^{192}Os(^{82}Se,Xγ) 2004Zh27

Type	Author	History Citation	Literature Cutoff Date
Modified	Balraj Singh	ENSDF	08-May-2015

Deep inelastic reaction.

2004Zh27 (also 2005De12): E=460 MeV. Measured Eγ, Iγ, $\gamma\gamma$, $\gamma\gamma(\theta)$ with the 4π spectrometer GASP consisting of 40 Compton-suppressed, large-volume Ge detectors and of an inner BGO ball acting as a multiplicity filter and total-energy spectrometer.

^{85}Br Levels

E(level)†	J$^\pi$‡	Comments
0.0#	3/2$^-$	
345.2# *1*	5/2$^-$	
1572.51# *15*	9/2$^+$	J$^\pi$: (9/2$^-$) in Adopted Levels.
2436.8# *3*	(11/2$^+$)	E(level): this level is not included in Adopted Levels since 864.5γ is relocated based on results from 2005Fo05 and 2006As07.
2733.24# *18*	13/2$^+$	E(level): due to the reordering of 594-1161 γ cascade and non-confirmation of 296.9γ in other studies, this level is located at 2165 keV in Adopted Levels.
3326.74# *20*	15/2$^{(+)}$	J$^\pi$: (13/2$^-$) in Adopted Levels.
3709.3# *4*	17/2$^{(+)}$	J$^\pi$: (15/2$^-$) in Adopted Levels.
4343.0# *5*	(19/2$^+$)	J$^\pi$: based on systematics. J^π=(17/2$^-$) in Adopted Levels.

† From Eγ data.
‡ As suggested by 2004Zh27 from values of R(ADO), wherever possible. See Adopted Levels for somewhat different assignments for several levels.
# Band(A): Yrast structure.

γ(^{85}Br)

R(ADO)=Iγ(34°)/Iγ(90°); ADO=angular distribution from oriented nuclei.

E$_\gamma$†#	I$_\gamma$@	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$	Mult.‡	Comments
296.9 *5*	6 *1*	2733.24	13/2$^+$	2436.8	(11/2$^+$)		E$_\gamma$: this γ ray has not been seen in any of the two more recent heavy-ion γ-ray studies (2005Fo05,2006As07) thus has been omitted in Adopted Levels, Gammas.
345.2 *1*	100 *20*	345.2	5/2$^-$	0.0	3/2$^-$		R(ADO)=1.10 *9*.
382.6 *3*	30 *6*	3709.3	17/2$^{(+)}$	3326.74	15/2$^{(+)}$	D	R(ADO)=0.80 *23*.
593.5& *1*	63 *13*	3326.74	15/2$^{(+)}$	2733.24	13/2$^+$	D	R(ADO)=0.90 *16*.
633.7 *3*	26 *5*	4343.0	(19/2$^+$)	3709.3	17/2$^{(+)}$		
864.5 *3*	14 *3*	2436.8	(11/2$^+$)	1572.51	9/2$^+$		E$_\gamma$: this γ ray is placed from a 3856 level in recent high-spin studies by 2005Fo05 and 2006As07 with an intermediate γ ray of 1419 keV which was not seen by 2004Zh27.
1160.7& *1*	43 *9*	2733.24	13/2$^+$	1572.51	9/2$^+$		R(ADO)=1.3 *4*.
1227.3 *1*	92 *18*	1572.51	9/2$^+$	345.2	5/2$^-$	Q	R(ADO)=1.30 *10*.

† γ-rays have been assigned based on the cross-coincidence relationship with the binary products and according to the expected systematic behavior. Cross γ-ray coincidences (the γ rays coming from the decay of the "target-like" fragments in coincidence

Continued on next page (footnotes at end of table)

^{192}Os(^{82}Se,Xγ) 2004Zh27 (continued)

$\gamma(^{85}Br)$ (continued)

with those coming from the "beam-like" reaction products) were used to distinguish between the different reaction partners, due to the nature of the binary reaction mechanism.

‡ Stretched quadrupole ($\Delta J=2$) transitions have R(ADO) values ≈1.4, whereas R(ADO)≈0.8 for stretched dipole; stretched quadrupole transitions cannot be distinguished from $\Delta J=0$ dipole transitions or certain M1+E2 admixtures of $\Delta J=1$ transitions (as stated by 2004Zh27).

2004Zh27 state that uncertainty ranges from 0.1-0.5 keV; Based on this statement, the evaluators have assigned uncertainties with the following criterion: $\Delta E\gamma=0.1$ keV for $I\gamma>30$; $\Delta E\gamma=0.3$ keV for $10\leq I\gamma\leq 30$; $\Delta E\gamma=0.5$ keV for $I\gamma<10$.

@ 2004Zh27 quote that the uncertainties in relative intensities are within 20%.

& 594γ-1161γ cascade is reversed in Adopted Levels, Gammas following recent studies of 2005Fo05 and 2006As07, thus defining the intermediate level at 2165 instead of 2733 keV.

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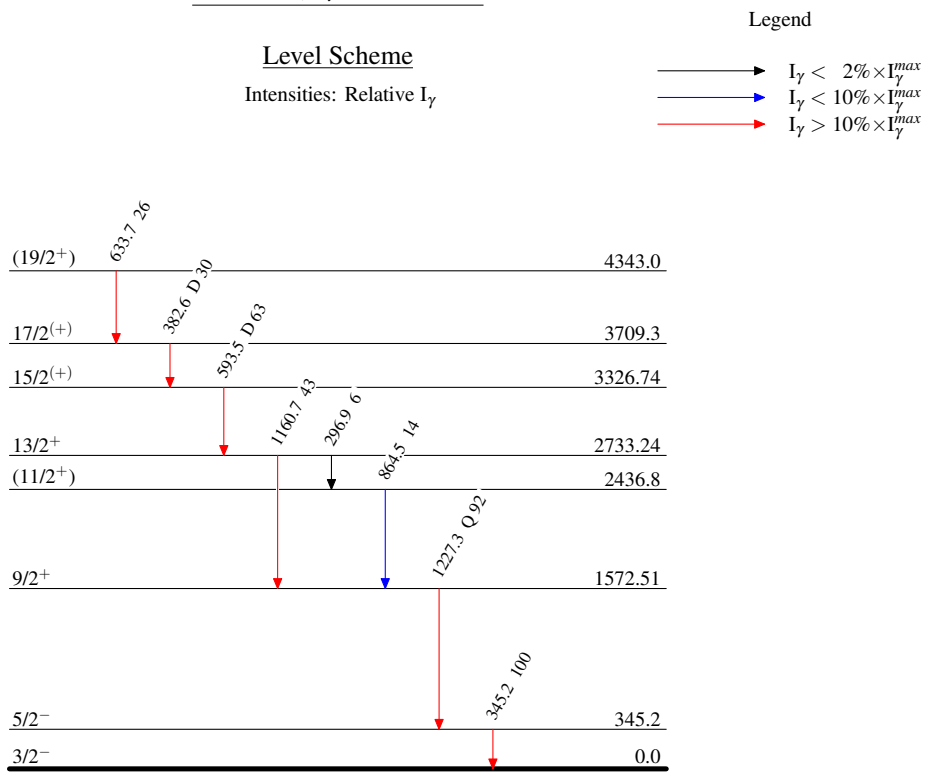
Level Scheme

Intensities: Relative I_γ



$^{85}_{35}Br_{50}$

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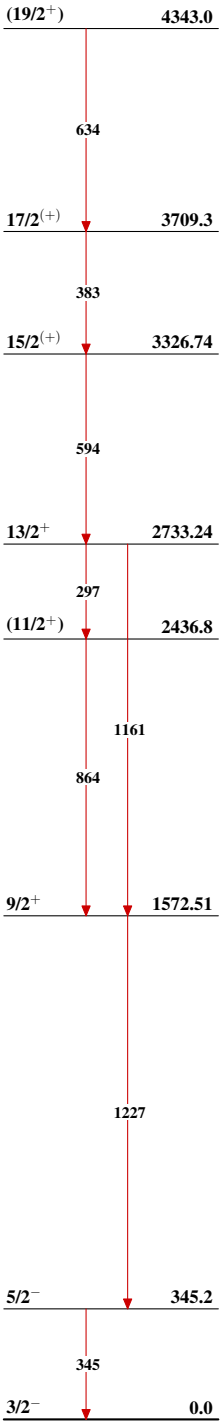
Band(A): Yrast structure



$^{85}_{35}Br_{50}$