^{9}Be(^{48}Ca,^{38}Alγ) 2015St14

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Jun Chen	NDS 152, 1 (2018)	30-Sep-2017

2015St14: ^{38}Al ions were produced by fragmentation of a 345 MeV/nucleon ^{48}Ca beam from the RIBF facility at RIKEN on a 15 mm beryllium target. Fragments were separated and identified using the BigRIPS spectrometer and the zero-degree spectrometer (ZDS), with energy loss measured by a multi-sampling ionization chamber (MUSIC) and positions by PPACs. The selected ions were implanted into the CAITEN detector (Cylindrical Active Implantation Target for Exotic Nuclei), consisting of a segmented movable hollow-cylindrical-shape plastic scintillator and a stationary ring of 24 position-sensitive photomultiplier tubes (PSPMTs). γ rays were detected by three HPGe detectors. Measured $\beta\gamma$(t). Deduced half-life.

2004Gr20 (also 2003Gr22,1995Pe19): E=60 MeV/nucleon, tof method, measured half-life by timing of β(^{38}Al implants) coin.

^{38}Al Levels

E(level)[†]	J$^{\pi}$[†]	T$_{1/2}$[‡]
0	(0$^-$)	9.0 ms *7*
0+x	(5$^-$)	9.0 ms *7*

[†] Shell-model calculations predicts a 0$^-$ ground state and a low-lying 5$^-$ first excited state (2015St14). The authors argue that the proposed 3703-keV level in ^{38}Si from ^{38}Al β^- decay could be strongly populated by the decay of isomer while the observed 3656-keV transition could be from the decay of ground state. Brackets around J^{π} were added by the evaluator.

[‡] From β-delayed 418γ(t), 1074γ(t), 1159γ(t) and 1470γ(t) in ^{38}Al β^- decay (2015St14). These γ-ray transitions could be from β-decay of ^{38}Al (0$^-$) ground state or (5$^-$) isomer or both and thus the evaluator assigned the measured value of T$_{1/2}$ to both states. Other: 7.6 ms *6* for g.s. in 2004Gr20.