	6,7	10	●	2					
Sb	134	51	83	7.80E+01	3,09E+07	6,19E+05	7,73E+05	1,55E+04	20	●	6,7	10	●	2					
Sb	135	51	84	1.71E+00	1,44E+07	2,88E+05	3,60E+05	7,20E+03	20	●	6,8	10	●	2					
Sb	136	51	85	8.20E-01	2,06E+06	4,12E+04	5,15E+04	1,03E+03	20	●	6,8	10	●	2					
Sb	137	51	86	2.06E-01	1,48E+05	2,97E+03	3,70E+03	7,43E+01	20	●	6,9	10	●	2					
Sb	138	51	87	2.26E-01	1,84E+04		4,60E+02			●			●	2					
Te	127	52	75	3.37E+04	1,75E+09	3,50E+07	4,38E+07	8,75E+05	20	●	6,4	10	●	4				LIS source 11	
Te	128	52	76	6.94E+31	6,24E+09	1,25E+08	1,56E+08	3,13E+06	20	●	6,4	10	●	4					
Te	129	52	77	4.18E+03	1,05E+10	2,10E+08	2,63E+08	5,25E+06	20	●	6,5	10	●	4					
Te	130	52	78	2.49E+28	3,22E+10	6,44E+08	8,05E+08	1,61E+07	20	●	6,5	10	●	4					
Te	131	52	79	1.50E+03	2,37E+10	4,74E+08	5,93E+08	1,19E+07	20	●	6,6	10	●	4					
Te	132	52	80	2.77E+05	4,21E+10	8,42E+08	1,05E+09	2,11E+07	20	●	6,6	10	●	4					
Te	133	52	81	7.50E+02	1,56E+10	3,12E+08	3,90E+08	7,80E+06	20	●	6,7	10	●	4					
Te	134	52	82	2.51E+03	1,17E+10	2,33E+08	2,93E+08	5,83E+06	20	●	6,7	10	●	4					
Te	135	52	83	1.90E+01	1,37E+09	2,73E+07	3,43E+07	6,83E+05	20	●	6,8	10	●	4					
Te	136	52	84	1.75E+01	5,48E+08	1,10E+07	1,37E+07	2,75E+05	20	●	6,8	10	●	4					
Te	137	52	85	2.49E+00	8,39E+07	1,68E+06	2,10E+06	4,20E+04	20	●	6,9	10	●	4					
Te	138	52	86	1.40E+00	2,15E+07	4,30E+05	5,38E+05	1,08E+04	20	●	6,9	10	●	4					
Te	139	52	87	3.51E-01	2,16E+06	4,32E+04	5,40E+04	1,08E+03	20	●	7,0	10	●	4					
Te	140	52	88	2.46E-01	2,76E+05	5,51E+03	6,90E+03	1,38E+02	20	●	7,0	9	●	4					

Cs	148	55	93	1.58E-01	5,47E+04	1,09E+03	1,37E+03	2,73E+01	26	●	5,7	11	●	1						
Cs	149	55	94	2.43E-01	3,16E+03	6,31E+01	7,90E+01	1,58E+00	26	●	5,7	11	●	1						
Ba	133	56	77	3.32E+08	1,14E+06	2,28E+04	2,85E+04	5,70E+02	26	●	5,1	12	●	2						SIS+IS source xxx
Ba	139	56	83	4.98E+03	1,88E+10	3,76E+08	4,70E+08	9,40E+06	26	●	5,3	12	●	2						
Ba	140	56	84	1.10E+06	6,05E+10	1,21E+09	1,51E+09	3,03E+07	26	●	5,4	12	●	2						
Ba	141	56	85	1.10E+03	1,61E+10	3,22E+08	4,03E+08	8,05E+06	26	●	5,4	12	●	2						
Ba	142	56	86	6.38E+02	9,33E+09	1,87E+08	2,33E+08	4,68E+06	26	●	5,5	12	●	2						
Ba	143	56	87	1.43E+01	1,48E+08	2,96E+06	3,70E+06	7,40E+04	26	●	5,5	12	●	2						
Ba	144	56	88	1.15E+01	5,69E+07	1,14E+06	1,42E+06	2,85E+04	26	●	5,5	12	●	2						
Ba	145	56	89	4.31E+00	7,25E+06	1,45E+05	1,81E+05	3,63E+03	26	●	5,6	12	●	2						
Ba	146	56	90	2.22E+00	7,12E+05	1,42E+04	1,78E+04	3,55E+02	26	●	5,6	11	●	2						
Ba	147	56	91	8.93E-01	4,98E+04	9,96E+02	1,25E+03	2,49E+01	26	●	5,7	11	●	2						
Ba	148	56	92	6.07E-01	4,28E+03		1,07E+02						●	2						
Ba	149	56	93	3.44E-01	2,19E+02		5,48E+00						●	2						
Ba	150	56	94	3.00E-01	1,73E+01		4,33E-01						●	2						
La	137	57	80	1.89E+12	3,45E+06	6,90E+04	8,63E+04	1,73E+03	23	●	6,0	11	●	4						SIS source x
La	138	57	81	3.31E+18	2,60E+07	5,20E+05	6,50E+05	1,30E+04	23	●	6,0	11	●	4						
La	140	57	83	1.45E+05	5,53E+08	1,11E+07	1,38E+07	2,78E+05	23	●	6,1	11	●	4						
La	141	57	84	1.41E+04	1,55E+09	3,10E+07	3,88E+07	7,75E+05	23	●	6,1	11	●	4						
La	142	57	85	5.47E+03	3,14E+09	6,28E+07	7,85E+07	1,57E+06	23	●	6,2	11	●	4						
La	143	57	86	8.52E+02	4,31E+09	8,62E+07	1,08E+08	2,16E+06	23	●	6,2	11	●	4						
La	144	57	87	4.08E+01	1,83E+09	3,66E+07	4,58E+07	9,15E+05	23	●	6,3	10	●	4						
La	145	57	88	2.48E+01	9,91E+08	1,98E+07	2,48E+07	4,95E+05	23	●	6,3	10	●	4						
La	146	57	89	6.27E+00	1,33E+08	2,66E+06	3,33E+06	6,65E+04	23	●	6,3	10	●	4						
La	147	57	90	4.02E+00	3,42E+07	6,84E+05	8,55E+05	1,71E+04	23	●	6,4	10	●	4						
La	148	57	91	1.05E+00	2,62E+06	5,24E+04	6,55E+04	1,31E+03	23	●	6,4	10	●	4						
La	149	57	92	1.05E+00	5,28E+05	1,06E+04	1,32E+04	2,65E+02	23	●	6,5	10	●	4						
La	150	57	93	8.60E-01	6,29E+04	1,26E+03	1,57E+03	3,15E+01	23	●	6,5	10	●	4						
La	151	57	94	1.32E+00	1,00E+04		2,50E+02						●	4						
La	152	57	95	1.23E+00	7,01E+02		1,75E+01						●	4						
La	153	57	96	5.46E-01	1,69E+01		4,23E-01						●	4						
As*	73	33	40	6.94E+06	1,45E+04	2,90E+02	3,63E+02	7,25E+00	15	●	4,9	13	●	5	●	5				ZrC - ZrO ₂ target - FEBIAD
As*	74	33	41	1.54E+06	1,89E+05	3,78E+03	4,73E+03	9,45E+01	15	●	4,9	13	●	5	●	5				ZrC - ZrO ₂ target - FEBIAD
Br*	78	35	43	3.88E+02	3,01E+04	6,02E+02	7,53E+02	1,51E+01	15	●	5,2	12	●	5	●	5				ZrC - ZrO ₂ target - FEBIAD
Br	80	35	45	1.08E+03	3,41E+06	6,82E+04	8,53E+04	1,71E+03	15	●	5,3	12	●	5	●	5				ZrC - ZrO ₂ target - FEBIAD
Rb*	83	37	46	7.45E+06	3,55E+06	7,10E+04	8,88E+04	1,78E+03	17	●	4,9	13	●	5						ZrC - ZrO ₂ target SIS
Rb*	84	37	47	2.83E+06	4,01E+07	8,02E+05	1,00E+06	2,01E+04	17	●	4,9	13	●	5						ZrC - ZrO ₂ target SIS
Sr*	85	38	47	5.60E+06	2,23E+05	4,46E+03	5,58E+03	1,12E+02	14	●	6,1	11	●	5						ZrC - ZrO ₂ target SIS
Cs*	131	55	76	8.37E+05	8,21E+06	1,64E+05	2,05E+05	4,10E+03	26	●	5,0	13	●	5						LaCx - CeS target SIS source x
Cs*	132	55	77	5.60E+05	8,94E+07	1,79E+06	2,24E+06	4,48E+04	26	●	5,1	13	●	5						LaCx - CeS target SIS source x
I*	126	53	73	1.13E+06	1,83E+07	3,66E+05	4,58E+05	9,15E+03	20	●	6,3	10	●	5	●	5				LaCx - CeS target FEBIAD
Ba*	131	56	75	9.94E+05			0,00E+00		26	●	5,0	13	●	5						LaCx - CeS target SIS source x

La*	133	57	78	1.41E+04					23	●	5,8	11	●	5	●	5			CeS target - SIS source x
La*	134	57	78	4.00E+02					23	●	5,8	11	●	5	●	5			CeS target - SIS source x
La*	135	57	78	7.02E+04	2,28E+04	4,56E+02	5,70E+02	1,14E+01	23	●	5,9	11	●	5	●	5			LaCx - CeS target SIS source x
La*	136	57	79	5.92E+02	2,92E+05	5,60E+04	7,30E+03	1,40E+03	23	●	5,9	11	●	5	●	5			LaCx - CeS target SIS source x
Ce*	135	58	77	6.39E+04			0,00E+00		26	●	5,2	12	●	5					LaCx target - SIS
Lu*	179	78	101	1.65E+04			0,00E+00		26	●	6,9	10							TaC target - SIS
Hf*	173	72	101	8.50E+04			0,00E+00												TaC target - FEBIAD
							0,00E+00												

