

$^{87}\text{As}$   $\beta^-$  decay 2013Ma22

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	T. D. Johnson and W. D. Kulp(a)		NDS 129, 1 (2015)	27-Jul-2015

Parent:  $^{87}\text{As}$ :  $E=0.0$ ;  $J^\pi=(3/2^-)$ ;  $T_{1/2}=484$  ms 40;  $Q(\beta^-)=10808$  4;  $\% \beta^-$  decay=?

Proton beam was provided by the Oak Ridge Isochronous Cyclotron (ORIC) at the HRIBF-ORNL facility. Target= $^{238}\text{U}$ . Fission fragment were ionized to charge state +1 then purified using  $\text{H}_2\text{S}$  gas, a mass pre-separator and electromagnetic separation. The purified beams were then sent to the Low-energy Radioactive Ion Beam Spectroscopy Station (LeRIBSS) and implanted in a moving tape collector (MTC). Measured  $E_\gamma$ ,  $I_\gamma$ ,  $E_\beta$ ,  $\beta\gamma$ -coin, half-life of  $^{87}\text{As}$  g.s. using two plastic scintillation counters and four HPGe detectors. Comparison with the gross theory of  $\beta$  decay, the finite-range droplet model and the continuum quasiparticle random-phase approximation.

 $^{87}\text{Se}$  Levels

E(level)	$J^\pi$ †
0.0	(3/2 <sup>+</sup> )
91.9 2	(5/2 <sup>+</sup> )

† from Adopted Levels.

 $\gamma(^{87}\text{Se})$ 

$E_\gamma$	$E_i(\text{level})$	$J_i^\pi$	$E_f$	$J_f^\pi$	Comments
92	91.9	(5/2 <sup>+</sup> )	0.0	(3/2 <sup>+</sup> )	$E_\gamma$ : Not placed in 2013Ma22, but the 92 $\gamma$ was placed from $^{248}\text{Cm}$ spontaneous fission.

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