^{73}Ge(p,p′) 1969He05

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh and Jun Chen	NDS 158, 1 (2019)	16-May-2019

$J^{\pi}(^{73}Ge\ g.s.)=9/2^{+}$.

1969He05: E=12.0 MeV proton beam was produced from the Aldermaston Tandem accelerator. Targets were 100 $\mu g/cm^2$ 73.6% enriched ^{73}Ge on 10 $\mu g/cm^2$ carbon backings. Scattered protons were momentum-analyzed with the Aldermaston multi-gap magnetic spectrograph and detected in nuclear emulsion plates. Measured $\sigma(\theta)$. Deduced levels, L, deformation parameters from DWBA analysis. 1969He05 also report data on ^{72}Ge(d,p)^{73}Ge.

Cross-section data (1969He05)

Level	σ_{max} (mb/sr)
67	5.10
498	0.66
551	0.25
656	0.70
867	0.94
918	0.44
997	2.00
1039	0.48
1132	0.35
1318	0.19
1338	0.11
1614	0.17
1767	0.33
2364	0.15
2454	0.17

^{73}Ge Levels

E(level)†	L‡	$(\beta_L R)^2$‡	E(level)†	L‡	$(\beta_L R)^2$‡	E(level)†	L‡	$(\beta_L R)^2$‡
0			867 *3*	2	0.40	1614 *10*	2	0.09
67 *2*	2	1.92	918 *10*	2	0.19	1659 *10*		
498 *3*	2	0.26	997 *10*	2	0.88	1767 *10*	2	0.20
551 *10*	2	0.10	1039 *4*	2	0.21	2088 *10*		
656 *10*	2	0.29	1132 *10*	2	0.16	2364 *10*	3	0.18
778 *10*			1318 *10*	2	0.09	2454 *10*	3	0.21
825 *10*			1338 *10*	2	0.05			

† From 1969He05. No explicit uncertainties are given in 1969He05 for levels with ΔE(level)=10 keV which has been assigned by the evaluators based on authors′ statement that uncertainty in excitation energy is estimated at less than 10 keV.

‡ From DWBA fit to experimental $\sigma(\theta)$ with $d\sigma/d\Omega_{exp}=(\beta_L R)^2 d\sigma/d\Omega_{DWBA}$ (1969He05).