

Adopted Levels

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Jun Chen, John Cameron and Balraj Singh		NDS 112,2715 (2011)	20-Oct-2011

$S(n)=1.71\times 10^4$ SY; $S(p)=1.3\times 10^3$ SY; $Q(\alpha)=-8.9\times 10^3$ SY [2012Wa38](#)

Note: Current evaluation has used the following Q record.

Estimated uncertainties: $\Delta S(n)=\Delta S(p)=357$, $\Delta Q(\alpha)=284$ ([2011AuZZ](#)).

$Q(\epsilon p)=15876$ 196, $S(2p)=406$ 196 ([2011AuZZ](#)); both from systematics.

Values in [2003Au03](#): $S(n)=16620$ 360, $S(p)=1210$ 360, $Q(\alpha)=-9120$ 280, $S(2p)=590$ 200; all from systematics.

$S(n)=17135$ SY; $S(p)=1281$ SY; $Q(\alpha)=-8931$ SY [2011AuZZ](#)

First isotope identification by [1985Ay01](#).

[1985Ay01](#): ^{35}Ca produced by bombarding a 2 mg/cm² natural calcium target with 135 MeV ^3He beam of 3-7 μA from the 88 inch cyclotron at the Lawrence Berkeley Laboratory. Measured Ep, Ip. Deduced mass excess (4453 keV 60).

[1986La17](#): $E=77.4$ MeV/nucleon ^{40}Ca beam from GANIL on Ni target. A four stage telescope (two 1000 μm Si detectors and two 4000 μm Si(Li) detectors) for detecting fragments. Measured fragment spectra. Deduced fragment mass, charge distribution.

[1999Tr04](#), [1998Le45](#): ^{35}Ca (98% purity, 0.3 ions/s) beam produced by fragmentation of a 95 MeV/nucleon $^{40}\text{Ca}^{20+}$ beam of 400 enA on a rotating 500 μm natural Ni target, and implanted into a 500 μm silicon detector for detecting βp and $\beta 2p$ decays. Two silicon counters for detecting β -rays and three Ge detectors and two NaI detectors for detecting γ -rays. Measured $\beta p\gamma$ -coin, Ep, Ip, $T_{1/2}$. Deduced levels for ^{35}K .

Mass measurements: [1985Ay01](#).

Structure calculations (binding energies, separation energies, quadrupole moments, mass excess, etc.): [2003Sm02](#), [1998Co30](#).

[Additional information 1](#).

 ^{35}Ca Levels

E(level)	J^π	$T_{1/2}$	Comments
0	(1/2 ⁺)	25.7 ms 2	$\% \epsilon + \% \beta^+ = 100$; $\% \epsilon p = 95.9$ 14; $\% \epsilon 2p = 4.1$ 6 $T_{1/2}$: from decay curve of β -delayed protons in 1999Tr04 . Other: 50 ms 30 from 1985Ay01 . J^π : probable mirror state of 1/2 ⁺ ground state of ^{35}P . $\% \epsilon p$, $\% \epsilon 2p$: from 1999Tr04 .