^{4}He(HI,xγ) 2006FuZX

History

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

Beam could include $^{31-38}$Na, $^{30-33}$Mg, $^{32-35}$Al, $^{34-36}$Si and ^{37}P.

2006FuZX: cocktail secondary beams produced by the projectile fragmentation of a 63 MeV/nucleon ^{40}Ar primary beam on a carbon beryllium target. Primary constituents of beam include $^{31-38}$Na, $^{30-33}$Mg, $^{32-35}$Al, $^{34-36}$Si and ^{37}P at E(average)=40 MeV/nucleon and analyzed with the RIKEN Projectile-fragment Separator (RIPS). Secondary target was liquid Helium. Levels in ^{31}Mg can be populated in a variety of reactions. Outgoing particles were identified by energy loss and time-of-flight. γ rays were detected with the GRAPE array of segmented Ge detectors. Measured Eγ, particle-γ-coin. Deduced levels.

^{31}Na Levels

E(level)†
0.0
375.1 *7*
1162.9 *10*

† From Eγ data.

$\gamma(^{31}$Na)

E$_\gamma$†	E$_i$(level)	E$_f$	Comments
375.1 *7*	375.1	0.0	
787.8 *7*	1162.9	375.1	New γ ray in 2006FuZX is stated by authors as preliminary. However, this transition is confirmed as 787 *8* in later work by 2010Do05, and a level at 1163 keV was proposed earlier by 2002Pr12.

† From 2006FuZX, with placements from Adopted Gammas.

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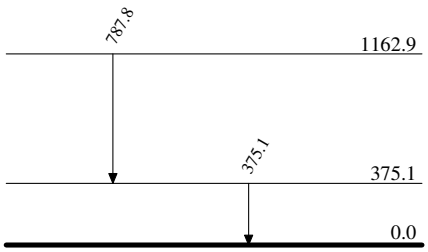
Level Scheme



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