

$^9\text{Be}(^{208}\text{Pb},\text{X}\gamma)$     [2011St21,2014Ku23,2014Mo15](#)

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	F. G. Kondev	NDS 196,342 (2024)	1-Sep-2023

[2011St21](#):  $^{202}\text{Ir}$  produced and identified in  $^9\text{Be}(^{208}\text{Pb},\text{x})$ ,  $E=1$  GeV/nucleon from the UNILAC and SIS-18 accelerator complex at GSI. Target thickness= $2.526\text{ g/cm}^2$ , backed by a  $^{93}\text{Nb}$  foil of thickness= $0.223\text{ g/cm}^2$ . Fragments identified by the Fragment Recoil Separator (FRS), slowed in Al degraders and stopped in a plastic catcher that was surrounded by the RISING  $\gamma$ -ray spectrometer. Measured  $E\gamma$ ,  $I\gamma$  (delayed),  $\gamma(t)$ .

[2014Ku23](#), [2007KuZZ](#):  $^{202}\text{Ir}$  produced and identified in  $^9\text{Be}(^{208}\text{Pb},\text{x})$ ,  $E=1$  GeV/nucleon from the UNILAC and SIS-18 accelerator complex at GSI. Fragment Recoil Separator (FRS) was used to separate and identify the  $^{202}\text{Ir}$  residues. The  $^{202}\text{Ir}$  nuclei were implanted into an array of four double-sided silicon strip detectors with a surface of  $25\text{ cm}^2$ , 1 mm thickness. The half-life was deduced from position-time correlations between the implanted fragments and the subsequent  $\beta$  decay.

[2014Mo15](#):  $^{202}\text{Ir}$  produced and identified in  $^9\text{Be}(^{208}\text{Pb},\text{x})$ ,  $E=1$  GeV/nucleon from the UNILAC and SIS-18 accelerator complex at GSI.  $^9\text{Be}$  target of thickness  $2.5\text{ g/cm}^2$  was used. Reaction products were separated and identified by the Fragment Recoil Separator (FRS). The recoils were stopped in the RISING active stopper. Measured (ion) $\beta\gamma$ ,  $\beta\gamma(\text{ion})$  correlations, and half-lives using RISING array for  $\gamma$  rays, and Si detector arrays for particle detection.

 $^{202}\text{Ir}$  Levels

E(level)	$J^\pi$	$T_{1/2}$	Comments
0.0 $\approx 2594$	$(1^-, 2^-)$	13 s 3 3.4 $\mu\text{s}$ 6	$J^\pi, T_{1/2}$ : From Adopted Levels. E(level): From Adopted Levels. $T_{1/2}$ : From $655.9\gamma(t)+737.2\gamma(t)+889.2\gamma(t)$ in <a href="#">2011St21</a> . Experimental isomeric state population ratio= $0.7\% +2-3$ .

 $\gamma(^{202}\text{Ir})$ 

$E_\gamma^\dagger$	$I_\gamma^\dagger$	$E_i(\text{level})$
$^{x311.5}_{\ddagger} 5$	41 13	
$^{x655.9}_{\ddagger} 5$	54 17	
$^{x737.2}_{\ddagger} 5$	100 29	
$^{x889.2}_{\ddagger} 5$	51 17	
$^{x967.6}_{\ddagger} 5$	44 15	

$^\dagger$  From [2011St21](#). Uncertainty of  $\Delta E_\gamma=0.5\text{ keV}$  was assigned in consultation with Zs. Podolyak (USurrey).

$^\ddagger$   $\gamma$  ray deexcites the 3.4- $\mu\text{s}$  isomer, but the decay scheme is not known.

$^x$   $\gamma$  ray not placed in level scheme.