
Ta($^{48}\text{Ca}, ^{19}\text{B}$) [2012Ga45](#)

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	G. C. Sheu, J. H. Kelley		ENSDF	25-Oct-2018

[1991Mu19](#): ^{19}B and several other nuclei were identified in the fragmentation products of a 44 MeV/nucleon ^{48}Ca beam impinging on a 173 mg/cm² Ta target at GANIL using ΔE vs. time-of-flight method. The LISE spectrometer was fixed at 0° with respect to the incident beam and provided the momentum resolution $\Delta B_{\rho}/B_{\rho}=1.3\times 10^{-3}$.

[2012Ga45](#): XUNDL dataset compiled by TUNL, 2012.

A beam of E=60 MeV/nucleon ^{48}Ca was fragmented on a ^{nat}Ta target that was located between the SISSI solenoid spectrometers at GANIL. The ejectiles were transported 82 m to the focal plane of the SPEG spectrometer where they were identified by ΔE -E and their magnetic rigidity was determined. Furthermore their time-of flight was measured for the path between the SPEG spectrometer and a micro-channel plate detector located after a set of dipole magnets that followed the production target. Two sets of field settings ($B_{\rho}=2.4$ Tm and 2.88 Tm) were used to reduce systematic uncertainties. Masses were determined for a set of calibration nuclei and nuclei of interest.

The ^{19}B mass excess $\Delta M=59.77$ MeV 35 was deduced from momentum and time-of-flight.

[1991Or01](#): A typo is present in Table 1, giving ^{19}B . However the observed nucleus and ΔM are related to ^{19}C .

 ^{19}B Levels

E(level)	Comments
0	$\Delta M=59.77$ MeV 35 deduced from momentum and time-of-flight (2012Ga45). (2017Wa10 : AME2016) gives $\Delta M=59.77$ MeV 53.