

²⁰⁸Pb(⁴⁸Ca,Xγ) 2010Me07,2010Me05

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Jun Chen and Balraj Singh		NDS 190,1 (2023)	20-Jun-2023

2010Me07,2010Me05: E=310 MeV ⁴⁸Ca beam produced from the Laboratori Nazionali di Legnaro (LNL) tandem-ALPI accelerator complex. Target of 1 mg/cm² enriched ²⁰⁸Pb evaporated onto a 1 mg/cm² Ta backing. γ-ray detected in the CLARA array of 23 Compton-suppressed clover detectors, with 11 Clover detectors placed at 90°, 8 at 130°, 3 at 154° and 1 at 170° respect to the CLARA-PRISMA symmetry axis. The projectile-like products selected using PRISMA magnetic spectrometer. Measured E_γ, I_γ, (recoils)γ-coin. Deduced levels, B(E2); T_{1/2} using the differential recoil distance Doppler shift method. See also [2009Me05](#).

⁴⁴Ar Levels

E(level) [‡]	J ^π [†]	T _{1/2} [#]	Comments
0	0 ⁺		
1158	2 ⁺	4.1 ps <i>14</i>	
2746	(4 ⁺)	2.7 ps <i>+25-20</i>	
3439	(6 ⁺)	>27.7 ps	T _{1/2} : unshifted 693γ was observed for all target-to-degrader distances. Taking into account the time range of the plunger setup and the low statistics of the peak a lower limit was extracted.

[†] From [2010Me07](#). The same assignments made by [2000Fo03](#).

[‡] From E_γ data.

[#] From differential recoil distance Doppler shift method ([2010Me07](#)).

γ(⁴⁴Ar)

E _i (level)	J _i ^π	E _γ [†]	I _γ [†]	E _f	J _f ^π	Mult.	Comments
1158	2 ⁺	1158	100	0	0 ⁺	E2	Mult.: from the Adopted Gammas. 2010Me07 quote B(E2) _↓ =0.0067 <i>+44-17</i> .
2746	(4 ⁺)	1588	100	1158	2 ⁺	[E2]	2010Me07 quote B(E2) _↓ =0.0021 <i>+60-10</i> .
3439	(6 ⁺)	693	100	2746	(4 ⁺)	[E2]	2010Me07 quote B(E2) _↓ <0.0128.

[†] From [2010Me07](#).

$^{208}\text{Pb}(^{48}\text{Ca},\text{X}\gamma)$ 2010Me07,2010Me05

Level Scheme

Intensities: Relative photon branching from each level

