

Coulomb excitation 2009Va16

Type	History		Literature Cutoff Date
	Author	Citation	
Full Evaluation	Balraj Singh	ENSDF	25-Mar-2019

2009Va16: 2.87 MeV/nucleon beam of ^{61}Mn was produced in fission of uranium (UC_x target) induced by 1.4 GeV protons from PS Booster at CERN. The laser ionized (RILIS facility at ISOLDE-CERN) Mn isotopes were extracted from the ion source and mass separated. The 30-keV isobaric beam was bunched in a Penning trap (REXTRAP) and injected in the electron beam ion source (EBIS). The ^{61}Mn beam was accelerated to 2.87 MeV/nucleon and impinged on a ^{109}Ag target.

Measured E_γ , I_γ , $\gamma(\theta)$ using MINIBALL Ge detector array. Deduced B(E2) value using GOSIA analysis. Comparison with shell-model calculations. The data were normalized to excitations in the target nucleus ^{109}Ag .

 ^{61}Mn Levels

<u>E(level)[†]</u>	<u>J^π[†]</u>
0	(5/2 ⁻)
157	(7/2 ⁻)
1035	(9/2 ⁻)
1282	(11/2 ⁻)

[†] 2009Va16 list values from 2008Va08.

 $\gamma(^{61}\text{Mn})$

<u>E_γ[†]</u>	<u>E_i(level)</u>	<u>J_i^π</u>	<u>E_f</u>	<u>J_f^π</u>	<u>Mult.</u>	<u>Comments</u>
157	157	(7/2 ⁻)	0	(5/2 ⁻)	(M1+E2)	B(E2)(W.u.)=30 4 (2009Va16) B(E2)(W.u.) is obtained by 2009Va16 with constrained B(M1)=0.008 based on T _{1/2} (157 level)<1.7 ns (minimum flight time between the secondary target and the particle detector) since mixing ratio of the 157-keV transition could not be obtained from their $\gamma(\theta)$ data.
878 (1035)	1035 1035	(9/2 ⁻) (9/2 ⁻)	157 0	(7/2 ⁻) (5/2 ⁻)	[M1(+E2)] [E2]	B(E2)(W.u.)=0 (2009Va16) B(E2)(W.u.)=7.5 15 (2009Va16)

[†] 2009Va16 list rounded values from 2008Va08.

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Legend

Level Scheme-----► γ Decay (Uncertain)