^{95}Rb IT decay 2009Fo05

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	S. K. Basu, G. Mukherjee, A. A. Sonzogni	NDS 111, 2555 (2010)	30-Jun-2009

Parent: ^{95}Rb: E=835.0 *6*; $T_{1/2}$<500 ns; %IT decay=100.0

2009Fo05: ^{95}Rb produced through the ^{9}Be(^{238}U,X) reaction. ^{238}U beam produced at E=80 MeV/nucleon by the K500 and K1200 cyclotrons at the NSCL at Michigan State University. Reaction products were separated using the A1900 fragment separator and detected using two parallel plate avalanche counters, a Si ΔE detector, four Si detectors, and a plastic scintillator. Measurements of the time-of-flight, $\beta\rho$ and total kinetic energy were used to determine the atomic number, mass number and charge state of reaction products. γ's were detected with one HPGe detector. Half-lives were measured using the time difference between implantation events and HPGe events, which was not suitable for measuring half-lives of less than 500 ns. Measured particle spectra, Eγ, Iγ, (particle)γ-coincidence and half-lives of isomeric states.

Isomer with half-life of <500 ns discovered.

^{95}Rb Levels

E(level)†	J^π	$T_{1/2}$	Comments
0	$5/2^-$	377.7 ms *8*	J^π: from Adopted Levels. $T_{1/2}$: from Adopted Levels.
192.0 *6*			
810.0 *5*			
835.0 *6*		<500 ns	$T_{1/2}$: Measured by 2009Fo05 from time correlations between implanted ^{95}Rb nuclei and γ-ray events.

† From least squares fit to Eγ's, assuming δEγ=0.7 keV.

$\gamma(^{95}Rb)$

Iγ normalization: listed γ-ray intensity is per 100 fragments.

E_γ	I_γ†‡	E_i(level)	E_f	J^π_f
(25)		835.0	810.0	
192.0 *7*	>7.2	192.0	0	$5/2^-$
618.0 *7*	>8.5	810.0	192.0	
810.0 *7*	>6.6	810.0	0	$5/2^-$
835.0 *7*	>0.2	835.0	0	$5/2^-$

† Photons per 100 fragments.

‡ Absolute intensity per 100 decays.

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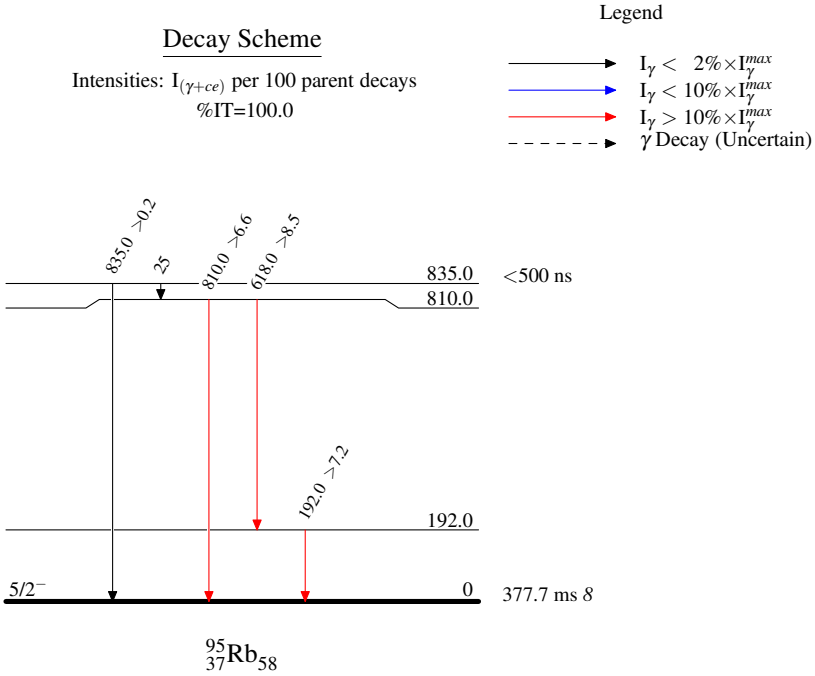
Decay Scheme

Intensities: $I_{(\gamma+ce)}$ per 100 parent decays

%IT=100.0



$^{95}_{37}Rb_{58}$