

C(^{37}Al , ^{36}Mg) 2013Do22

Type	History		Literature Cutoff Date
	Author	Citation	
Full Evaluation	Balraj Singh	ENSDF	21-May-2021

One-proton knockout reaction.

2013Do22: levels and gamma rays in ^{36}Mg populated via one-proton knockout reaction with a thick carbon target. Radioactive beam of ^{37}Al at 247 MeV/nucleon was produced from fragmentation of ^{48}Ca beam at 345 MeV/nucleon with Be target at RIBF-RIKEN facility. Secondary beam was purified via $B\rho$ - ΔE - $B\rho$ method and identified by ΔE - $B\rho$ -TOF method using BigRIPS separator. Gamma rays were detected in coincidence with ^{36}Mg particles using DALI2 array of 186 large- volume NaI(Tl) detectors. Measured E_γ , I_γ , (^{36}Mg) γ -coin. Deduced levels, J, π . Comparison with shell-model calculations.

 ^{36}Mg Levels

<u>E(level)</u>	<u>Jπ</u>
0	0 ⁺
662 6	(2 ⁺)
2032 21	(4 ⁺)

 $\gamma(^{36}\text{Mg})$

<u>E$_\gamma$</u>	<u>E$_i$(level)</u>	<u>J$_i^\pi$</u>	<u>E$_f$</u>	<u>J$_f^\pi$</u>	<u>Comments</u>
662 6	662	(2 ⁺)	0	0 ⁺	I_γ : most intense peak in $\gamma(^{36}\text{Mg})$ -coin spectrum Fig. 3 in 2013Do22 .
1370 20	2032	(4 ⁺)	662	(2 ⁺)	I_γ : weak peak in $\gamma(^{36}\text{Mg})$ -coin spectrum Fig. 3 in 2013Do22 .

C(^{37}Al , ^{36}Mg) 2013Do22Level Scheme