

Adopted Levels, Gammas

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Yu. Khazov, A. Rodionov and G. Shulyak		NDS 136, 163 (2016)	14-Jul-2016

Q(β^-)=9370 40; S(n)=3580 40; S(p)=11360 40; Q(α)=-3220 SY 2012Wa38

$\Delta Q(\alpha)$ =380 (syst, 2012Wa38).

Q(β^-n)=3880 40 (2012Wa38).

Produced and identified by 1971Tr02 (1970K1ZZ), 50 MeV proton induced fission of ²³⁸U, on-line mass spectrometer.

Measured β , $\beta\gamma$ coin (1981De25,1981Ke07,1982Pa24,1986Gr11,1988GrZX); deduced Q(β).

2015YaZW: neutron rich Cs isotopes were produced at RIBF-RIKEN facility in ⁹Be(²³⁸U,F) reaction at E=345 MeV/nucleon.

Identification of Cs isotopes was made by determining atomic Z and mass-to-charge ratio. The selectivity of ions was based on magnetic rigidity, time-of-flight and energy loss. The separated nuclei were implanted at in a stack of eight double-sided silicon-strip detector (WAS3ABi), surrounded by EURICA array of 12 cluster-type Ge detectors. with 7 crystals. Isomer of ¹⁴⁶Cs at 47 keV was found, half-life of this state was measured.

Measurement of atomic mass: 2013Va12; CARIBU facility.

¹⁴⁶Cs Levels

E(level)	J π	T _{1/2}	Comments
0.0	1 ⁻	0.3220 s 13	$\%_{\beta^-}$ =100; $\%_{\beta^-n}$ =14.2 5 T _{1/2} : weighted average of 0.322 s 1 (1983Re10), 0.321 s 2 (1993Ru01), 0.343 s 7 (1976Lu02), 0.325 s 10 (1979Ri09), 0.300 s 20 (2003Be05), 0.305 s 10 (1978Wo09), 0.38 s 5 (1981En05), 0.352 s 42 (1974Ro15), 0.28 s 3 (1976ReZN) (n(t), β (t) methods). J π : from hfs (1987Co19); π from μ . $\%_{\beta^-n}$: weighted average of 15.1% 6 (1993Ru01), 14.2% 17 (1974Ro15,1975Iz03), 13.1% 13 (1981En05), 13.2% 8 (1979Ri09), 11.3% 25 (1983Re10). Average E(n)=530 keV 70 (1977Re06). μ : -0.515 2 (atomic beam laser spectroscopy, 1987Co19). Q: +0.22 3 (atomic beam laser spectroscopy, 1987Co19).
47		1.25 μ s 5	T _{1/2} : from timing of γ -line of isomer transition.

γ (¹⁴⁶Cs)

E _i (level)	E _{γ}	E _f	J π_f
47	47	0.0	1 ⁻

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