

$^{181}\text{Ta}(^{40}\text{Ar},^{20}\text{N})$ **1986Gi10,1987Gi05**

<u>Type</u>	<u>Author</u>	<u>History</u>	<u>Citation</u>	<u>Literature Cutoff Date</u>
Full Evaluation	C. G. Sheu, J. H. Kelley		ENSDF	31-Dec-2018

1986Gi10: The authors measured the masses of several nuclides, produced in the fragmentation of 44 MeV/nucleon ^{40}Ar ions on a 160 mg/cm² $^{\text{nat}}\text{Ta}$ target at GANIL, by measuring their time-of-flight over a 116 meter flight path that allowed them to achieve an accuracy down to a few 10^{-5} . The nuclides were detected and identified in the SPEG spectrometer focal plane.

The ^{20}N mass excess $\Delta M=22.20$ MeV *36* was deduced.

1987Gi05: The authors measured the masses of several nuclides, produced in the fragmentation of 60 MeV/nucleon ^{40}Ar ions on a 350 mg/cm² $^{\text{nat}}\text{Ta}$ target at GANIL, by measuring their time-of-flight over a roughly 80 meter flight path. The nuclides were detected and identified in the SPEG spectrometer focal plane. A mass resolution near 5×10^{-4} was achieved.

The ^{20}N mass excess $\Delta M=21.62$ MeV *14* was deduced.

2012Kw02: Several light neutron-rich nuclides, produced by projectile fragmentation of an ^{40}Ar beam at $E=140$ MeV/nucleon, bombarded one of three targets, 668 mg/cm² ^9Be , 775 mg/cm² $^{\text{nat}}\text{Ni}$, and 1086 mg/cm² ^{181}Ta at the National Superconducting Cyclotron Laboratory (NSCL). Fragments were momentum analyzed using the A1900 separator and identified at the final focus using time-of-flight and a telescope consisting of five Si ΔE detectors. The fragmentation cross sections, parallel momentum transfers, and parallel momentum distribution widths were measured and compared to the theoretical predictions.

 ^{20}N LevelsE(level)

0