^{9}Be(^{13}C,α^{13}C) 2009Mi23

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	C. G. Sheu, J. H. Kelley, J. Purcell	ENSDF	5-Aug-2021

2009Mi23: XUNDL dataset compiled by TUNL, 2009.

The authors used resonant particle spectroscopy to analyze the center of mass energy spectrum of ^{13}C + α particles detected following ^{9}Be(^{13}C,^{13}C+X) reactions at E(^{13}C)=90 MeV. The ^{13}C ions were measured in a position sensitive ΔE-E telescope, while the α-particles were detected in an array of position sensitive ΔE detectors; α-particles are the only stable particles that can be in coincidence with ^{13}C. The ^{13}C ground state and ^{13}C*(≈3.7 MeV) participate in the reaction.

^{17}O Levels

E(level)[†]	Comments
10.8×10^{3}	
12.0×10^{3}	E(level): broad: likely unresolved multiplet including ^{17}O*(11.82,12.00,12.22,12.42 MeV).
13.6×10^{3}	E(level): strongest population of this state is consistent with configuration=^{16}O (6^{+},16.29 MeV)⊗$p_{1/2}$ in a weak coupling scheme.
14.9×10^{3}	
19.0×10^{3}	The evaluator associates this level with the E_x=19.6 MeV level.

[†] From (2009Mi23).