^{9}Be(^{46}Ar,Xγ): E=70 MeV/A 2005Ga18

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	T. W. Burrows	NDS 109, 171 (2008)	30-Oct-2007

^{46}Ar beam obtained by fragmentation of 110 MeV/A ^{48}Ca primary beam At NSCL of Michigan State University on a 1034 mg/cm^2 ^{9}Be target located At the mid-acceptance position of the A1900 fragment separator. A 188 *4* mg/cm^2 secondary ^{9}Be target was placed In the target position of the S2003d800 magnetic spectrometer and surrounded by the SeGA γ array configured with 15 *32*-fold segmented HPGe detectors. Measured γ's and (particle)γ-coincidences.

Level scheme above the first excited state constructed by the evaluator based on the discussion of 2005Ga18 on page 051301-2 and by comparison to the proposed ^{45}Cl β^- decay and (^{48}Ca,Xγ) level schemes.

^{45}Ar Levels

E(level)[†]	J$^\pi$[‡]	σ (mb)[#]
0.0	7/2$^-$	61 *9*
532 *9*	3/2$^-$	3.6 *36*
1336 *13*		
1402 *13*		
1727 *16*		
1760 *16*		
1908 *6*		

[†] From least-squares fit to Eγ's (evaluator).
[‡] Assumed by 2005Ga18 based on ^{45}Cl β^- decay. Not adopted by the evaluator.
[#] Knockout cross section from absolute intensities and inclusive cross section to all bound states of ^{45}Ar of 122 mb *13*. σ(to levels above 1400 keV)=57 mb *8*.

$\gamma(^{45}$Ar)

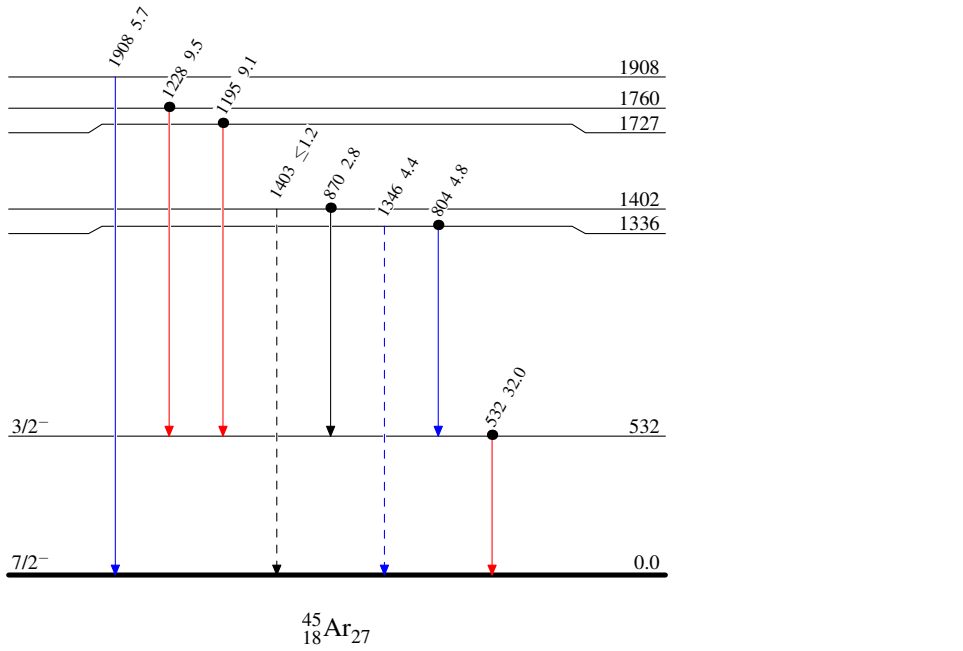
E$_\gamma$	I$_\gamma$[†]	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$
532 *9*	32.0 *40*	532	3/2$^-$	0.0	7/2$^-$
804 *9*	4.8 *9*	1336		532	3/2$^-$
870 *9*	2.8 *6*	1402		532	3/2$^-$
[x]1067 *11*	3.5 *9*				
1195 *13*	9.1 *13*	1727		532	3/2$^-$
1228 *13*	9.5 *14*	1760		532	3/2$^-$
1346[‡] *12*	4.4 *9*	1336		0.0	7/2$^-$
1403[‡] *14*	≤1.2	1402		0.0	7/2$^-$
1908 *6*	5.7 *12*	1908		0.0	7/2$^-$
[x]2165 *18*	3.4 *7*				

[†] Absolute intensities (In per cent) per ^{45}Ar fragment.
[‡] Placement of transition in the level scheme is uncertain.
[x] γ ray not placed in level scheme.

^{9}Be(^{46}Ar,Xγ): E=70 MeV/A 2005Ga18

Level Scheme

Intensities: Absolute intensities (In %) per ^{45}Ar fragment



$^{45}_{18}Ar_{27}$