^{34}Mg(p,p′γ) 2006El03

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Ninel Nica, Balraj Singh	NDS 113, 1563 (2012)	28-May-2012

Beam=^{34}Mg, target=liquid hydrogen.

^{34}Mg particles produced by fragmentation of ^{40}Ar beam at 94 MeV/nucleon hitting a ^{181}Ta target. The fragments were separated by RIPS fragment separator. The secondary beam of ^{34}Mg at 50 MeV/nucleon hit a liquid hydrogen target. The reaction products and scattered particles were detected and identified by a parallel-plate avalanche counter (PPAC) and a silicon detector telescope. Time-of-flight method used for atomic charge selection. The γ rays measured with an array of 146 NaI(Tl) detectors surrounding the target. Deduced mass deformation and neutron deformation parameters.

^{34}Mg Levels

E(level)	J^π	Comments
0	0^+	
685 *16*	2^+	β_{mass}=0.68 *16*, β_n=0.70 *13*.

γ(^{34}Mg)

E_γ	E_i(level)	J_i^π	E_f	J_f^π	Comments
685 *16*	685	2^+	0	0^+	σ=111 mb *37* in (p,p′).

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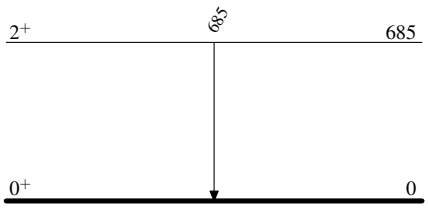
Level Scheme



$^{34}_{12}Mg_{22}$