

Coulomb excitation 1998Ib01

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jun Chen	NDS 152, 1 (2018)	30-Sep-2017

1998Ib01: $^{197}\text{Au}(^{38}\text{Si}, ^{38}\text{Si}') E=42.2$ MeV/nucleon ^{38}Si beam was produced by fragmentation of $E=80$ MeV/nucleon ^{40}Ar and $E=70$ MeV/nucleon ^{48}Ca primary beams provided by the K1200 cyclotron at NSCL on a 356 mg/cm 2 ^9Be target. Fragments were identified and separated by the A1200 fragment separator. The secondary target was 532 mg/cm 2 ^{197}Au . γ rays were detected with an array of 39 cylindrical NaI(Tl) detectors and scattered particles were detected in a fast/slow plastic phoswich detector. Measured $\sigma(E\gamma)$, particle- γ -coin. Deduced $B(E2)$, deformation parameter. Comparisons with shell-model calculations.

 ^{38}Si Levels

E(level)	J^π	Comments
0	0^+	
1084 20	2^+	$B(E2)\uparrow=0.0197$ (1998Ib01) J^π : Coulomb excitation from 0^+ . integrated cross section= 65 mb 24 (1998Ib01).

 $\gamma(^{38}\text{Si})$

E_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π
1084 20	1084	2^+	0	0^+

Coulomb excitation 1998Ib01Level Scheme