

Adopted Levels

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

$Q(\beta^-)=1.44\times 10^4$ 7; $S(n)=2.9\times 10^3$ 7; $S(p)=2.17\times 10^4$ *syst*; $Q(\alpha)=-1.85\times 10^4$ 8 [2012Wa38](#)

Note: Current evaluation has used the following Q record 14.37E+3 692960 710 2.07e+412-1.85×10⁴ 8 [2007Ju03,2003Au03](#).

Δ' (^{45}S)= -3990 keV 690 ([2007Ju03](#)). See [2000Sa21](#) for experimental details) compared to -3.25 MeV 174 ([2003Au03](#)).

$Q(\beta^-)$: from Δ' (^{45}S) and Δ' (^{45}Cl)= -18.36 MeV 10 ([2007Ju03](#)). Other: 15.1 MeV 18 ([2003Au03](#)).

$S(n)$: from Δ' (^{45}S) and Δ' (^{44}S)= 9100 keV 140 ([2007Ju03](#)) and Δ' (^1n)= 8071 ([2003Au03](#)). Other: 2.2 MeV 18 ([2003Au03](#)).

$S(p)$: from Δ' (^{45}S) and Δ' (^{44}P)= 9380 keV 900 ([2007Ju03](#)) and Δ' (^1H)= 7289 keV ([2003Au03](#)). Other: 22.6 MeV 18 ([2003Au03](#); *syst*).

$Q(\alpha)$: from Δ' (^{45}S) and Δ' (^{41}Si)= 12.12 MeV 37 ([2007Ju03](#)) and Δ' (^4He)= 2425 keV ([2003Au03](#)). Other: -19.2 MeV 26 ([2003Au03](#)).

$Q(\beta^-n)$ = 8.16 MeV 70 from Δ' (^{45}S) ([2007Ju03](#)) and Δ' (^{44}Cl)= -20.23 MeV 11 and Δ' (^1n)= 8071 keV ([2003Au03](#)). Other: 8.91 MeV 175 ([2003Au03](#)).

[1995So03](#): $^{64}\text{Ni}(^{48}\text{Ca},\text{X})$ E=60 MeV/u. Selection by LISE3 spectrometer. Identification by ΔE -tof in three silicon detectors.

Measured β^-n coincidences (Si and nearly 4π ^3He neutron detectors). 111 β^-n coincidences.

[2004Gr20,2003Gr22](#): $\text{Be}(^{48}\text{Ca},\text{X})$ E=60 MeV/u. Selection by LISE3 spectrometer. Identification by ΔE -tof (PPAC's, DSDD).

Measured β^- 's (plastic scintillators).

Other: [1988GuZV](#).

 ^{45}S Levels

E(level)	$T_{1/2}$	Comments
0	68 ms 2	$\% \beta^- = 100$; $\% \beta^- n = 54$ J^π : 2003Au02 suggest $3/2^+$ based on systematics. $T_{1/2}$: from 2004Gr20 . Other: 82 ms 13 (1995So03). $\% \beta^- n$: From 1995So03 .