

Adopted Levels, Gammas

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	E. A. Mccutchan		11-Nov-2015

$Q(\beta^-)=12215$ SY; $S(n)=4625$ SY; $S(p)=20181$ SY; $Q(\alpha)=-14395$ SY [2012Wa38](#)

$\Delta Q(\beta^-)=503$; $\Delta S(n)=585$; $\Delta S(p)=711$; $\Delta Q(\alpha)=861$ ([2012Wa38](#)).

$S(2n)=7219$ syst 585; $Q(\beta^-n)=8360$ syst 503 ([2012Wa38](#)).

[2011Da08](#): ${}^{66}\text{Cr}$ produced in fragmentation of a ${}^{86}\text{Kr}$ beam at $E=57.8$ MeV/nucleon on a natural Ti target. Isotopes separated with the LISE2000 spectrometer and identified through ΔE and time-of-flight measurements. Measured $T_{1/2}$ from time correlation between implantation and β events in a DSSD detector.

[2011Li50](#): ${}^{66}\text{Cr}$ produced in fragmentation of a ${}^{86}\text{Kr}$ beam at $E=130$ MeV/nucleon on a ${}^9\text{Be}$ target. Isotopes separated with the A1900 spectrometer using ΔE and time-of-flight measurements. Measured $T_{1/2}$ from time correlation between implantation and β events in a DSSD detector.

[2005Ga01](#): ${}^{66}\text{Cr}$ produced in fragmentation of a ${}^{76}\text{Ge}$ beam at $E=61.8$ MeV/nucleon on a ${}^{58}\text{Ni}$ target. Isotopes separated with the LISE3 spectrometer using ΔE , total energy, and time-of-flight measurements. Measured $T_{1/2}$ from time correlation between implantation and β events in a DSSD detector. Subset of results presented in [2003So21](#).

[1997Be70](#): First identification of ${}^{66}\text{Cr}$ produced in projectile fission of ${}^{238}\text{U}$ on a ${}^9\text{Be}$ target with $E=750$ MeV/nucleon. Fission fragments separated with the fragment separator (FRS) and identified event-by-event using ΔE - $B\rho$ -time-of-flight and trajectory measurements. Observed 19 events corresponding to ${}^{66}\text{Cr}$ production which translates into a production cross section of 1.5 nb.

 ${}^{66}\text{Cr}$ LevelsCross Reference (XREF) Flags

A ${}^{67}\text{Mn}(P,2p\gamma)$

E(level) [†]	J^π [‡]	$T_{1/2}$	XREF	Comments
0.0	0^+	24 ms 2	A	$\% \beta^- = 100$ $T_{1/2}$: weighted average of 23 ms 4 (2011Da08 , implant- $\beta(t)$) and 24 ms 2 (2011Li50 , implant- $\beta(t)$). Others: 10 ms 6 (2005Ga01 , 2003So21 , implant- $\beta(t)$).
386 10	(2^+)		A	
1069 13	(4^+)		A	

[†] From E_γ .

[‡] From relative intensities of measured γ rays and from systematics along the Fe and Cr isotopic chains ([2015Sa43](#)).

 $\gamma({}^{66}\text{Cr})$

$E_i(\text{level})$	J_i^π	E_γ [†]	E_f	J_f^π
386	(2^+)	386 10	0.0	0^+
1069	(4^+)	683 9	386	(2^+)

[†] From ${}^{67}\text{Mg}(p,2p\gamma)$.

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