^{178}Ir

In 1972, Akhmadzhanov et al. reported the discovery of ^{178}Ir in the paper "The new isotopes ^{178}Ir, ^{180}Ir, ^{181}Ir. Decay scheme for ^{182}Ir" (1972Ak03). A 140 MeV ^{16}O beam from the JINR U-300 accelerator bombarded thulium targets and ^{178}Ir was formed in the fusion-evaporation reaction ^{169}Tm(^{16}O,7n). Gamma-rays singles, $\gamma-\gamma$-coincidence spectra and decay curves were measured. "The ^{178}Ir was obtained by irradiating metallic thulium with ^{16}O ions having a maximum energy of 140 MeV for 0.5−1.0 min. Measurement of the γ-spectra was begun 5 sec after the end of irradiation. This isotope was identified on the basis of the γ-transitions $6^+ \rightarrow 4^+ \rightarrow 2^+ \rightarrow 0^+$ between the levels of the ground-state band of the ^{178}Os daughter nucleus, having energies of 363.1, 266.1, and 131.6 keV. The decay half-life of ^{178}Ir determined from these γ-transitions is 0.5±0.3 min."

Adapted from reference (2012Ro36)

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