^{192}Pb

The first observation of ^{192}Pb was reported by Le Beyec et al. in 1974 in "New neutron deficient Pb and Bi nuclides produced in cross bombardments with heavy ions" (1974Le02). Fluorine and oxygen beams with energies up to 10.4 MeV/nucleon were accelerated by the Berkeley HILAC and bombarded self-supporting tantalum foils and WO_3 targets enriched in ^{182}W, respectively. Excitation function were recorded and α-decay energies and half-lives were measured. "^{192}Pb: E_α=5.06$\pm$0.03 MeV, ($t_{1/2}$=2.3$\pm$0.5 min) In the case of Bi, the excitation energy necessary for the emission of eight neutrons was around 100 MeV. Since the neutron binding energies for ^{192}Pb to ^{200}Pb are very close to binding energies for ^{193}Bi$-^{201}$Bi, one might deduce that at E^* = 105 MeV, the peak of the excitation function of the 5.06-MeV α ray obtained in the ^{181}Ta(^{19}F,xn)-induced reaction corresponds to x=8, and therefore to ^{192}Pb." Similar results were already included in an overview article by Eskola (1967Es05), quoting a private communication by Siivola.

Adapted from reference (2013Fr04)

1967Es05 P. Eskola, Ark. Fys. **36**, 477 (1967).

1974Le02 Y. Le Beyec, M. Lefort, J. Livet, N. T. Porile, and A. Siivola, Phys. Rev. C **9**, 1091 (1974).

2013Fr04 C. Fry and M. Thoennessen, At. Data Nucl. Data Tables **99**, 365 (2013).

Please cite this abstract as: "FRIB Nuclear Data Group, *Discovery of Nuclides Project*, Isotope Database, doi:10.11578/frib/2279152"