

$^1\text{H}(^{21}\text{Na},\gamma)$ 2004Da17,2005Tr11

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia		NDS 127, 69(2015)	1-Apr-2015

Others: 2003Bi03, 2005Ch30, 2007Gr11.

2004Da17: $p(^{21}\text{Na},\gamma)$ E=200-1103 keV. TRIUMF-ISAC RFQ linear accelerator. Recoil separator, measured E_γ , I_γ , particle- γ coincidence.

2005Tr11: $p(^{21}\text{Na},\gamma)$, ^{21}Na beam energy not listed; measured E_γ , I_γ , $\gamma\gamma$ -coin. deduced resonance levels, spin and parity.

 ^{22}Mg Levels

E(level) [†]	J ^π #	Γ [@]	Comments
0.0			
1247.02 [‡] 3			
3308.22 [‡] 6			
4402.0 [‡] 3			
5710.0 6			Resonance energy 205.7 5 (2003Bi03).
5833.3 4			Resonance energy 329 (2004Da17).
5958 5			Resonance energy 454 5 (2004Da17).
6042 13			Resonance energy 538 13 (2004Da17).
6242.7 11	4 ⁺		Resonance energy 738.4 10 (2004Da17).
6325.6 10	1 ⁺	16 keV 3	Resonance energy 821.3 9 (2004Da17).
6605.4 25	2 ⁺	30 keV 7	Resonance energy 1101.1 25 (2004Da17).

[†] Level energies 5710 keV and above are deduced by evaluator using $\text{Sp}(^{22}\text{Mg})=5504.3$ 4 (2012Wa38) and resonance energy listed in comments.

[‡] From Adopted Levels.

Assigned in 2005Tr11, based on γ -ray feeding and analogue states in ^{22}Ne .

@ From 2004Da17.

 $\gamma(^{22}\text{Mg})$

$E_i(\text{level})$	E_γ [†]	I_γ ^{&}	E_f	$E_i(\text{level})$	J_i^π	E_γ [†]	I_γ ^{&}	E_f
1247.02	1246.98 [#] 3		0.0	5833.3		4585.8 [‡]	100	1247.02
3308.22	2061.09 [#] 5		1247.02	6242.7	4 ⁺	2934.3 [@]		3308.22
4402.0	3154.7 [#] 3		1247.02	6325.6	1 ⁺	5077.9 [@]		1247.02
	4401.5 [@]		0.0			6324.6 [@]		0.0
5710.0	4462.5 [‡]	100	1247.02	6605.4	2 ⁺	2203.3 [@]		4402.0
	5709.2 [‡]	15	0.0			5357.7 [@]		1247.02
5833.3	2524.9 [‡]	25	3308.22					

[†] From level energy difference, recoil energy subtracted, except otherwise noted.

[‡] Measured – γ -ray energy not listed in 2004Da17.

From Adopted Gammas. γ -ray energy not listed in 2005Tr11.

@ Placement from 2005Tr11.

& From 2004Da17.

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Level Scheme

Intensities: Relative photon branching from each level

