^{7}Li(^{98}Rb,α3nγ) 2015Bo11

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	Jun Chen, Balraj Singh	NDS 164, 1 (2020)	15-Feb-2020

2015Bo11 (also 2014Bo09): E=2.85 MeV/nucleon ^{98}Rb beam was produced from the REX-ISOLDE facility, with a strong isobaric ^{98}Sr component present in the ^{98}Rb beam. Target was 1.5 mg/cm^2 LiF enriched in ^{7}Li. Charged particles were detected with the T-REX Si detector system with two layers as a ΔE-E telescope for particle identification, and γ rays were detected with the HPGe MINIBALL array consisting of 24 sixfold segmented HPGe crystals. Measured Eγ, $\gamma\gamma$-coin, (particle)γ-coin, $\sigma(\theta)$. Discussed reaction mechanism in terms of transfer of a cluster-like particle within a distorted-wave Born approximation framework.

^{98}Sr Levels

E(level)	J$^\pi$[†]
0	0$^+$
144	2$^+$
433	4$^+$
866	6$^+$

[†] From Adopted Levels.

γ(^{98}Sr)

2015Bo11 report transitions of 144, 289, and 433 keV. They assign the 144-keV transition (observed in both ^{7}Li(^{98}Sr,^{98}Sr′γ) and ^{7}Li(^{98}Rb,α3nγ) reactions) from the decay of the first 2$^+$ level in ^{98}Sr. The 289 and 433 transitions, observed only in ^{7}Li(^{98}Rb,α3nγ) reaction, have been assigned by evaluators, based on the Adopted Levels.

E$_\gamma$	E$_i$(level)	J$_i^\pi$	E$_f$	J$_f^\pi$
144[†‡]	144	2$^+$	0	0$^+$
289[‡]	433	4$^+$	144	2$^+$
433[‡]	866	6$^+$	433	4$^+$

[†] Observed in coincidence with scattered ^{7}Li particles.
[‡] Observed in coincidence with α particles.

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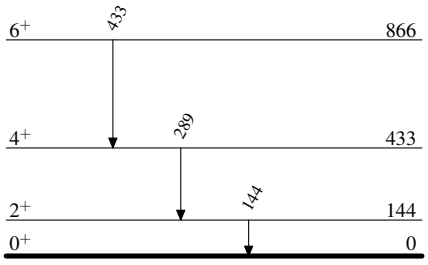
Level Scheme



$^{98}_{38}Sr_{60}$