Adopted Levels

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia	NDS 113,909 (2012)	1-Jan-2012

Q(β^-)=2.12×10^4 *syst*; S(n)=1.4×10^3 *syst*; S(p)=1.97×10^4 *syst*; Q(α)=−1.88×10^4 *syst* 2012Wa38
Note: Current evaluation has used the following Q record 21552 SY1234 syst 20237 syst −18978 syst 2011AuZZ.
ΔQ(β^-)=586(syst), ΔS(n)=766(syst), ΔS(p)=906(syst), ΔQ(α)=766(syst) 2011AuZZ.
2003Au03: Q(β^-)=22200 *600*(syst), S(n)=1000 *800*(syst), S(p)=20800 *800*(syst), Q(α)=−18600 *800*(syst).

1989Gu03: New isotope ^{29}F was produced and identified from the Ta(^{48}Ca,X) reaction, E=55 MeV/u.

2000Oz01: Measured ^{29}F production cross-sections: σ_f=0.027 nb 14 from ^{40}Ar fragmentation, E=1.06 GeV/u, on Be target.

1999Re16,2001Pe14,1997Ta22: ^{29}F was produced from fragmentation of 2.8 GeV ^{36}S beam on a Ta target; separated in-flight using LISE spectrometer at GANIL and identified through time-of-flight and energy loss measurements. Measured β-delayed γ-rays, β-γ coincidence, and half-life.
1999Dl01: Fragmentation of ^{36}S beam, E-75 MeV/u, on natural C and ^{181}Ta targets; isotopes separated in-flight using LISE spectrometer at GANIL and identified through time-of-flight and energy loss measurements. Measured yields of different isotope production, also measured β^- delayed γ-rays and half-life. Second experiment was also performed at JNIR, Dubna: ^{32}S and ^{34}S beams, 6<E<20 MeV/u, on natural C and ^{197}Au targets, the yields of various isotopes were measured using the MSP-144 magnetic spectrometer with a position- sensitive ionization chamber.
1998NoZZ: ^{29}F was produced from the projectile-like fragmentation of a 95 MeV/u ^{40}Ar beam on a ^{181}Ta target; fragments were identified by time-of-flight and energy loss measurements, two plastic scintillation counters, two surface barrier Si detectors, and three Si(Li) detectors, half-life was measured from β^- decay measurements.

^{29}F Levels

E(level)	$T_{1/2}$	Comments
0.0	2.5 ms *3*	%β^-=100; %β^-n=100 *80* $T_{1/2}$: weighted average of 2.4 ms *4* (1999Dl01), 2.6 ms *4*(1998NoZZ) and 2.4 ms *8* (2001Pe14,1997Ta22). Other value: 2.9 ms *8* (1999Re16 − appears to be from the same experiment in 1997Ta22). %β^-n: From 1999Dl01. J^π: systematics: 5/2$^+$ (2003Au02), 3/2$^+$ (1997Mo25).