Exercice 5 / Distribution de charges.
Fission de ^{236}U

a/ Règle "UCD"

On a : $(Z/A)_{^{236}U} = \frac{92}{236} = 0,389$

d'où pour : $A_\ell = 97 \Rightarrow Z_\ell = 38$

$A_L = 139 \Rightarrow Z_L = 54$

b/ Règle "ECD"

Table VI $\Rightarrow$ pour $A_\ell = 97 \rightarrow$ noyau stable : $^{97}_{42}Mo$

$A_L = 139 \rightarrow$ noyau stable : $^{139}_{57}La$

- d'après l'énoncé, on a : $Z_\ell - 42 = Z_L - 57$

- conservation de la charge : $Z_\ell + Z_L = 92$

d'où $\begin{cases} Z_\ell - 42 = Z_L - 57 \\ Z_\ell + Z_L = 92 \end{cases} \Rightarrow Z_\ell = 38,5 \quad Z_L = 53,5$

donc $Z_\ell = 38$ ou 39

$Z_L = 53$ ou 54

Nuclide	T_3	Excès de masse M—A, μu	Termes prépondérants pour niveaux fondamentaux au bas — Proton	Neutron	J^π	Périodes s	Abondance isotopique, pourcentage ou modes de désintégration avec leur énergie, MeV	Energie totale de désintégration, MeV	Moment magnétique mn	Moment quadrupolaire, barns
$_{39}Y^{86}$	-4	-85054_2	$(2p_{1/2})^1$	$(1g_{9/2})^7$	4^-	$0,540 \times 10^5$	CE; β^+ 1,19,0,6–3,1; γ 1,08, ...	5,27		
$_{39}Y^{87}$	$-\frac{9}{2}$	-89260_3		$(1g_{9/2})^8$	$(\frac{1}{2}^-)$	$0,288 \times 10^6$	CE; β^+0,7; γ0,48	1,72		
$_{39}Y^{88}$	-5	-90172_1		$(1g_{9/2})^9$	4^-	$0,933 \times 10^7$	CE; β^+0,72; γ 1,83,0,90, ...	3,62		
$_{39}Y^{89}$	$-\frac{11}{2}$	-94128_1		$(1g_{9/2})^{10}$	$\frac{1}{2}^-$		100		$-0,1373$	
$_{39}Y^{90}$	-6	-92837_1		$(2d_{5/2})^1$	2^-	$0,231 \times 10^6$	β^- 2,27, ...; γ 1,75	2,29	$-1,6300$	
$_{39}Y^{91}$	$-\frac{13}{2}$	-92705_2		$(2d_{5/2})^2$	$\frac{1}{2}^-$	$0,510 \times 10^7$	β^- 1,55, ...; γ 1,21	1,54	$\pm 0,1640$	
$_{39}Y^{92}$	-7	-91074_2		$(2d_{5/2})^3$	2^-	$0,127 \times 10^5$	β^- 3,64, 1,32, ...; γ0,932, 1,39, ...	3,63		
$_{39}Y^{93}$	$-\frac{15}{2}$	-90448_2		$(2d_{5/2})^4$	$(\frac{1}{2}^-)$	$0,364 \times 10^5$	β^- 2,89, ...; γ0,27,0,94,0,35–2,4	2,89		
$_{39}Y^{94}$	-8	-88320_3		$(2d_{5/2})^5$		$0,120 \times 10^4$	β^- 5,0, ...; γ0,92,0,56, 1,13, ...	5,00		
$_{39}Y^{95}$	$-\frac{17}{2}$	-87460_4		$(2d_{5/2})^6$		$0,660 \times 10^3$	β^-	4,20		
$_{39}Y^{96}$	-9	-84310_4		$(1g_{7/2})^1$		$,138 \times 10^3$	β^- 3,5; γ0,7, 1,0	6,90		
$_{40}Zr^{85}$	$-\frac{5}{2}$		$(2p_{1/2})^2$	$(1g_{9/2})^5$						
$_{40}Zr^{86}$	-3	-83770_4		$(1g_{9/2})^6$	0^+	$0,594 \times 10^5$	CE; γ0,24	1,20		
$_{40}Zr^{87}$	$-\frac{7}{2}$	-85510_3		$(1g_{9/2})^7$		$0,576 \times 10^4$	β^+ 2,10, ...; γ 1,2, ...	3,50		
$_{40}Zr^{88}$	-4	-89940_4		$(1g_{9/2})^8$	0^+	$0,734 \times 10^7$	CE; γ0,39	0,50		
$_{40}Zr^{89}$	$-\frac{9}{2}$	-91086_1		$(1g_{9/2})^9$	$(\frac{9}{2}^+)$	$0,282 \times 10^6$	CE; β^+0,90; γ 1,7, ...	2,83		
$_{40}Zr^{90}$	-5	-95300_1		$(1g_{9/2})^{10}$	0^+		51,46			
$_{40}Zr^{91}$	$-\frac{11}{2}$	-94358_1		$(2d_{5/2})^1$	$\frac{5}{2}^+$		11,23		$-1,3030$	
$_{40}Zr^{92}$	-6	-94969_1		$(2d_{5/2})^2$	0^+		17,11			
$_{40}Zr^{93}$	$-\frac{13}{2}$	-93550_1		$(2d_{5/2})^3$	$\frac{5}{2}^+$	$0,300 \times 10^{14}$	β^-0,063,0,091	0,06		
$_{40}Zr^{94}$	-7	-93686_1		$(2d_{5/2})^4$	0^+		17,40			
$_{40}Zr^{95}$	$-\frac{15}{2}$	-91965_1		$(2d_{5/2})^5$	$(\frac{5}{2}^+)$	$0,562 \times 10^7$	β^-0,40,0,36,0,89; γ0,72,0,76	1,12		
$_{40}Zr^{96}$	-8	-91714_1		$(2d_{5/2})^6$	0^+		2,80	0,21		
$_{40}Zr^{97}$	$-\frac{17}{2}$	-89034_2		$(3s_{1/2})^1$	$\frac{1}{2}^+$	$0,612 \times 10^5$	β^- 1,91, ...; γ0,5–2,6	2,67		
$_{40}Zr^{99}$	$-\frac{19}{2}$			$(1g_{7/2})^3$		$< 0,160 \times 10^1$	β^-			
$_{41}Nb^{89}$	$-\frac{7}{2}$	-86920_3	$(1g_{9/2})^1$	$(1g_{9/2})^8$		$0,684 \times 10^4$	β^+ 2,9	3,88		
$_{41}Nb^{90}$	-4	-88741_2		$(1g_{9/2})^9$	$(+)$	$0,526 \times 10^5$	β^+ 1,50, ...; γ 1,14, 2,32	6,11		
$_{41}Nb^{91}$	$-\frac{9}{2}$	-93140_2		$(1g_{9/2})^{10}$	$(\frac{9}{2}^+)$	Long	CE	1,14		
$_{41}Nb^{92}$	-5	-92789_2		$(2d_{5/2})^1$		$0,873 \times 10^6$	CE; γ0,93,0,89, 1,82	{0,37⁻ 2,03⁺		
$_{41}Nb^{93}$	$-\frac{11}{2}$	-93618_1		$(2d_{5/2})^2$	$\frac{9}{2}^+$		100		6,1670	$-0,220$
$_{41}Nb^{94}$	-6	-92697_2		$(2d_{5/2})^3$	(6^+)	$0,631 \times 10^{12}$	β^-0,5, ...; γ0,87,0,70	{2,06⁻ 0,92⁺		
$_{41}Nb^{95}$	$-\frac{13}{2}$	-93168_1		$(2d_{5/2})^4$		$0,302 \times 10^7$	β^-0,16, ...; γ0,77	0,92		
$_{41}Nb^{96}$	-7	-91944_2		$(2d_{5/2})^5$		$0,828 \times 10^5$	β^-[illegible]7,0,4; γ0,77,0,56, 1,08, ...	3,15		
$_{41}Nb^{97}$	$-\frac{15}{2}$	-91904_1		$(2d_{5/2})^6$	$(+)$	$0,[illegible] \times 10^4$	β^- 1,27, ...; γ0,66	1,93		
$_{41}Nb^{98}$	-8	[illegible]		$(1g_{7/2})^1$		$0,309 \times 10^4$	β^-[illegible]31, ...; γ0,78,0,72,0,33–2,7	4,60		

${}_{41}Nb^{99}$	$-\frac{17}{2}$	-83950_4		$(1g_{7/2})^2$		$0,150 \times 10^3$	β^- 3,2, . . . ; γ0,10,0,26	3,10		
${}_{41}Nb^{100}$	-9	-85980_4		$(1g_{7/2})^3$		†$0,180 \times 10^3$	β^-; γ0,53,0,36,0,45,0,14–2,9	6,10		
${}_{41}Nb^{101}$	$-\frac{19}{2}$			$(1g_{7/2})^4$		$0,600 \times 10^2$	β^-			
${}_{42}Mo^{90}$	-3	-86060_3	$(1g_{9/2})^2$	$(1g_{9/2})^8$	0^+	$0,205 \times 10^5$	CE; β^+ 1,2; γ	2,50		
${}_{42}Mo^{91}$	$-\frac{7}{2}$	-88350_2		$(1g_{9/2})^9$	$(\frac{9}{2}^+)$	$0,936 \times 10^3$	β^+ 3,44; CE	4,46		
${}_{42}Mo^{92}$	-4	-93189_1		$(1g_{9/2})^{10}$	0^+		15,84			
${}_{42}Mo^{93}$	$-\frac{9}{2}$	-93170_2		$(2d_{5/2})^1$	$(\frac{5}{2})$	$0,300 \times 10^{12}$	CE	0,42		
${}_{42}Mo^{94}$	-5	-94909_1		$(2d_{5/2})^2$	0^+		9,04			
${}_{42}Mo^{95}$	$-\frac{11}{2}$	-94161_1		$(2d_{5/2})^3$	$\frac{5}{2}^+$		15,72		—0,9135	
${}_{42}Mo^{96}$	-6	-95326_1		$(2d_{5/2})^4$	0^+		16,53			
${}_{42}Mo^{97}$	$-\frac{13}{2}$	-93978_1		$(2d_{5/2})^5$	$\frac{5}{2}^+$		9,46		—0,9327	
${}_{42}Mo^{98}$	-7	-94591_1		$(2d_{5/2})^6$	0^+		23,78			
${}_{42}Mo^{99}$	$-\frac{15}{2}$	-92230_2		$(3s_{1/2})^1$	$(\frac{1}{2}^+)$	$0,238 \times 10^6$	β^- 1,23,0,45, . . . ; γ0,74,0,041-0,78	1,37		
${}_{42}Mo^{100}$	-8	-92525_1		$(1g_{7/2})^2$	0^+		9,63			
${}_{42}Mo^{101}$	$-\frac{17}{2}$	-89647_2		$(1g_{7/2})^3$		$0,876 \times 10^3$	β^- 2,23, . . . ; γ 1,02,0,59, 2,08, . . .	2,82		
${}_{42}Mo^{102}$	-9	-89750_4		$(1g_{7/2})^4$	0^+	[illegible] $\times 10^3$	β^- 1,2	1,00		
${}_{42}Mo^{104}$	-10			$(1g_{7/2})^6$	0^+	[illegible] $\times 10^3$	β^- 2,2, . . . ; γ0,89,0,36			
${}_{42}Mo^{105}$	$-\frac{21}{2}$			$(1g_{7/2})^7$		[illegible]	β^-			
${}_{43}Tc^{92}$	-3	-84540_2	$(1g_{9/2})^3$	$(1g_{9/2})^9$		$0,246 \times 10^2$	β^+ 4,1; γ 1,54,0,79,0,33,0,14, . . .	8,06		
${}_{43}Tc^{93}$	$-\frac{7}{2}$	-89749_2		$(1g_{9/2})^{10}$	$(\frac{9}{2}^+)$	$0,972 \times 10^4$	CE; β^+0,82,0,6; γ 1,3, 1,5,0,86, . . .	3,19		
${}_{43}Tc^{94}$	-4	-90337_1		$(2d_{5/2})^1$	(2^+)	$0,173 \times 10^4$	CE; β^+ ~1,7, . . . ; γ0,87,0,71,0,85	4,26		
${}_{43}Tc^{95}$	$-\frac{9}{2}$	-92380_2		$(2d_{5/2})^2$	$(\frac{9}{2}^+)$	†$0,720 \times 10^5$	CE; γ0,77,0,84,0,21–1,1	1,66		
${}_{43}Tc^{96}$	-5	-92170_2		$(2d_{5/2})^3$		$0,373 \times 10^6$	CE; γ0,77,0,84,0,81, 1,12, . . .	{0,21− 2,94+		
${}_{43}Tc^{97}$	$-\frac{11}{2}$	-93660_4		$(2d_{5/2})^4$	$(^+)$	$0,331 \times 10^{14}$	CE	0,30		
${}_{43}Tc^{98}$	-6	-92890_3		$(2d_{5/2})^5$		$0,475 \times 10^{14}$	β^-0,3; γ0,75,0,66	{1,70− 1,59+		
${}_{43}Tc^{99}$	$-\frac{13}{2}$	-93751_1		$(2d_{5/2})^6$	$\frac{9}{2}^+$	$0,668 \times 10^{13}$	β^-0,29	0,29	5,6800	0,300
${}_{43}Tc^{100}$	-7	-92160_2		$(1g_{7/2})^1$	1^+	$0,170 \times 10^2$	β^- 3,37, 2,24, . . . ; γ0,54,0,59, . . .	{3,37− 0,34+		
${}_{43}Tc^{101}$	$-\frac{15}{2}$	-92674_2		$(1g_{7/2})^2$		$0,840 \times 10^3$	β^- 1,32, 1,07; γ0,31,0,54, . . .	1,63		
${}_{43}Tc^{102}$	-8	-90820_4		$(1g_{7/2})^3$		†$0,500 \times 10^1$	β^- 4	4,50		
${}_{43}Tc^{103}$	$-\frac{17}{2}$	-91170_3		$(1g_{7/2})^4$		$0,500 \times 10^2$	β^- 2,2, 2,0; γ0,135,0,35,0,215	2,35		
${}_{43}Tc^{104}$	-9	-88290_3		$(1g_{7/2})^5$		$0,108 \times 10^4$	β^- 2,4, . . . ; γ0,31–4,8	5,85		
${}_{43}Tc^{105}$	$-\frac{19}{2}$	-88670_3		$(1g_{7/2})^6$		$0,480 \times 10^3$	β^- 3,4, 1,8; γ0,11, . . .	3,40		
${}_{44}Ru^{93}$	$-\frac{5}{2}$		$(1g_{9/2})^4$	$(1g_{9/2})^9$		$0,500 \times 10^2$	β^+			
${}_{44}Ru^{94}$	-3			$(1g_{9/2})^{10}$	0^+	$0,342 \times 10^4$	CE; β^+; γ			
${}_{44}Ru^{95}$	$-\frac{7}{2}$	-90199_2		$(2d_{5/2})^1$		$0,594 \times 10^4$	CE; β^+ 1,0, 1,3,0,7; γ0,34, 1,1, . . .	2,03		
${}_{44}Ru^{96}$	-4	-92402_1		$(2d_{5/2})^2$	0^+		5.51			
${}_{44}Ru^{97}$	$-\frac{9}{2}$	-92370_4		$(2d_{5/2})^3$	$(\frac{5}{2}^+)$	$0,251 \times 10^6$	CE; γ0,22,0,11-0,57	1,20		
${}_{44}Ru^{98}$	-5	-94711_1		$(2d_{5/2})^4$	0^+		1.87			
${}_{44}Ru^{99}$	$-\frac{11}{2}$	-94064_1		$(2d_{5/2})^5$	$\frac{5}{2}^+$		12.72		—0,6300	
${}_{44}Ru^{100}$	-6	-95782_1		$(2d_{5/2})^6$	0^+		12.62			

Nuclide	T_3	Excès de masse $M-A$, μu	Termes prépondérants pour niveaux fondamentaux ou bas — Proton	Neutron	J^π	Périodes s	Abondance isotopique, pourcentage ou modes de désintégration avec leur énergie, MeV	Energie totale de désintégration, MeV	Moment magnétique mn	Moment quadrupolaire, barns
$_{44}Ru^{101}$	$-\frac{13}{2}$	-94423_1	$(1g_{9/2})^4$	$(2d_{5/2})^{-1}$	$\frac{5}{2}+$		17,07		−0,6900	
$_{44}Ru^{102}$	-7	-95652_1		$(1g_{7/2})^2$	0+		31,61			
$_{44}Ru^{103}$	$-\frac{15}{2}$	-93694_2		$(2d_{5/2})^{-1}$	$(\frac{5}{2}+)$	$0,346 \times 10^7$	β^-0,21, 1,0,0,71, . . . ; γ0,50, . . .	0,74		
$_{44}Ru^{104}$	-8	-94570_1		$(1g_{7/2})^4$	0+		18,58			
$_{44}Ru^{105}$	$-\frac{17}{2}$	-92321_2		$(1g_{7/2})^5$		$0,160 \times 10^5$	β^- 1,15, 1,08, 1,87, . . . ; γ0,72, . . .	1,87		
$_{44}Ru^{106}$	-9	-92678_2		$(1g_{7/2})^6$	0+	$0,316 \times 10^8$	β^-0,04	0,04		
$_{44}Ru^{107}$	$-\frac{19}{2}$	-89870_3		$(1g_{7/2})^7$		$0,252 \times 10^3$	β^- 3,2, 1,9–3,0; γ0,19, . . .	3,15		
$_{44}Ru^{108}$	-10	-89900_2		$(1g_{7/2})^8$	0+	$0,270 \times 10^3$	β^- 1,3, 1,2; γ 1,7	1,32		
$_{45}Rh^{96}$	-3		$(1g_{9/2})^5$	$(2d_{5/2})^1$		$0,700 \times 10^3$				
$_{45}Rh^{97}$	$-\frac{7}{2}$	-88620_4	ou	$(2d_{5/2})^2$		$0,198 \times 10^4$	β^+ 1,8, 2,1, . . . ; CE ; γ0,08–2,5	3,49		
$_{45}Rh^{98}$	-4	-90200_3	$(2p_{1/2})^{-1}$	$(2d_{5/2})^3$		$0,522 \times 10^3$	β^+ 2,5; CE ; γ0,66	4,20		
$_{45}Rh^{99}$	$-\frac{9}{2}$	-91810_2		$(2d_{5/2})^4$		$0,138 \times 10^7$	CE; β^+ 1,03, . . . ; γ0,35,0,089	2,10		
$_{45}Rh^{100}$	-5	-91874_2		$(2d_{5/2})^5$	2−	$0,756 \times 10^5$	CE; β^+ 2,61, . . . ; γ0,54,0,44, . . .	3,64		
$_{45}Rh^{101}$	$-\frac{11}{2}$	-93822_2		$(2d_{5/2})^6$	$(\frac{1}{2}-)$	$0,160 \times 10^9$	CE; γ0,195,0,127	0,56		
$_{45}Rh^{102}$	-6	-93158_1		$(1g_{7/2})^1$	(−)	†$0,178 \times 10^8$	CE; β^- 1,15, . . . ; β^+ 1,28,0,81; γ0,47, . . .	{1,15− 2,32+		
$_{45}Rh^{103}$	$-\frac{13}{2}$	-94489_1		$(1g_{7/2})^2$	$\frac{1}{2}-$		100		−0,0883	
$_{45}Rh^{104}$	-7	-93341_1		$(1g_{7/2})^3$	1+	†$0,420 \times 10^2$	β^- 2,44, . . . ; γ0,56, 1,24	2,47		
$_{45}Rh^{105}$	$-\frac{15}{2}$	-94329_2		$(1g_{7/2})^4$	*$(\frac{7}{2})+$	$0,130 \times 10^6$	β^-0,57,0,25, . . . ; γ0,31	0,57		
$_{45}Rh^{106}$	-8	-92721_2		$(1g_{7/2})^5$	1+	†$0,300 \times 10^2$	β^- 3,53, . . . ; γ0,51,0,62,0,7–3,4	3,54		
$_{45}Rh^{107}$	$-\frac{17}{2}$	-93247_2		$(1g_{7/2})^6$		$0,130 \times 10^4$	β^- 1,2,0,83–1,5; γ0,31, . . .	1,51		
$_{45}Rh^{108}$	-9	-91300_3		$(1g_{7/2})^7$	1+	$0,170 \times 10^2$	β^- 4,5, 3,5, 4,1, . . . ; γ0,43,0,62, . . .	4,50		
$_{45}Rh^{109}$	$-\frac{19}{2}$	-91360_4		$(1g_{7/2})^8$		†$0,300 \times 10^2$	β^-; γ0,49,0,31	2,50		
$_{45}Rh^{110}$	-10	-88900_3		$(3s_{1/2})^1$		$0,500 \times 10^1$	β^- 5,5, . . . ; γ0,38	5,50		
$_{46}Pd^{98}$	-3		$(1g_{9/2})^6$	$(2d_{5/2})^2$	0+	$0,102 \times 10^4$	β^+			
$_{46}Pd^{99}$	$-\frac{7}{2}$	-87730_3		$(2d_{5/2})^3$		$0,132 \times 10^4$	β^+ 2,0, . . . ; γ0,14,0,28,0,42,0,67	3,80		
$_{46}Pd^{100}$	-4	-91230_4		$(2d_{5/2})^4$	0+	$0,346 \times 10^6$	CE; γ0,082, ,073, ,04–,31	0,60		
$_{46}Pd^{101}$	$-\frac{9}{2}$	-91930_2		$(1g_{7/2})^1$	$(\frac{7}{2}+)$	$0,306 \times 10^5$	CE; β^+0,58; γ0,59,0,29, . . .	1,76		
$_{46}Pd^{102}$	-5	-94391_2		$(2d_{5/2})^6$	0+		0,96			
$_{46}Pd^{103}$	$-\frac{11}{2}$	-93893_2		$(1g_{7/2})^1$	$(\frac{7}{2}+)$	$0,147 \times 10^7$	CE ; γ0,052-0,36	0,56		
$_{46}Pd^{104}$	-6	-95989_2		$(1g_{7/2})^2$	0+		10,97			
$_{46}Pd^{105}$	$-\frac{13}{2}$	-94936_2		$(2d_{5/2})^{-1}$	$\frac{5}{2}+$		22,23		−0,6015	
$_{46}Pd^{106}$	-7	-96521_1		$(1g_{7/2})^4$	0+		27,33			
$_{46}Pd^{107}$	$-\frac{15}{2}$	-94868_1		$(2d_{5/2})^{-1}$	$(\frac{5}{2}+)$	$0,221 \times 10^{15}$	β^-0,035	0,04		
$_{46}Pd^{108}$	-8	-96109_1		$(1g_{7/2})^6$	0+		26,71			
$_{46}Pd^{109}$	$-\frac{17}{2}$	-94046_1		$(2d_{5/2})^{-1}$	$\frac{5}{2}+$	$0,486 \times 10^5$	β^- 1,03, . . . ; γ . . .	1,12		

$_{53}I^{138}$	-16			$(2f_{7/2})^3$		$0{,}630 \times 10^1$	β^-			
$_{53}I^{139}$	$-\frac{33}{2}$			$(2f_{7/2})^4$		$0{,}200 \times 10^1$	β^-			
$_{54}Xe^{121}$	$-\frac{13}{2}$	-88200	$(1g_{7/2})^4$	$(3s_{1/2})^1$		$0{,}240 \times 10^4$	β^+ 2,8; CE; γ0,096,0,080,0,132	3,79		
$_{54}Xe^{122}$	-7			$(1h_{11/2})^4$	0^+	$0{,}684 \times 10^5$	CE; γ 1,5,0,09,0,24			
$_{54}Xe^{123}$	$-\frac{15}{2}$	-91270_4		$(3s_{1/2})^1$		$0{,}666 \times 10^4$	CE; β^+ 1,5; γ0,15	2,80		
$_{54}Xe^{124}$	-8	-93880_3		$(1h_{11/2})^6$	0^+		0,096			
$_{54}Xe^{125}$	$-\frac{17}{2}$	-93380_4		$(3s_{1/2})^1$	$(\frac{1}{2}^+)$	$0{,}648 \times 10^5$	CE; γ0,187,0,056,0,243,0,096-0,46	1,90		
$_{54}Xe^{126}$	-9	-95712_1		$(1h_{11/2})^8$	0^+		0,090			
$_{54}Xe^{127}$	$-\frac{19}{2}$	-94780_3		$(3s_{1/2})^1$	$(\frac{1}{2}^+)$	$0{,}315 \times 10^7$	CE; γ0,20,0,17,0,15,0,06	0,70		
$_{54}Xe^{128}$	-10	-96460_1		$(1h_{11/2})^{10}$	0^+		1,92			
$_{54}Xe^{129}$	$-\frac{21}{2}$	-95216_1		$(3s_{1/2})^1$	$\frac{1}{2}^+$		26,44		$-0{,}7768$	
$_{54}Xe^{130}$	-11	-96491_1		$(1h_{11/2})^{12}$	0^+		4,08			
$_{54}Xe^{131}$	$-\frac{23}{2}$	-94914_1		$(2d_{3/2})^1$	$\frac{3}{2}^+$		21,18		0,6908	$-0{,}120$
$_{54}Xe^{132}$	-12	-95839_1		$(3s_{1/2})^2$	0^+		26,89			
$_{54}Xe^{133}$	$-\frac{25}{2}$	-94185_2		$(2d_{3/2})^1$	$\frac{3}{2}^+$	$0{,}455 \times 10^6$	β^-0,35, . . . ; γ0,081, . . .	0,43		
$_{54}Xe^{134}$	-13	-94602_1		$(2d_{3/2})^2$	0^+		10,44			
$_{54}Xe^{135}$	$-\frac{27}{2}$	-92980_3		$(2d_{3/2})^3$	$(\frac{3}{2}^+)$	$0{,}331 \times 10^5$	β^-0,91,0,55; γ0,25,0,61, . . .	1,16		
$_{54}Xe^{136}$	-14	-92779_1		$(2d_{3/2})^4$	0^+		8,87			
$_{54}Xe^{137}$	$-\frac{29}{2}$	-88900_3		$(2f_{7/2})^1$		$0{,}234 \times 10^3$	β^- 4,2, 3,7; γ0,46	4,04		
$_{54}Xe^{138}$	-15	-86190_4		$(2f_{7/2})^2$	0^+	$0{,}840 \times 10^3$	β^-0,214; γ0,42,0,51, 1,8, 2,0	2,80		
$_{54}Xe^{139}$	$-\frac{31}{2}$	-82160_3		$(2f_{7/2})^3$		$0{,}410 \times 10^2$	β^- ~4,6; γ	4,60		
$_{54}Xe^{140}$	-16			$(2f_{7/2})^4$	0^+	$0{,}160 \times 10^2$	β^-			
$_{54}Xe^{141}$	$-\frac{33}{2}$			$(2f_{7/2})^5$		$0{,}200 \times 10^1$	β^-			
$_{54}Xe^{142}$	-17			$(2f_{7/2})^6$	0^+	$0{,}150 \times 10^1$	β^-			
$_{54}Xe^{143}$	$-\frac{35}{2}$			$(2f_{7/2})^7$		$0{,}100 \times 10^1$	β^-			
$_{54}Xe^{144}$	-18			$(2f_{7/2})^8$	0^+	$0{,}100 \times 10^1$	β^-			
$_{55}Cs^{123}$	$-\frac{13}{2}$		$(1g_{7/2})^5$	$(1h_{11/2})^4$		$0{,}480 \times 10^3$	β^+			
$_{55}Cs^{125}$	$-\frac{15}{2}$	-90090_4	$(2d_{5/2})^1$	$(1h_{11/2})^6$		$0{,}270 \times 10^4$	CE; β^+ 2,05; γ0,112	3,07		
$_{55}Cs^{126}$	-8	-90560_3	ou	$(3s_{1/2})^1$	1^+	$0{,}960 \times 10^2$	β^+ 3,8, . . . ; CE; γ0,39	4,80		
$_{55}Cs^{127}$	$-\frac{17}{2}$	-92520_3	1/2+ (420)	$(1h_{11/2})^8$	$\frac{1}{2}^+$	$0{,}223 \times 10^5$	CE; β^+0,7, 1,06, . . . ; γ0,41, . . .	2,10	1,4300	
$_{55}Cs^{128}$	-9	-92241_2		$(3s_{1/2})^1$	1^+	$0{,}180 \times 10^3$	β^+ 2,9, 2,5, . . . ; CE; γ0,13, . . .	3,93		
$_{55}Cs^{129}$	$-\frac{19}{2}$	-94040_4		$(1h_{11/2})^{10}$	$\frac{1}{2}^+$	$0{,}112 \times 10^6$	CE; γ0,040,0,39,0,37,0,58, . . .	1,10	1,4790	
$_{55}Cs^{130}$	-10	-93280_2		$(3s_{1/2})^1$	1^+	$0{,}180 \times 10^4$	CE; β^+ 1,97; β^-0,44	0,44− 2,99+	±1,4100	
$_{55}Cs^{131}$	$-\frac{31}{2}$	-94534_1		$(1h_{11/2})^{12}$	$\frac{5}{2}^+$	$0{,}838 \times 10^6$	CE	0,36	3,5400	
$_{55}Cs^{132}$	-11	-93607_2		$(1h_{11/2})^{-1}$	2^-	$0{,}562 \times 10^6$	CE; β^-; β^+0,4; γ0,67,0,46,0,51-2,0	1,18− 2,08+	2,2200	
$_{55}Cs^{133}$	$-\frac{23}{2}$	-94645_2		$(3s_{1/2})^2$	$\frac{7}{2}^+$		100		2,5790	$-0{,}003$
$_{55}Cs^{134}$	-12	-93177_2		$(2d_{3/2})^1$	4^+	$0{,}663 \times 10^8$	β^-0,65,0,09,0,21-1,45; γ0,60,0,80, . . .	2,06− 1,33+	2,9900	
$_{55}Cs^{135}$	$-\frac{25}{2}$	-94230_3		$(2d_{3/2})^2$	$\frac{7}{2}^+$	$0{,}631 \times 10^{14}$	β^-0,21	0,21	2,7290	0,049
$_{55}Cs^{136}$	-13	-92660_2		$(1h_{11/2})^{-1}$	5^-	$0{,}112 \times 10^7$	β^-0,34,0,66; γ 1,04,0,83, . . .	2,83		
$_{55}Cs^{137}$	$-\frac{27}{2}$	-93230_2		$(2d_{3/2})^4$	$\frac{7}{2}^+$	$0{,}947 \times 10^9$	β^-0,51, 1,17	1,18	2,8380	0,050

Nuclide	T_3	Excès de masse M—A, μu	Termes prépondérants pour niveaux fondamentaux ou bas — Proton	Neutron	Jπ	Périodes s	Abondance isotopique, pourcentage ou modes de désintégration avec leur énergie, Mev	Energie totale de désintégration, MeV	Moment magnétique mn	Moment quadru-polaire, barns
$_{55}Cs^{138}$	-14	-89200_4	$(1g_{7/2})^5$	$(2f_{7/2})^1$		$0{,}193 \times 10^4$	β^- 3,40, . . . ; γ 1,43, 1,0,0,46	5,40		
$_{55}Cs^{139}$	$-\frac{29}{2}$	-87100_3	$(2d_{5/2})^1$	$(2f_{7/2})^2$		$0{,}570 \times 10^3$	β^- 4, ~3,4, ~2,7; γ 1,28,0,63	4,00		
$_{55}Cs^{140}$	-15	-82890_4	ou	$(2f_{7/2})^3$		$0{,}660 \times 10^2$	β^- >4,4, . . . ; γ0,59,0,88–3,15	6,10		
$_{55}Cs^{141}$	$-\frac{31}{2}$		$1/2^+(420)$	$(2f_{7/2})^4$		$0{,}240 \times 10^2$	β^-			
$_{55}Cs^{142}$	-16			$(2f_{7/2})^5$		$0{,}230 \times 10^1$	β^-			
$_{55}Cs^{143}$	$-\frac{33}{2}$			$(2f_{7/2})^6$		$0{,}200 \times 10^1$	β^-			
$_{55}Cs^{144}$	-17			$(2f_{7/2})^7$		Courte	β^-			
$_{56}Ba^{125}$	$-\frac{13}{2}$		$(1g_{7/2})^6$	$(3s_{1/2})^1$						
$_{56}Ba^{126}$	-7			$(1h_{11/2})^6$	0^+	$0{,}582 \times 10^4$	CE; γ0,27,0,70			
$_{56}Ba^{127}$	$-\frac{15}{2}$	-88660_4		$(3s_{1/2})^1$		$0{,}600 \times 10^3$	β^+	3,60		
$_{56}Ba^{128}$	-8	-91490_4		$(1h_{11/2})^8$	0^+	$0{,}207 \times 10^6$	CE; γ0,27, . . .	0,70		
$_{56}Ba^{129}$	$-\frac{17}{2}$	-91410_4		$(3s_{1/2})^1$		$0{,}900 \times 10^4$	CE; β^+ 1,43, . . . ; γ0,18,0,21, . . .	2,45		
$_{56}Ba^{130}$	-9	-93755_2		$(1h_{11/2})^{10}$	0^+		0,101			
$_{56}Ba^{131}$	$-\frac{19}{2}$	-93284_2		$(3s_{1/2})^1$	$(\frac{1}{2}^+)$	$0{,}100 \times 10^7$	CE; γ0,50,0,122,0,216,0,055–1,03	1,16		
$_{56}Ba^{132}$	-10	-94880_3		$(1h_{11/2})^{12}$	0^+		0,097			
$_{56}Ba^{133}$	$-\frac{21}{2}$	-94121_2		$(3s_{1/2})^1$	$(\frac{1}{2}^+)$	$0{,}227 \times 10^9$	CE; γ0,081,0,36,0,30,0,08–0,38	0,49		
$_{56}Ba^{134}$	-11	-95388_2		$(3s_{1/2})^2$	0^+		2,42			
$_{56}Ba^{135}$	$-\frac{23}{2}$	-94450_3		$(2d_{3/2})^1$	$\frac{3}{2}^+$		6,59		0,8372	0,180
$_{56}Ba^{136}$	-12	-95700_2		$(2d_{3/2})^2$	0^+		7,81			
$_{56}Ba^{137}$	$-\frac{25}{2}$	-94500_2		$(2d_{3/2})^3$	$\frac{3}{2}^+$		11,32		0,9366	0,280
$_{56}Ba^{138}$	-13	-95000_2		$(2d_{3/2})^4$	0^+		71,66			
$_{56}Ba^{139}$	$-\frac{27}{2}$	-91400_2		$(2f_{7/2})^1$		$0{,}498 \times 10^4$	β^- 2,34, 2,17, . . . ; γ0,166, 1,43, . . .	2,30		
$_{56}Ba^{140}$	-14	-89435_2		$(2f_{7/2})^2$	0^+	$0{,}111 \times 10^7$	β^- 1,02,0,48; γ0,54,0,16, . . .	1,05		
$_{56}Ba^{141}$	$-\frac{29}{2}$	-85950_3		$(2f_{7/2})^3$		$0{,}108 \times 10^4$	β^- 2,8, . . . ; γ0,19,0,12–1,6	3,00		
$_{56}Ba^{142}$	-15	-83650_3		$(2f_{7/2})^4$	0^+	$0{,}660 \times 10^3$	β^-; γ0,26,0,89, 1,20,0,08, . . .	2,20		
$_{56}Ba^{143}$	$-\frac{31}{2}$			$(2f_{7/2})^5$		$0{,}120 \times 10^2$	β^-			
$_{56}Ba^{144}$	-16			$(2f_{7/2})^6$	0^+	Courte	β^-			
$_{57}La^{124}$	-5		$(1g_{7/2})^7$	$(3s_{1/2})^1$		$0{,}420 \times 10^3$				
$_{57}La^{126}$	-6		$(2d_{5/2})^1$	$(3s_{1/2})^1$		$0{,}600 \times 10^2$	β^+; CE; γ0,26			
$_{57}La^{127}$	$-\frac{13}{2}$		ou	$(1h_{11/2})^6$						
$_{57}La^{128}$	-7		$1/2^+(420)$	$(3s_{1/2})^1$		$0{,}276 \times 10^3$	β^+; CE; γ0,28, . . .			
$_{57}La^{129}$	$-\frac{15}{2}$	-87110_4		$(1h_{11/2})^8$		$0{,}600 \times 10^3$	β^+; CE; γ0,28	4,00		
$_{57}La^{130}$	-8	-87740_4		$(3s_{1/2})^1$		$0{,}540 \times 10^3$	β^+; CE; γ0,36, . . .	5,60		
$_{57}La^{131}$	$-\frac{17}{2}$	-90110_2		$(1h_{11/2})^{10}$		$0{,}366 \times 10^4$	CE; β^+ 1,42, 1,94, . . . ; γ0,115, . . .	2,96		
$_{57}La^{132}$	-9	-89700_3		$(3s_{1/2})^1$	0^+	$0{,}151 \times 10^5$	β^+ 3,8; γ 1,0–3,3	4,82		
$_{57}La^{133}$	$-\frac{19}{2}$	-91760_3		$(1h_{11/2})^{12}$		$0{,}144 \times 10^5$	CE; β^+ 1,2; γ0,8	2,20		
$_{57}La^{134}$	-10	-91340_2		$(2d_{3/2})^1$	1^+	$0{,}390 \times 10^3$	β^+ 2,7, . . . ; CE; γ0,60	3,77		
$_{57}La^{135}$	$-\frac{21}{2}$	-93110_4		$(3s_{1/2})^2$	$(\frac{5}{2})^+$	$0{,}713 \times 10^5$	CE; β^+; γ0,48,0,108–0,87	1,30		

$_{57}La^{136}$	-11	-92620_3		$(2d_{3/2})^1$	$1+$	$0{,}570 \times 10^3$	CE; β^+ 1,8, ...; γ0,83	0,28− / 2,87+		
$_{57}La^{137}$	$-\frac{23}{2}$	-93960_4		$(2d_{3/2})^2$	$(\frac{7}{2}+)$	$0{,}189 \times 10^{13}$	CE	0,50		
$_{57}La^{138}$	-12	-93090_2		$(1h_{11/2})^{-1}$	$5-$	$0{,}347 \times 10^{19}$	0,089; CE; β^-0,205; γ 1,4	1,02− / 1,78+	3,7070	±0,800
$_{57}La^{139}$	$-\frac{25}{2}$	-93860_2		$(2d_{3/2})^4$	$\frac{7}{2}+$		99,91		2,7780	0,220
$_{57}La^{140}$	-13	-90562_2		$(2f_{7/2})^1$	$3-$	$0{,}145 \times 10^6$	β^- 1,34, 1,10, ...; γ 1,6,0,49, ...	3,77		
$_{57}La^{141}$	$-\frac{27}{2}$	-89172_2		$(2f_{7/2})^2$		$0{,}140 \times 10^5$	β^- 2,4, ...; γ 1,37	2,43		
$_{57}La^{142}$	-14	-86020_2		$(2f_{7/2})^3$	$(2-)$	$0{,}504 \times 10^4$	β^- 2,1, 2,0, ...; γ0,64, 2,41, ...	4,51		
$_{57}La^{143}$	$-\frac{29}{2}$	-84130_2		$(2f_{7/2})^4$	$(\frac{7}{2}+)$	$0{,}840 \times 10^3$	β^- 3,3; γ0,63,0,20–2,85	3,30		
$_{57}La^{144}$	-15	-80400_4		$(2f_{7/2})^5$		Courte	β^-	5,60		
$_{58}Ce^{131}$	$-\frac{15}{2}$	-84500_3	$(1g_{7/2})^8$	$(3s_{1/2})^1$		$0{,}180 \times 10^4$	β^+ 4,2	5,22		
$_{58}Ce^{132}$	-8	-88410_4		$(1h_{11/2})^{10}$	$0+$	$0{,}151 \times 10^5$	β^+	1,20		
$_{58}Ce^{133}$	$-\frac{17}{2}$	-88750_4		$(3s_{1/2})^1$		$0{,}227 \times 10^5$	CE; β^+ 1,3; γ 1,8	2,80		
$_{58}Ce^{134}$	-9	-91190_2		$(1h_{11/2})^{12}$	$0+$	$0{,}259 \times 10^6$	CE	0,14		
$_{58}Ce^{135}$	$-\frac{19}{2}$	-90860_4		$(3s_{1/2})^1$		$0{,}648 \times 10^5$	CE; β^+0,81; γ0,09–0,27	2,10		
$_{58}Ce^{136}$	-10	-92900_3		$(3s_{1/2})^2$	$0+$		0,193			
$_{58}Ce^{137}$	$-\frac{21}{2}$	-92670_4		$(2d_{3/2})^1$		†$0{,}324 \times 10^5$	CE; γ0,010,0,46	1,20		
$_{58}Ce^{138}$	-11	-94170_2		$(2d_{3/2})^2$	$0+$		0,250			
$_{58}Ce^{139}$	$-\frac{23}{2}$	-93570_2		$(2d_{3/2})^3$	$\frac{3}{2}+$	$0{,}121 \times 10^8$	CE; γ0,166	0,27		
$_{58}Ce^{140}$	-12	-94608_2		$(2d_{3/2})^4$	$0+$		88,48			
$_{58}Ce^{141}$	$-\frac{25}{2}$	-91781_2		$(2f_{7/2})^1$	$\frac{7}{2}-$	$0{,}281 \times 10^7$	β^-0,435,0,58; γ0,145	0,58	±0,9000	
$_{58}Ce^{142}$	-13	-90860_2		$(2f_{7/2})^2$	$0+$	$0{,}158 \times 10^{24}$	11,07; α	1,45		
$_{58}Ce^{143}$	$-\frac{27}{2}$	-87673_2		$(2f_{7/2})^3$		$0{,}119 \times 10^6$	β^- 1,09, 1,38, ...; γ0,058,0,29, ...	1,44		
$_{58}Ce^{144}$	-14	-86409_2		$(2f_{7/2})^4$	$0+$	$0{,}246 \times 10^8$	β^-0,3,0,19, ...; γ0,034–0,134	0,32		
$_{58}Ce^{145}$	$-\frac{29}{2}$	-82730_4		$(2f_{7/2})^5$		$0{,}180 \times 10^3$	β^- 2,0	2,60		
$_{58}Ce^{146}$	-15	-81330_3		$(2f_{7/2})^6$	$0+$	$0{,}840 \times 10^3$	β^-0,7; γ0,32,0,05–0,27	1,00		
$_{58}Ce^{147}$	$-\frac{31}{2}$			$(2f_{7/2})^7$		$0{,}720 \times 10^2$	β^-			
$_{58}Ce^{148}$	-16			$(2f_{7/2})^8$	$0+$	$0{,}420 \times 10^2$	β^-			
$_{59}Pr^{134}$	-8		$(2d_{5/2})^1$	$(3s_{1/2})^1$		$0{,}360 \times 10^4$	γ 1,3, 2,2,0,94			
$_{59}Pr^{135}$	$-\frac{17}{2}$		ou	$(1h_{11/2})^{12}$		$0{,}132 \times 10^4$	β^+ 2,5; γ0,22,0,08,0,30			
$_{59}Pr^{136}$	-9		$(1g_{7/2})^{-1}$	$(3s_{1/2})^1$		$0{,}420 \times 10^4$	β^+ 2,0; γ0,17,0,8, 1,1			
$_{59}Pr^{137}$	$-\frac{19}{2}$	-89640_4		$(3s_{1/2})^2$		$0{,}540 \times 10^4$	CE; β^+ 1,7	2,82		
$_{59}Pr^{138}$	-10	-89540_3		$(2d_{3/2})^1$		$0{,}720 \times 10^4$	CE; β^+ 1,4; γ0,16–1,7	4,32		
$_{59}Pr^{139}$	$-\frac{21}{2}$	-91420_3		$(2d_{3/2})^2$		$0{,}162 \times 10^5$	CE; β^+ 1,0; γ 1,3, 1,6	2,00		
$_{59}Pr^{140}$	-11	-90993_2		$(2d_{3/2})^3$	$1+$	$0{,}204 \times 10^3$	β^+ 2,37, ...; CE; γ	3,37		
$_{59}Pr^{141}$	$-\frac{23}{2}$	-92404_2		$(2d_{3/2})^4$	$\frac{5}{2}+$		100		4,5000	−0,060
$_{59}Pr^{142}$	-12	-90022_2		$(2f_{7/2})^1$	$2-$	$0{,}691 \times 10^5$	β^- 2,15,0,58; γ 1,57	2,16− / 0,78+	±0,2600	±0,030
$_{59}Pr^{143}$	$-\frac{25}{2}$	-89219_2		$(2f_{7/2})^2$	$\frac{7}{2}+$	$0{,}118 \times 10^7$	β^-0,93	0,93		
$_{59}Pr^{144}$	-13	-86752_2		$(2f_{7/2})^3$	$0-$	$0{,}104 \times 10^4$	β^- 2,98,0,8, ...; γ0,69, 2,18, ...	2,99		
$_{59}Pr^{145}$	$-\frac{27}{2}$	-85524_2		$(2f_{7/2})^4$	$(\frac{7}{2}+)$	$0{,}212 \times 10^5$	β^- 1,80; γ0,072–1,15	1,81		
$_{59}Pr^{146}$	-14	-82410_3		$(2f_{7/2})^5$	$(2-)$	$0{,}144 \times 10^4$	β^- 3,7, 2,3; γ0,46, 1,49,0,75, ...	4,20		
$_{59}Pr^{147}$	$-\frac{29}{2}$	-81200_4		$(2f_{7/2})^6$		$0{,}720 \times 10^3$	β^-; γ0,32–~1,7	2,50		

Nuclide	T_3	Excès de masse M—A, μu	Termes prépondérants pour niveaux fondamentaux ou bas — Proton	Neutron	J^π	Périodes s	Abondance isotopique, pourcentage ou modes de désintégration avec leur énergie, MeV	Energie totale de désintégration, MeV	Moment magnétique mn	Moment quadrupolaire, barns
$_{60}Nd^{138}$	-9		$(2d_{5/2})^2$	$(3s_{1/2})^2$	0+	$0{,}132 \times 10^4$	β^+ 2,4			
$_{60}Nd^{139}$	$-\frac{19}{2}$	-88420_4		$(2d_{3/2})^1$		$0{,}187 \times 10^5$	CE; β^+ 3,3, . . . ; γ 1,3			
$_{60}Nd^{140}$	-10	-90670_4		$(2d_{3/2})^2$	0+	$0{,}285 \times 10^6$	CE; γ0,11 0,5	0,30		
$_{60}Nd^{141}$	$-\frac{21}{2}$	-90472_2		$(2d_{3/2})^3$	$\frac{3}{2}$+	$0{,}900 \times 10^4$	CE; β^+0,78; γ 1,15, 1,30, . . .	1,80		
$_{60}Nd^{142}$	-11	-92337_2		$(2d_{3/2})^4$	0+		27,11			
$_{60}Nd^{143}$	$-\frac{23}{2}$	-90221_2		$(2f_{7/2})^1$	$\frac{7}{2}$−		12,17		−1,1000	−0,600
$_{60}Nd^{144}$	-12	-89961_2		$(2f_{7/2})^2$	0+	$0{,}757 \times 10^{23}$	23,95; α	1,90		
$_{60}Nd^{145}$	$-\frac{25}{2}$	-87462_2		$(2f_{7/2})^3$	$\frac{7}{2}$−		8,30		−0,7100	−0,300
$_{60}Nd^{146}$	-13	-86914_2		$(2f_{7/2})^4$	0+		17,22			
$_{60}Nd^{147}$	$-\frac{27}{2}$	-83926_2		$(2f_{7/2})^5$	$\frac{5}{2}$−	$0{,}950 \times 10^6$	β^-0,82 0,38, . . . ; γ0,091 0,53, . . .	0,90	±0,5900	
$_{60}Nd^{148}$	-14	-83131_2		$(2f_{7/2})^6$	0+		5,73			
$_{60}Nd^{149}$	$-\frac{29}{2}$	-79878_2		$(2f_{7/2})^7$	$\frac{5}{2}$	$0{,}648 \times 10^4$	β^- 1,42, 1,02, 1,13, . . . ; γ0,21, . . .	1,67		
$_{60}Nd^{150}$	-15	-79085_2		$(2f_{7/2})^8$	0+		5,62			
$_{60}Nd^{151}$	$-\frac{31}{2}$	-76230_3		3/2− (521)		$0{,}720 \times 10^3$	β^- 1,93, 2,06, . . . ; γ0,12 0,26, . . .	2,40		
$_{61}Pm^{141}$	$-\frac{19}{2}$	-86590_3	$(2d_{5/2})^3$	$(2d_{3/2})^2$		$0{,}132 \times 10^4$	β^+ 2,6	3,62		
$_{61}Pm^{142}$	-10	-87180_3	ou	$(2d_{3/2})^3$	1+	$0{,}340 \times 10^2$	β^+ 3,8; CE; γ 1,57	4,80		
$_{61}Pm^{143}$	$-\frac{21}{2}$	-89010_3	$(1g_{7/2})^{-1}$	$(2d_{3/2})^4$		$0{,}229 \times 10^8$	CE; γ0,742	1,13		
$_{61}Pm^{144}$	-11	-87490_4		$(2f_{7/2})^1$	(−)	$0{,}328 \times 10^8$	CE; γ0,70 0,62 0,48	0,48− 2,30+		
$_{61}Pm^{145}$	$-\frac{23}{2}$	-87309_2		$(2f_{7/2})^2$	($\frac{5}{2}$+)	$0{,}568 \times 10^9$	CE; α 2,2; γ0,068 0,073	0,14+ 2,32α		
$_{61}Pm^{146}$	-12	-85368_2		$(2f_{7/2})^3$		$0{,}138 \times 10^9$	CE; γ0,45 0,75; β^-0,78; γ0,75	1,53− 1,44+		
$_{61}Pm^{147}$	$-\frac{25}{2}$	-84892_2		$(2f_{7/2})^4$	$\frac{7}{2}$+	$0{,}852 \times 10^8$	β^-0,23; γ0,12	0,23	±3,2000	±0,700
$_{61}Pm^{148}$	-13	-82579_2		$(2f_{7/2})^5$	1−	†$0{,}467 \times 10^6$	β^- 2,46, 1,0, 1,9; γ0,55 0,91, . . .	2,45		
$_{61}Pm^{149}$	$-\frac{27}{2}$	-81670_2		$(2f_{7/2})^6$	$\frac{7}{2}$+	$0{,}190 \times 10^6$	β^- 1,06 0,78, . . . ; γ0,28 0,85	1,07		
$_{61}Pm^{150}$	-14	-79040_2		$(2f_{7/2})^7$	(1)	$0{,}972 \times 10^4$	β^- 2,3, 1,8, . . . ; γ0,33, 1,18, . . .	3,43		
$_{61}Pm^{151}$	$-\frac{29}{2}$	-78802_2		$(2f_{7/2})^8$	$\frac{5}{2}$+	$0{,}101 \times 10^6$	β^-0,85, 1,03, . . . ; γ0,34 0,10, . . .	1,19	±1,8000	±1,900
$_{61}Pm^{152}$	-15	-76490_4		3/2− (521)		$0{,}360 \times 10^3$	β^- 2,2; γ0,12 0,24, 1,0	3,50		
$_{61}Pm^{153}$	$-\frac{31}{2}$	-75970_3		$(1h_{9/2})^2$		$0{,}330 \times 10^3$	β^- 1,65; γ0,125 0,180	1,80		
$_{61}Pm^{154}$	-16			3/2− (521)		$0{,}150 \times 10^3$	β^- 2,5			
$_{62}Sm^{141}$	$-\frac{17}{2}$		$(2d_{5/2})^4$	$(2d_{3/2})^1$		$0{,}170 \times 10^7$	CE			
$_{62}Sm^{142}$	-9			$(2d_{3/2})^2$	0+	$0{,}432 \times 10^4$	CE; β^+ 1,0			
$_{62}Sm^{143}$	$-\frac{19}{2}$	-85450_2		$(2d_{3/2})^3$	($\frac{3}{2}$+)	$0{,}540 \times 10^3$	CE; β^+ 2,4	3,32		
$_{62}Sm^{144}$	-10	-88011_2		$(2d_{3/2})^4$	0+		3,09			
$_{62}Sm^{145}$	$-\frac{21}{2}$	-86606_2		$(2f_{7/2})^1$		$0{,}294 \times 10^8$	CE; γ0,061 0,48	0,65		
$_{62}Sm^{146}$	-11	-87003_2		$(2f_{7/2})^2$	0+	$0{,}279 \times 10^{16}$	α 2,53	2,54		