^{46}Fe β^+p decay: partial 2007Do17

History			
Type	Author	Citation	Literature Cutoff Date
Full Evaluation	T. W. Burrows	NDS 109, 171 (2008)	30-Oct-2007

Parent: ^{46}Fe: E=0; $J^\pi=0^+$; $T_{1/2}$=13.0 ms *20*; Q(β^+p)=12430 *SY*; %β^+p decay=78.7 *38*

^{46}Fe-E,J^π: From the Adopted Levels in 2000Wu08.

^{46}Fe-$T_{1/2}$: From 2007Do17. Other: 20 ms *+20−8* (1992Bo37) adopted by 2000Wu08. T_z=−3 (2007Do17).

^{46}Fe-Q(β^+p): From 2003Au03. Estimated uncertainty=620 keV (syst).

Ni(^{58}Ni,X) E=74.5 MeV/nucleon. ALPHA-LISE3 fragment separator. Fragment identification by energy loss, residual energy and tof measurements using two micro-channel plate (MCP) detectors and Si detectors. Double-sided silicon-strip detectors (DSSSD) and a thick Si(Li) detector were used to detect implanted events, charged particles and β particles. γ's detected by four Ge detectors. Coincidences measured between charged particles and γ's.

All information is from 2007Do17, except as noted.

^{45}Cr Levels

E(level)	J^π[†]	$T_{1/2}$	Comments
0.0	(7/2$^-$)	60.9 ms *4*	%β^+=100; %β^+p=34.4 *8* T=(3/2) E(level),J^π,$T_{1/2}$,T,%β^+,%β^+p: from the Adopted Levels.
0+x	(3/2$^+$)		
494+x	(5/2$^+$)		

[†] From the mirror nucleus ^{45}Sc, except as noted.

γ(^{45}Cr)

E_γ	I_γ[†]	E_i(level)	J_i^π	E_f	J_f^π
493.6 *4*	23 *8*	494+x	(5/2$^+$)	0+x	(3/2$^+$)

[†] Absolute intensity per 100 decays.

Delayed Protons (^{45}Cr)

E(p)	E(^{45}Cr)	I(p)[†]	E(^{46}Mn)
1457 *28*		10 *3*	
1692 *23*		4 *4*	
3272 *23*		6.1 *25*	
4239 *33*	494+x	7.9 *32*	5017

[†] Absolute intensity per 100 decays.

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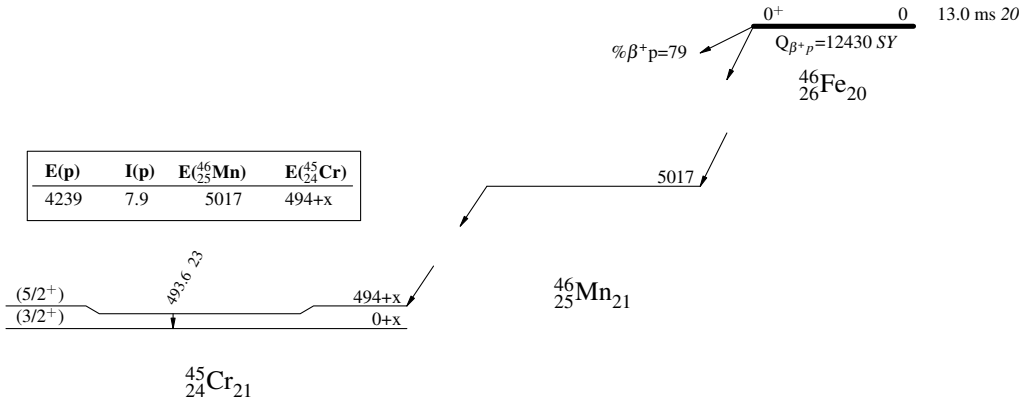
Decay Scheme

γ Intensities: I_γ per 100 parent decays
I(p) Intensities: I(p) per 100 parent decays



E(p)	I(p)	E($^{46}_{25}$Mn)	E($^{45}_{24}$Cr)
4239	7.9	5017	494+x