^{197}Au(γ,nγ),(e,e′nγ) 1978BeXB,1981Dj02

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Huang Xiaolong	NDS 108, 1093 (2007)	1-Jan-2006

1978BeXB: monoenergetic photon beam generated by (n,γ) reaction on Fe, Ni, and Cr. Used 9298γ from Fe; 8533 and 8999 γ′s from Ni; and 8484, 8512, 8884 and 9720 γ′s from Cr. These energies are higher than the (γ,n) threshold for ^{197}Au. FWHM of ^{3}He neutron spectrometer≈25 keV for 1 MeV neutrons.
1981Dj02: measured isomeric ratios of the yield of (γ,n) and (e,e′n).
1984An12: measured yield, deduced total photon absorption σ.
1987Be37: measured absolute photo-neutron σ(E).

^{196}Au Levels

E(level)[†‡]	E(level)[†‡]	J$^{\pi}$[a]	E(level)[†‡]	J$^{\pi}$[a]	E(level)[†‡]
0.0	203 *10*		313 *10*		488 *10*
34 *10*	232.4	7^{+}	363 *10*		570 *10*
80 *10*	253 *10*		400.7[&] *10*	6^{+}	637[#] *10*
167 *10*	295[@] *10*		420.6	8^{+}	730[#] *10*

[†] The values listed are for those levels that were independently populated by at least three of the incident γ-ray beams. The level energies are average of the separate determinations, unless otherwise specified. ΔE estimated by evaluator.
[‡] Although some of the levels are close In energy to levels identified from ^{196}Au IT decay, they are probably not the same. The 5^{+}, 6^{+}, 7^{+} states would need to Be populated by L(n)=3 or L(n)=5 if photoexcitation is E1.
[#] From Cr (n,γ) source.
[@] Incorrectly given as 219 in authors′ fig. 3.
[&] 408 *10* from 1978BeXB.
[a] From Adopted Levels.

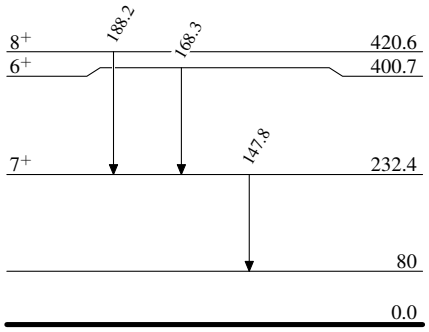
γ(^{196}Au)

E$_{\gamma}$[†]	E$_i$(level)	J$^{\pi}_i$	E$_f$	J$^{\pi}_f$
147.8	232.4	7^{+}	80	
168.3	400.7	6^{+}	232.4	7^{+}
188.2	420.6	8^{+}	232.4	7^{+}

[†] From 1981Dj02.

^{197}Au(γ,nγ),(e,e′nγ) 1978BeXB,1981Dj02

Level Scheme



$^{196}_{79}Au_{117}$