$^{1}H(^{31}Na,^{31}Na'\gamma)$ 2006El03

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Jun Chen and Balraj Singh	NDS 184, 29 (2022)	24-Jun-2022

Beam=^{31}Na, target=liquid hydrogen.

2006El03: E=50 MeV/nucleon beam was produced by fragmentation of 94 MeV/nucleon ^{40}Ar primary beam on a ^{181}Ta target at RIKEN. Fragments were separated by RIPS fragment separator and impinged on a liquid hydrogen target. Reaction products and scattered particles were detected and identified by a parallel-plate avalanche counter (PPAC) and a silicon detector telescope using the time-of-flight method. γ rays were detected with an array of 146 NaI(Tl) detectors surrounding the target. Measured Eγ, σ. Deduced deformation parameters. Comparisons with shell-model calculations.

^{31}Na Levels

E(level)	J^{π} †	Comments
0	$3/2^+$	
370 *12*	$(5/2^+)$	β_{mass}=0.56 *5*, β_n=0.54 *7* (2006El03).

† From Adopted Levels.

$\gamma(^{31}Na)$

E_γ	E_i(level)	J_i^π	E_f	J_f^π	Comments
370 *12*	370	$(5/2^+)$	0	$3/2^+$	σ=24 mb *4* for 370γ (2006El03).

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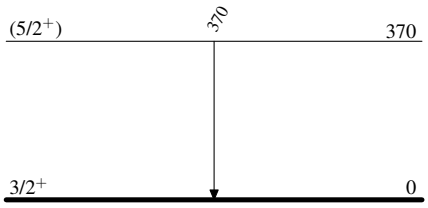
Level Scheme



$^{31}_{11}Na_{20}$