

$^1\text{H}(^{38}\text{Si}, ^{38}\text{Si}'\gamma)$ 2007Ca35

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

2007Ca35: E=90-100 MeV/nucleon ^{38}Si beam was produced by fragmentation of 140 MeV/nucleon ^{48}Ca primary beam provided by the Coupled Cyclotron Facility at NSCL on a 987 mg/cm² ^9Be target. Fragments were identified and separated by the A1900 fragment separator with the $B\rho$ - ΔE - $B\rho$ method. The secondary target was a RIKEN-Kyushu-Rikkyo liquid hydrogen (LH_2) at the target position of the S800 spectrograph. γ rays were detected with the SeGA array of sixteen 32-fold segmented HPGe detectors and scattered particles were detected by an ion chamber in the S800 focal plane. Measured $\sigma(E\gamma)$, particle- γ -coin. Deduced deformation parameter.

 ^{38}Si Levels

E(level)	J^π	Comments
0	0^+	
1084	2^+	J^π : from Adopted Levels. Feeding-corrected excitation cross-section=15.4 mb 23. $\beta_2(\text{p,p}')=0.35 +2-3$ (vibrational), 0.34 +2-3 (prolate), 0.38 3 (oblate). Sign of β_2 is not given in 2007Ca35.

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

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

 $^1\text{H}(^{38}\text{Si}, ^{38}\text{Si}'\gamma)$ 2007Ca35Level Scheme