Adopted Levels

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Alexandru Negret, Balraj Singh	NDS 124, 1 (2015)	30-Nov-2014

$Q(\beta^-)$=15300 *SY*; S(n)=2460 *SY*; S(p)=15910 *SY*; $Q(\alpha)$=−11210 *SY*   2012Wa38

$\Delta Q(\beta^-)$=ΔS(n)=760, ΔS(p)=990, $\Delta Q(\alpha)$=1060 (syst,2012Wa38).

S(2n)=6320 *810*, $Q(\beta^-$n)=10600 *700* (syst,2012Wa38). S(2p)=34850 (calculated, 1997Mo25).

1997Be70: ^{86}Ga produced and identified in ^{9}Be(^{238}U,F) reaction at E=750 MeV/nucleon at GSI. Identification by Fragment-Recoil Separator (FRS) and time-of-flight. A total of 4 events were assigned to ^{86}Ga.

2013Mi19, 2014Gr03: proton beam was provided by the Oak Ridge Isochronous Cyclotron (ORIC) at the HRIBF-ORNL facility. Target=UC$_x$. Mass analyzed ions of ^{86}Ga were extracted using Resonant Ionization Laser Ion Source (RILIS). Pure ^{86}Ga beam was then sent to the Low-energy Radioactive Ion Beam Spectroscopy Station (LeRIBSS) and implanted in a moving tape collector (MTC). Measured Eγ, Iγ, Eβ, $\beta\gamma$-coin, nγ-coin, half-life of ^{86}Ga, P$_n$, P$_{2n}$ using two HPGe Clover detectors, two plastic scintillation counters for β, and an array of 48 ^{3}He ionization chambers for neutron detection. Comparison of measured half-life, P$_{1n}$ and P$_{2n}$ with predictions from several calculations such as FRDM+QRPA, FRDM+QRPA2, DF3a+CQRPA, DF3a+CQRPA+fragmentation of β strength; FRDM=finite range droplet model, CQRPA=continuum quasiparticle random phase approximation; DF=density functional.

^{86}Ga Levels

E(level)	$T_{1/2}$	Comments
0.0	43 ms +*21−15*	%β^-=100; %β^-n=60 *10* (2013Mi19); %β^-2n=20 *10* (2013Mi19,2014Gr03) $T_{1/2}$: measured value from decay curves of five γ rays (2013Mi19). Theoretical values vary from 26 to 128 ms (2013Mi19). %β^-n,%β^-2n: from measurement by 2013Mi19, 2014Gr03. Theoretical values vary from 20 to 61 for %β^-n, and 12 to 44 for %β^-2n (2013Mi19). Other theoretical values: %β^-n=60.6 (1997Mo25), 67.2, 100 (2002Pf04); %β^-2n=13.3 (1997Mo25). Systematic (KHF) value of %β^-n=42.4 (2002Pf04).