

Coulomb excitation 2012Wi05

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

**2012Wi05:** Au( $^{48}\text{Ar}, ^{48}\text{Ar}'\gamma$ )  $^{48}\text{Ar}$  beam at 96 MeV/nucleon mid-target energy was produced via a primary  $^{48}\text{Ca}$  beam at 140 MeV/nucleon from the Coupled Cyclotron Facility at NSCL impinging on a 681 mg/cm<sup>2</sup>  $^9\text{Be}$  primary target. The secondary target was 518 mg/cm<sup>2</sup> gold.  $\gamma$  rays were detected by the Segmented Germanium Array (SeGA) consisting of 32-fold segmented HPGe detectors. Measured excitation energy, cross sections. Deduced B(E2).

 $^{48}\text{Ar}$  Levels

E(level)	$J^\pi$	$T_{1/2}$	Comments
0	$0^+$		
1040 7	$2^+$	6.7 ps +16-11	B(E2) $\uparrow$ =0.0346 55 (2012Wi05) $\sigma$ =74 mb 11 (2012Wi05). $T_{1/2}$ : deduced from B(E2) value.

 $\gamma(^{48}\text{Ar})$ 

$E_\gamma$	$E_i(\text{level})$	$J_i^\pi$	$E_f$	$J_f^\pi$	Comments
1040 7	1040	$2^+$	0	$0^+$	B(E2)(W.u.)=6.7 11

Coulomb excitation 2012Wi05Level Scheme