^{120}Ba

In 1974, Conrad et al. reported the observation of ^{120}Ba in their article "Quasi-Rotational Bands in Neutron Deficient Doubly Even Ba Isotopes" (1974Co36). ^{120}Ba was produced in the fusion evaporation reaction ^{106}Cd(^{16}O,2n) by bombarding cadmium with a 66 MeV oxygen beam provided by the MP Tandem of the Max-Planck-Institut für Kernphysik in Heidelberg, Germany. The isotope was identified by charged-particle-, neutron-, and gamma-gamma coincidence measurements: "To identify ^{120}Ba, which has 18 neutrons less than the most abundant barium isotope, neutron-gamma coincidences had to be applied in addition to charged particle and gamma-gamma coincidence measurements. The upper limit for the lifetime of the ground state of ^{120}Ba is 90 sec." The first three γ-transitions in ^{120}Ba were measured.

Adapted from reference (2010Sh20)

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