⁴⁸Ca(²³⁸U,Xγ) **2008Bh09**

Туре	Author	Citation	Literature Cutoff Date
Full Evaluation	Jun Chen	NDS 179, 1 (2022)	30-Nov-2021

Deep inelastic reactions near Coulomb barrier.

2008Bh09: E=1.310 GeV ²³⁸U beam was provided by GANIL cyclotron. Target was 1 mg/cm² isotopically enriched ⁴⁸Ca. Charged particles were identified using large acceptance variable mode spectrometer VAMOS and a focal plane detector; γ rays were detected with the EXOGAM array of eleven segmented clover Ge detectors with Compton-suppression. Measured E γ , I γ . Deduced levels.

⁴⁸Ar Levels

E(level) [†]	J ^{π‡}
0	0^{+}
1041 9	(2^{+})
2197 18	(2^{+})
2770 16	(4^{+})
3283?	(3^{+})

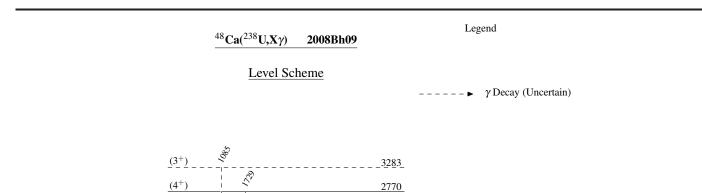
[†] From $E\gamma$ data.

[‡] Assignments for excited states are proposed by 2008Bh09 from comparisons with shell-model calculations, and systematics of even-even Ar isotopes (A=36-46).

 γ (⁴⁸Ar)

Eγ	E _i (level)	\mathbf{J}_i^{π}	\mathbf{E}_{f}	\mathbf{J}_f^{π}	Comments
1041 9	1041	(2^{+})	0	0^+	
1085	3283?	(3 ⁺)	2197	(2^{+})	
1156 15	2197	(2^{+})	1041	(2^{+})	
1729 <i>13</i>	2770	(4^{+})	1041	(2^{+})	
2197	2197	(2 ⁺)	0	0^{+}	E_{γ} , I_{γ} : γ not observed, limit of its intensity given as <30% of 1156 γ .

 † Placement of transition in the level scheme is uncertain.



2770

2197

1041

0



1041

219> 1156

(4⁺)

(2+)

(2⁺)

 0^+