Adopted Levels

History

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

S(n)=1.71×10^4 *syst*; S(p)=1.3×10^3 *syst*; Q(α)=−8.9×10^3 *syst* 2012Wa38
Note: Current evaluation has used the following Q record 17135 syst 1281 syst-8931 syst 2011AuZZ.
Estimated uncertainties: ΔS(n)=ΔS(p)=357, ΔQ(α)=284 (2011AuZZ).
Q(εp)=15876 *196*, S(2p)=406 *196* (2011AuZZ); both from systematics.
Values in 2003Au03: S(n)=16620 *360*, S(p)=1210 *360*, Q(α)=−9120 *280*, S(2p)=590 *200*; all from systematics.
First isotope identification by 1985Ay01.
1985Ay01: ^{35}Ca produced by bombarding a 2 mg/cm^2 natural calcium target with 135 MeV ^{3}He 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}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 β2p decays. Two silicon counters for detecting β-rays and three Ge detectors and two NaI detectors for detecting γ-rays. Measured βpγ-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*	%ε+%β^+=100; %εp=95.9 *14*; %ε2p=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. %εp, %ε2p: from 1999Tr04.