

Adopted Levels, Gammas

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	C. D. Nesaraja, E. A. McCutchan		NDS 133, 1 (2016)	30-Sep-2015

$Q(\beta^-)=1.710\times 10^4$ 38; $S(n)=1.38\times 10^3$ 44; $S(p)=23140$ SY; $Q(\alpha)=-18600$ SY 2012Wa38

$\Delta S(p)=620$; $\Delta Q(\alpha)=620$ (2012Wa38).

$S(2n)=6.3\times 10^3$ 4; $S(2p)=44730$ syst 630; $Q(\beta^-n)=1.21\times 10^4$ 4 (2012Wa38).

2011FuZZ: $\text{Be}({}^{48}\text{Ca},X)$ with $E({}^{48}\text{Ca})=345$ MeV/nucleon. Isotopes separated with the BigRIPS in-flight separator and identified through $B\rho$, time-of-flight, and energy loss measurements. Measured production cross section for ${}^{41}\text{Si}$ as $\sigma\approx 10^{-4}$ mb (value extracted from Figure 1 by evaluators).

2007Ta15: ${}^9\text{Be}({}^{48}\text{Ca},X)$ and ${}^{\text{nat}}\text{W}({}^{48}\text{Ca},X)$ reactions with $E({}^{48}\text{Ca})=142$ MeV/nucleon. Fragments separated with the A1900 fragment separator and identified using ΔE , $B\rho$, total energy and time-of-flight measurements. Measured production cross section for ${}^{41}\text{Si}$ as $\sigma=1.3\times 10^{-5}$ mb +6-8 for the W target.

2004Gr20: ${}^9\text{Be}({}^{48}\text{Ca},X)$ reaction with $E({}^{48}\text{Ca})=60$ MeV/nucleon. Fragments separated with the LISE3 spectrometer and identified on a event-by-event basis using ΔE and time-of-flight measurements. Measured implant- $\beta(t)$; deduced $T_{1/2}$. Subset of results given in 2004Gr28, 2003Gr22.

1999YoZW: ${}^9\text{Be}({}^{48}\text{Ca},X)$ and ${}^{181}\text{Ta}({}^{48}\text{Ca},X)$ reactions with $E({}^{48}\text{Ca})=70$ MeV/nucleon. Fragments separated with the RIPS spectrometer and identified by measuring time-of-flight and energy deposition into two Si detectors. Measured implant- $\beta(t)$ using a Si detector and β -neutron coincidences using 46 ${}^3\text{He}$ proportional counters; deduced preliminary $T_{1/2}$ values and tentative β -delayed neutron emission probabilities.

1989Gu03: ${}^{181}\text{Ta}({}^{48}\text{Ca},X)$ reaction with $E({}^{48}\text{Ca})=55$ MeV/nucleon. Fragments separated by the achromatic LISE spectrometer and identified using ΔE , total energy, $B\rho$, and time-of-flight measurements. Established particle stability of ${}^{41}\text{Si}$.

 ${}^{41}\text{Si}$ LevelsCross Reference (XREF) Flags

A ${}^9\text{Be}({}^{42}\text{P},X\gamma),({}^{43}\text{S},X\gamma),({}^{44}\text{S},X\gamma)$

E(level)	$T_{1/2}$	XREF	Comments
0	20.0 ms 25	A	$\% \beta^- = 100$; $\% \beta^-n > 0$ $T_{1/2}$: from implant- $\beta(t)$ (2004Gr20). Other: 15 ms 5 (preliminary value from implant- $\beta(t)$ in 1999YoZW, read off graph in Figure 1 by evaluators). J^π : $7/2^-$ proposed from systematics (2012Au07), $3/2^-$ from shell model calculations (2011Ka03). $\% \beta^-n$: preliminary result of 103 43 is given in 1999YoZW; a value greater than 100% indicates multiple neutron emission events were observed. As authors state their $\% \beta^-n$ values are tentatively deduced, the value is not adopted here. Theoretical calculations give $\% \beta^-n = 45$ (2003Mo09).
672 14		A	

 $\gamma({}^{41}\text{Si})$

$E_i(\text{level})$	E_γ	I_γ	E_f
672	672 14	100	0

Adopted Levels, GammasLevel Scheme

Intensities: Type not specified

