

¹³⁶Xe(¹⁸O,4n γ) 2001Ur02

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	S. K. Basu, A. A. Sonzogni		NDS 114, 435 (2013)	1-Apr-2013

2001Ur02: ¹³⁶Xe(¹⁸O,4n γ), E=76 MeV, NORDBALL γ -array, 2x10⁸ γ - γ coincidences, published as a conference paper.

¹⁵⁰Sm Levels

E(level) [†]	J π ^a	E(level) [†]	J π ^a	E(level) [†]	J π ^a	E(level) [†]	J π ^a
0.0 [‡]	0 ⁺	2744.6 [#] 19	11 ⁻	5046.0 [‡] 22	18 ⁺	7058 ^{&} 3	25 ⁻
334.0 [‡] 10	2 ⁺	3048.7 [‡] 20	12 ⁺	5345.6 [#] 22	19 ⁻	7068 [@] 3	24 ⁺
773.5 [‡] 14	4 ⁺	3293.8 [#] 20	13 ⁻	5581.0 ^{&} 22	19 ⁻	7838 [@] 3	26 ⁺
1071.6 [#] 14	3 ⁻	3676.0 [‡] 21	14 ⁺	5592.9 [@] 24	20 ⁺	7854 ^{&} 3	27 ⁻
1279.1 [‡] 17	6 ⁺	3835.6 [@] 22	14 ⁺	5739.0 [‡] 23	20 ⁺	8587 [@] 3	(28 ⁺)
1358.1 [#] 17	5 ⁻	3914.4 [#] 21	15 ⁻	5936.8 ^{&} 23	21 ⁻	8761 ^{&} 3	(29 ⁻)
1765.1 [#] 18	7 ⁻	4306.1 [@] 22	16 ⁺	6106.0 [#] 23	21 ⁻	9737 ^{&} 3	(31 ⁻)
1837.4 [‡] 18	8 ⁺	4386.5 [‡] 22	16 ⁺	6308 [@] 3	22 ⁺		
2232.6 [#] 18	9 ⁻	4606.1 [#] 22	17 ⁻	6420.2 ^{&} 25	23 ⁻		
2433.5 [‡] 19	10 ⁺	4929.3 [@] 22	18 ⁺	6448.5 [‡] 24	22 ⁺		

[†] From least squares fit to E γ , assuming $\Delta E\gamma = 1$ keV.

[‡] Band(A): Ground state, positive parity band, coupled to negative parity band based on 3⁻.

[#] Band(B): Negative parity band based on 3⁻, coupled to g.s. band.

[@] Band(C): Positive parity band.

[&] Band(D): Negative parity band.

^a As given by 2001Ur02, based on $\gamma(\theta)$ and band structure.

$\gamma(^{150}\text{Sm})$

E γ	E _i (level)	J π _i	E _f	J π _f	E γ	E _i (level)	J π _i	E _f	J π _f
197.8	5936.8	21 ⁻	5739.0	20 ⁺	472.1	4386.5	16 ⁺	3914.4	15 ⁻
200.9	2433.5	10 ⁺	2232.6	9 ⁻	483.4	6420.2	23 ⁻	5936.8	21 ⁻
219.7	4606.1	17 ⁻	4386.5	16 ⁺	505.7	1279.1	6 ⁺	773.5	4 ⁺
238.4	3914.4	15 ⁻	3676.0	14 ⁺	512.0	2744.6	11 ⁻	2232.6	9 ⁻
245.1	3293.8	13 ⁻	3048.7	12 ⁺	541.8	3835.6	14 ⁺	3293.8	13 ⁻
299.0	5345.6	19 ⁻	5046.0	18 ⁺	542.8	4929.3	18 ⁺	4386.5	16 ⁺
304.1	3048.7	12 ⁺	2744.6	11 ⁻	549.2	3293.8	13 ⁻	2744.6	11 ⁻
311.1	2744.6	11 ⁻	2433.5	10 ⁺	558.3	1837.4	8 ⁺	1279.1	6 ⁺
323.2	4929.3	18 ⁺	4606.1	17 ⁻	584.5	1358.1	5 ⁻	773.5	4 ⁺
334.0	334.0	2 ⁺	0.0	0 ⁺	591.0	5936.8	21 ⁻	5345.6	19 ⁻
342.6	6448.5	22 ⁺	6106.0	21 ⁻	596.1	2433.5	10 ⁺	1837.4	8 ⁺
355.9	5936.8	21 ⁻	5581.0	19 ⁻	615.3	3048.7	12 ⁺	2433.5	10 ⁺
367.0	6106.0	21 ⁻	5739.0	20 ⁺	620.6	3914.4	15 ⁻	3293.8	13 ⁻
382.2	3676.0	14 ⁺	3293.8	13 ⁻	623.3	4929.3	18 ⁺	4306.1	16 ⁺
393.3	5739.0	20 ⁺	5345.6	19 ⁻	627.3	3676.0	14 ⁺	3048.7	12 ⁺
395.2	2232.6	9 ⁻	1837.4	8 ⁺	630.0	4306.1	16 ⁺	3676.0	14 ⁺
407.0	1765.1	7 ⁻	1358.1	5 ⁻	637.5	7058	25 ⁻	6420.2	23 ⁻
439.5	773.5	4 ⁺	334.0	2 ⁺	651.8	5581.0	19 ⁻	4929.3	18 ⁺
439.8	5046.0	18 ⁺	4606.1	17 ⁻	659.5	5046.0	18 ⁺	4386.5	16 ⁺
467.4	2232.6	9 ⁻	1765.1	7 ⁻	663.6	5592.9	20 ⁺	4929.3	18 ⁺
470.5	4306.1	16 ⁺	3835.6	14 ⁺	691.7	4606.1	17 ⁻	3914.4	15 ⁻

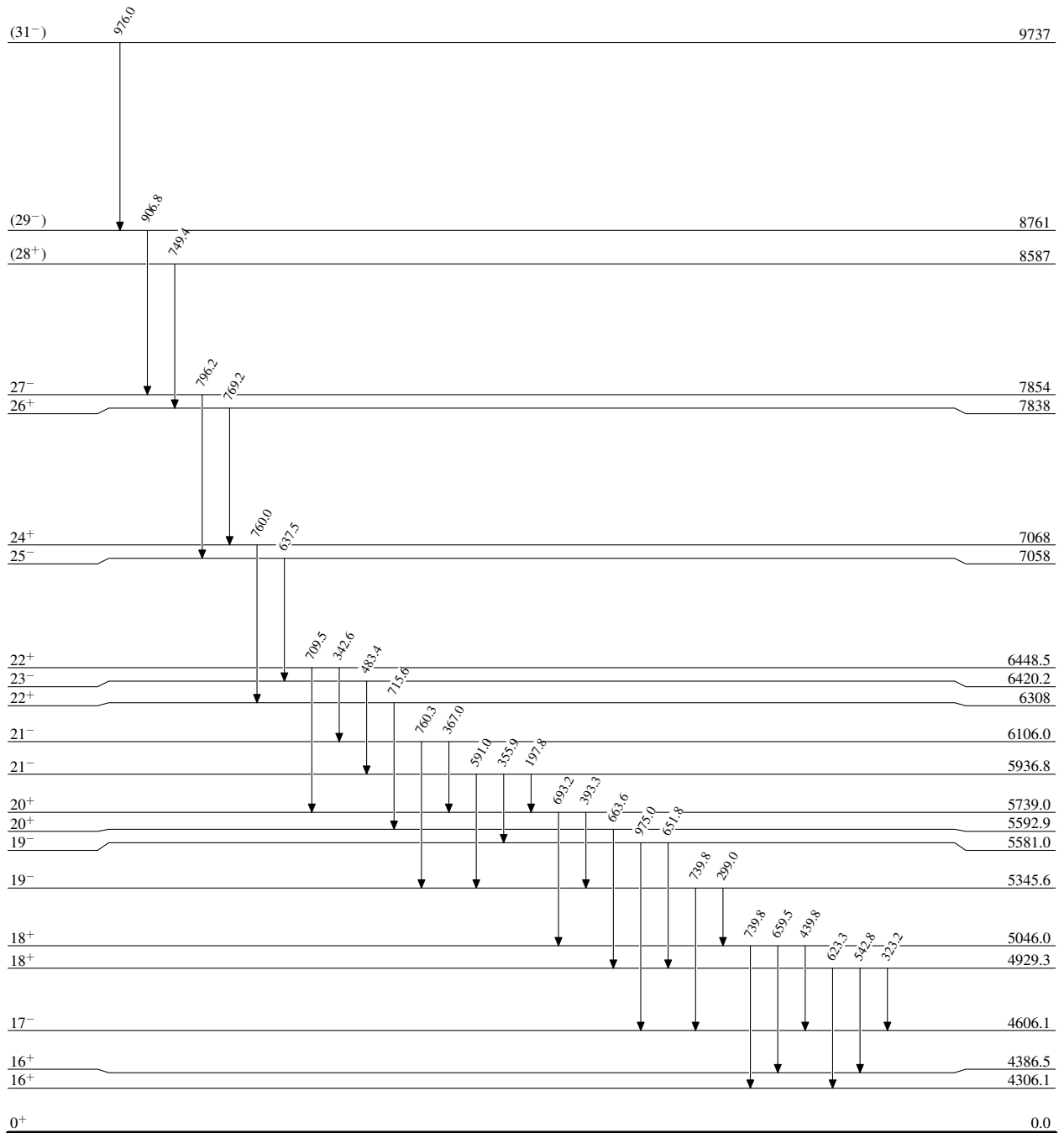
Continued on next page (footnotes at end of table)

$^{136}\text{Xe}(^{18}\text{O},4n\gamma)$ **2001Ur02 (continued)** $\gamma(^{150}\text{Sm})$ (continued)

E_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π	E_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π
693.2	5739.0	20 ⁺	5046.0	18 ⁺	760.0	7068	24 ⁺	6308	22 ⁺
709.5	6448.5	22 ⁺	5739.0	20 ⁺	760.3	6106.0	21 ⁻	5345.6	19 ⁻
710.4	4386.5	16 ⁺	3676.0	14 ⁺	769.2	7838	26 ⁺	7068	24 ⁺
715.6	6308	22 ⁺	5592.9	20 ⁺	796.2	7854	27 ⁻	7058	25 ⁻
737.6	1071.6	3 ⁻	334.0	2 ⁺	906.8	8761	(29 ⁻)	7854	27 ⁻
739.8	5046.0	18 ⁺	4306.1	16 ⁺	975.0	5581.0	19 ⁻	4606.1	17 ⁻
739.8	5345.6	19 ⁻	4606.1	17 ⁻	976.0	9737	(31 ⁻)	8761	(29 ⁻)
749.4	8587	(28 ⁺)	7838	26 ⁺					

$^{136}\text{Xe}(^{18}\text{O},4n\gamma)$ 2001Ur02

Level Scheme

 $^{150}_{62}\text{Sm}_{88}$

$^{136}\text{Xe}(^{18}\text{O},4n\gamma)$ 2001Ur02

Level Scheme (continued)

