Coulomb excitation

History

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

1960An07: ^{22}Ne(^{14}N,^{14}N), E=25.2 MeV.
1970Na07: ^{120}Sn,^{130}Te,^{148}Sm(^{22}Ne,^{22}Ne′) E=50-75 MeV.
1974Ol01: ^{197}Au,Pt(^{22}Ne,^{22}Ne′) E=80,91 MeV.
1977Sc36: ^{22}Ne(^{32}S,^{32}S′) E=41.3-51 MeV.
2012Bo09: ^{208}Pb(^{22}Ne,^{22}Neγ) – Target=^{208}Pb (thickness – 300 μg/cm^2) sandwiched between two layers of 10 and 15 μg/cm^2 ^{12}C. Projectile: ^{22}Ne beam, E=128 MeV. γ-ray array CLARA consisting of 21 HPGe clover detectors. Measured Eγ, (particle) γ-coin, deduced deformation parameters.

^{22}Ne Levels

E(level)	J^{π} †	$T_{1/2}$	Comments
0.0	0^+		
1275	2^+	3.75 ps *8*	$T_{1/2}$: From B(E2)↑=0.0223 *6* (1977Sc36). Other values: 2.0 ps *2* from B(E2)↑=0.042 *4* (1960An07), 2.6 ps *5* from B(E2)↑=0.033 *6* (1970Na07), and 3.4 ps *3* from B(E2)↑=0.025 *2* (1974Ol01). β_2=0.370 deduced from $\sigma(\theta)$ of ^{22}Ne ions and analyzed by DWBA calculations (2012Bo09).

† From Adopted Levels.

$\gamma(^{22}Ne)$

Eγ	E$_i$(level)	J_i^{π}	E$_f$	J_f^{π}
1275	1275	2^+	0.0	0^+

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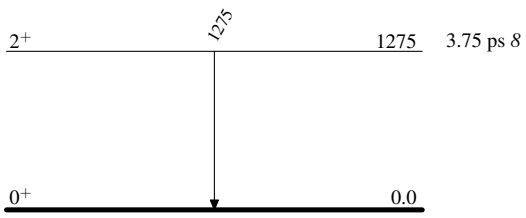
Level Scheme



$^{22}_{10}Ne_{12}$