

^{243}Np

In the 1979 paper “(t, α) reaction on actinide nuclei and the observation of ^{243}Np ” Flynn et al. identified ^{243}Np ([1979FI02](#)). A ^{244}Pu target was bombarded with 17 MeV tritons from the Los Alamos FN Van de Graaff facility populating ^{243}Np in (t, α) reactions. ^{243}Np was identified by measuring the ejectiles with a quadrupole-dipole-dipole spectrometer. “An extrapolation of ground state masses of the lighter neptuniums would suggest a Q value of 12.5 ± 0.1 . The observed Q value of the highest energy alpha group was 12.405 ± 0.010 MeV, which corresponds to a ^{243}Np mass of 243.064330 u for this state.” The first half-life measurement was reported eight years later by Moody et al. ([1987Mo29](#)) claiming discovery of ^{243}Np without quoting the work by Flynn et al.

Adapted from reference ([2013Fr02](#))

- [1979FI02](#) E. R. Flynn, D. L. Hanson, and R. A. Hardekopf, Phys. Rev. C **19**, 355 (1979).
[1987Mo29](#) K. J. Moody, W. Bruchle, M. Brugger, H. Gaggeler *et al.*, Z. Phys. A **328**, 417 (1987).
[2013Fr02](#) C. Fry and M. Thoennessen, At. Data Nucl. Data Tables **99**, 96 (2013).

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