

$^9\text{Be}(^{55}\text{Sc}, ^{53}\text{Ca}\gamma)$ 2013St20

Type	History		Literature Cutoff Date
	Author	Citation	
Full Evaluation	Balraj Singh	ENSDF	28-May-2021

2013St20 (also **2013St15,2014StZY**): ^{55}Sc beam produced in fragmentation of 345 MeV/nucleon ^{70}Zn beam at RIBF-RIKEN facility. Fragments separated by BigRIPS separator and analyzed in mass-to-charge ratio and atomic number by ZeroDegree spectrometer. Measured $E\gamma$, $I\gamma$, $(^{53}\text{Ca})\gamma$ -coin, $\gamma\gamma$ coin using an array of 168 NaI(Tl) detectors for γ rays. Deduced levels, J, π . Comparison with shell-model calculations and level systematics of neighboring nuclides. Two-proton knockout reaction.

 ^{53}Ca Levels

E(level)	J^π †
0	(1/2 ⁻)
1753 15	(5/2 ⁻)
2227 19	(3/2 ⁻)




† From shell-model predictions and systematics of level structure of neighboring nuclides (**2013St20**).

 $\gamma(^{53}\text{Ca})$

E_γ	I_γ	$E_i(\text{level})$	J_i^π	E_f	J_f^π
1753 15	100 12	1753	(5/2 ⁻)	0	(1/2 ⁻)
2227 19	44 5	2227	(3/2 ⁻)	0	(1/2 ⁻)

 $^9\text{Be}(^{55}\text{Sc}, ^{53}\text{Ca}\gamma)$ 2013St20Level SchemeIntensities: Relative I_γ

Legend

	$I_\gamma < 2\% \times I_\gamma^{\text{max}}$
	$I_\gamma < 10\% \times I_\gamma^{\text{max}}$
	$I_\gamma > 10\% \times I_\gamma^{\text{max}}$

