^{107}Ag(^{32}S,2p2nγ) 2001We08

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh, Alexander A. Rodionov And Yuri L. Khazov	NDS 109, 517 (2008)	22-Jan-2008

E=146 MeV. Measured Eγ, Iγ, γγ, γγ(θ)(DCO) using an array of six BGO-Compton-suppressed HPGe detectors.

^{135}Pm Levels

E(level)†	Jπ‡	$T_{1/2}$	Comments
0+y	(5/2+)		Additional information 1.
70+y#f	11/2−	45e s 4	Additional information 2.
126.0+yc 10			
251.0+yc 14			
356.0+y# 10	15/2−		
489.0+yc 17			
553.9+y@ 12	(11/2+)		
814.0+yc 20			
869.1+y# 12	19/2−		
1091.9+y@ 13	(15/2+)		
1205.0+yc 22			
1232.1+yd 16			
1242.1+ya 16	(19/2+)		
1367.1+yb 16	(21/2+)		
1527.3+y# 14	23/2−		
1643.0+yc 25			
1656.8+y@ 13	(19/2+)		
1786.1+yd 19			
1855.1+ya 19	(23/2+)		
1988.1+yb 19	(25/2+)		
2062.2+y& 15	21/2(+)		
2116+yc 3			
2183.6+y@ 15	(23/2+)		
2276.3+y# 17	27/2−		
2346.1+yd 21			
2465.2+y& 15	25/2(+)		
2504.1+ya 21	(27/2+)		
2686.1+yb 21	(29/2+)		
2739.6+y@ 18	(27/2+)		
2920.1+yd 24			
3028.2+y& 18	29/2(+)		
3081.3+y# 20	31/2−		
3201.1+ya 24	(31/2+)		
3396.6+y@ 20	(31/2+)		
3438.1+yb 24	(33/2+)		
3541+yd 3			
3768.2+y& 21	33/2(+)		
3927.3+y# 22	35/2−		
3969+ya 3	(35/2+)		
4185.6+y@ 23	(35/2+)		

Continued on next page (footnotes at end of table)

^{107}Ag(^{32}S,2p2nγ) 2001We08 (continued)

^{135}Pm Levels (continued)

E(level)†	Jπ‡	E(level)†	Jπ‡	E(level)†	Jπ‡	E(level)†	Jπ‡
4260+y[d] 3		4816+y[a] 3	(39/2+)	5192+y[b] 3	(41/2+)	5950+y[@] 3	(43/2+)
4265+y[b] 3	(37/2+)	4825.3+y[#] 25	39/2−	5515+y[&] 3	(41/2+)	6511+y[&] 3	(45/2+)
4615.2+y[&] 23	37/2(+)	5047.6+y[@] 25	(39/2+)	5788+y[#] 3	43/2−	6818+y[#] 3	47/2−

† From least-squares fit to Eγ′s, assuming Δ(Eγ)=1 keV for each γ ray.

‡ As proposed by 2001We08 based on their γγ(θ)(DCO) data and band associations. The assignments are the same in 'Adopted Levels levels', except that many are given in parentheses there due to lack of strong supporting arguments.

Band(A): $\pi h_{11/2}$ decoupled band. First band crossing (backbend) is observed at h\'ω≈430 keV.

@ Band(B): Band based on (11/2+), α=−1/2. Possible configuration=$\pi g_{7/2}5/2[413]\otimes\pi h^2_{11/2}$.

& Band(b): Band based on 21/2(+), α=+1/2. Possible configuration=$\pi g_{7/2}5/2[413]\otimes\pi h^2_{11/2}$.

a Band(C): Band based on (19/2+), α=−1/2. Weakly populated band.

b Band(c): Band based on (21/2+), α=+1/2. Weakly populated band.

c Band(D): γ cascade. Possibly ΔJ=1 band.

d Band(E): γ cascade. Possibly ΔJ=2 band.

e From 'Adopted Levels'.

f %ε+%β+=100.

γ(^{135}Pm)

Eγ	Ei(level)	J^π_i	E_f	J^π_f	Eγ	Ei(level)	J^π_i	E_f	J^π_f
125	251.0+y		126.0+y		657	3396.6+y	(31/2+)	2739.6+y	(27/2+)
126	126.0+y		0+y	(5/2+)	658	1527.3+y	23/2−	869.1+y	19/2−
238	489.0+y		251.0+y		697	3201.1+y	(31/2+)	2504.1+y	(27/2+)
286	356.0+y	15/2−	70+y	11/2−	698	2686.1+y	(29/2+)	1988.1+y	(25/2+)
325	814.0+y		489.0+y		719	4260+y		3541+y	
363	1232.1+y		869.1+y	19/2−	740	3768.2+y	33/2(+)	3028.2+y	29/2(+)
373	1242.1+y	(19/2+)	869.1+y	19/2−	749	2276.3+y	27/2−	1527.3+y	23/2−
391	1205.0+y		814.0+y		752	3438.1+y	(33/2+)	2686.1+y	(29/2+)
403	2465.2+y	25/2(+)	2062.2+y	21/2(+)	768	3969+y	(35/2+)	3201.1+y	(31/2+)
428	553.9+y	(11/2+)	126.0+y		788	1656.8+y	(19/2+)	869.1+y	19/2−
438	1643.0+y		1205.0+y		789	4185.6+y	(35/2+)	3396.6+y	(31/2+)
473	2116+y		1643.0+y		805	3081.3+y	31/2−	2276.3+y	27/2−
498	1367.1+y	(21/2+)	869.1+y	19/2−	827	4265+y	(37/2+)	3438.1+y	(33/2+)
513	869.1+y	19/2−	356.0+y	15/2−	846	3927.3+y	35/2−	3081.3+y	31/2−
527	2183.6+y	(23/2+)	1656.8+y	(19/2+)	847	4615.2+y	37/2(+)	3768.2+y	33/2(+)
538	1091.9+y	(15/2+)	553.9+y	(11/2+)	847	4816+y	(39/2+)	3969+y	(35/2+)
554	1786.1+y		1232.1+y		862	5047.6+y	(39/2+)	4185.6+y	(35/2+)
556	2739.6+y	(27/2+)	2183.6+y	(23/2+)	898	4825.3+y	39/2−	3927.3+y	35/2−
560	2346.1+y		1786.1+y		900	5515+y	(41/2+)	4615.2+y	37/2(+)
563	3028.2+y	29/2(+)	2465.2+y	25/2(+)	902	5950+y	(43/2+)	5047.6+y	(39/2+)
565	1656.8+y	(19/2+)	1091.9+y	(15/2+)	927	5192+y	(41/2+)	4265+y	(37/2+)
574	2920.1+y		2346.1+y		938	2465.2+y	25/2(+)	1527.3+y	23/2−
613	1855.1+y	(23/2+)	1242.1+y	(19/2+)	963	5788+y	43/2−	4825.3+y	39/2−
621	1988.1+y	(25/2+)	1367.1+y	(21/2+)	996	6511+y	(45/2+)	5515+y	(41/2+)
621	3541+y		2920.1+y		1030	6818+y	47/2−	5788+y	43/2−
649	2504.1+y	(27/2+)	1855.1+y	(23/2+)	1193	2062.2+y	21/2(+)	869.1+y	19/2−
656	2183.6+y	(23/2+)	1527.3+y	23/2−					

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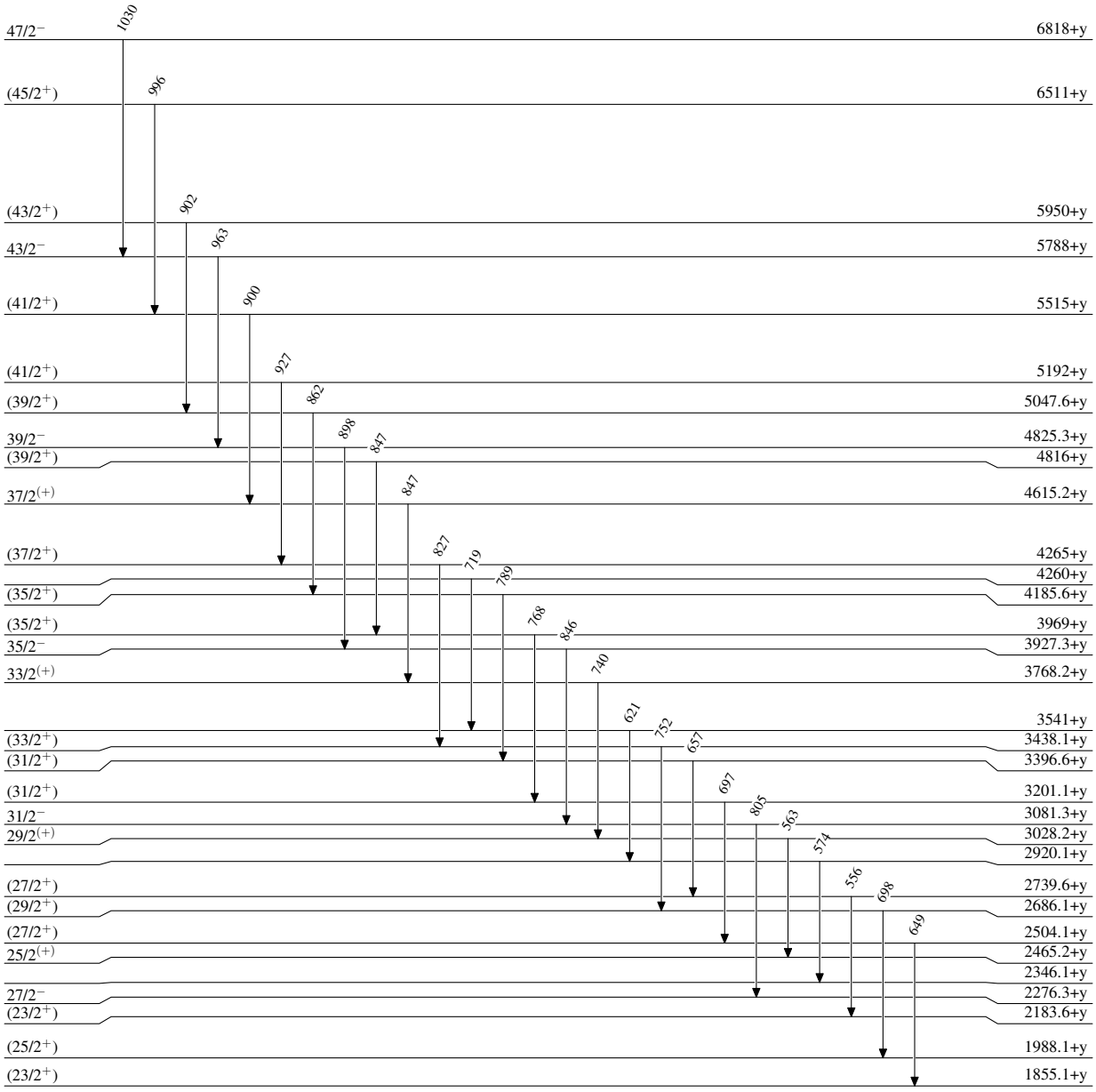
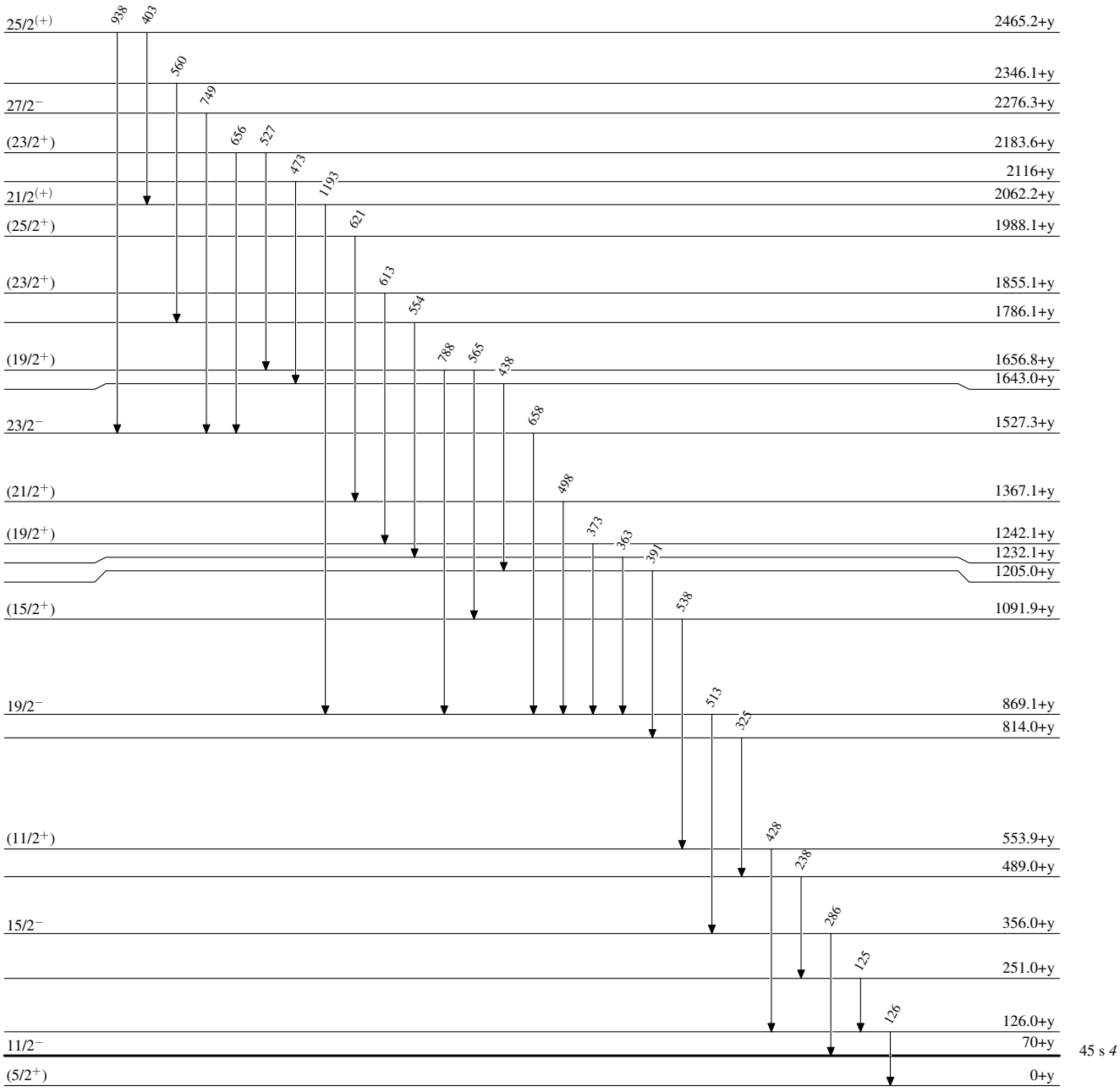
Level Scheme



$^{135}_{61}Pm_{74}$

^{107}Ag(^{32}S,2p2nγ) 2001We08

Level Scheme (continued)



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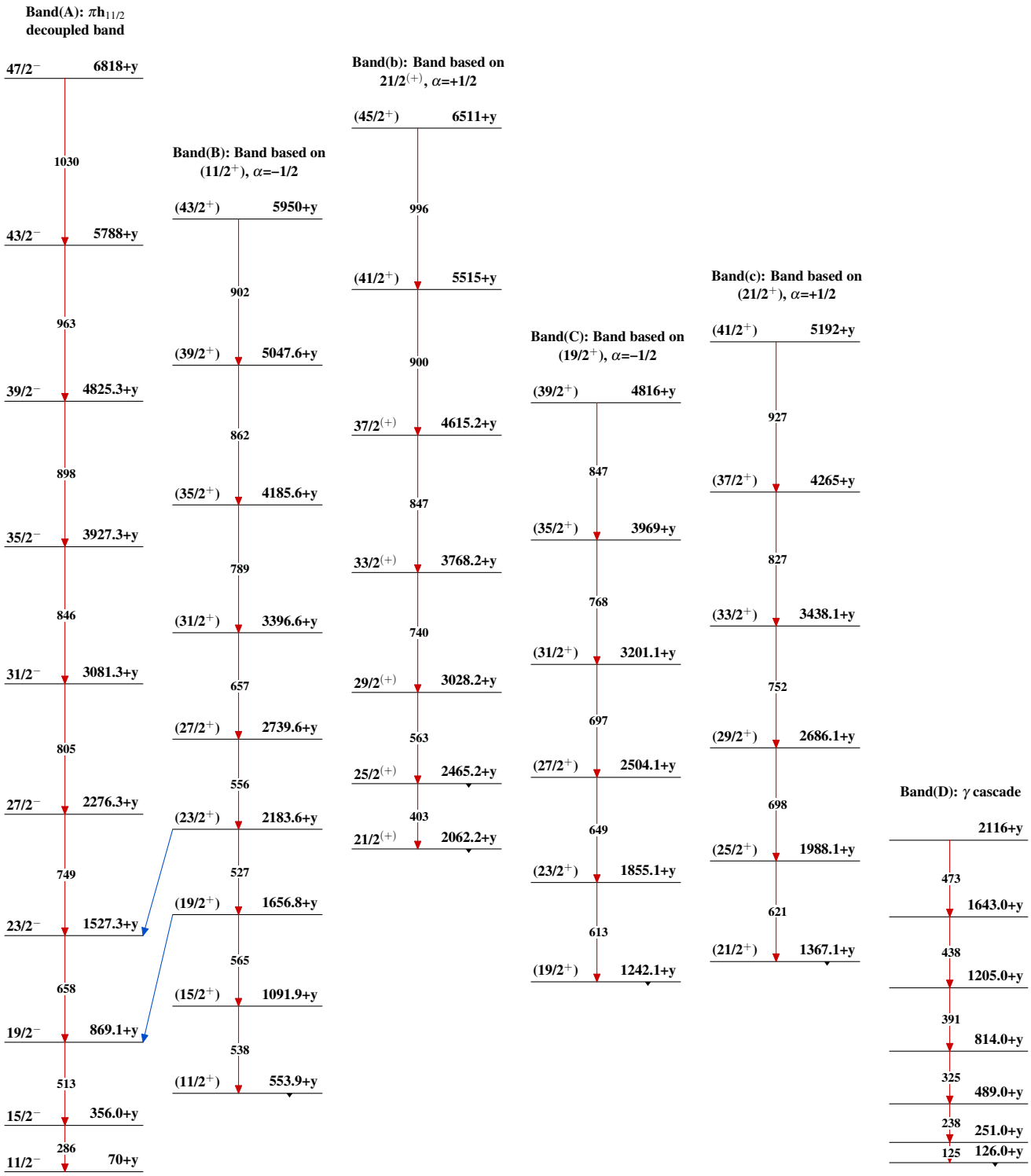

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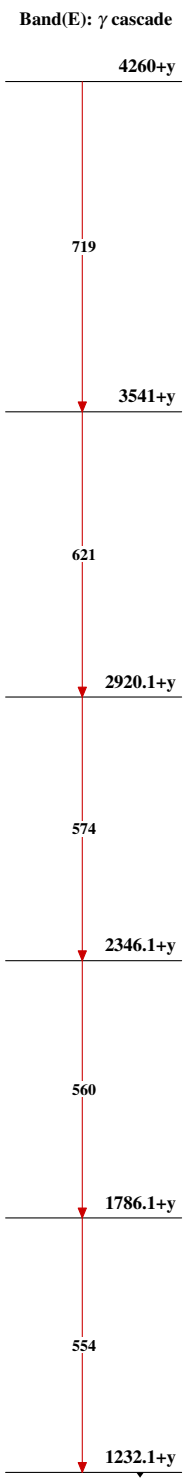
$^{107}Ag(^{32}S,2p2n\gamma)$ 2001We08 (continued)



$^{135}_{61}Pm_{74}$