^{122}Ba

In 1974, Conrad et al. reported the observation of ^{122}Ba in their article "Quasi-Rotational Bands in Neutron Deficient Doubly Even Ba Isotopes" (1974Co36). ^{122}Ba was produced in the fusion evaporation reaction ^{108}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 gamma-gamma coincidence measurements: "Up to now a level scheme of ^{122}Ba has not been published. For the lifetime of the ground state a value between 2.5 and 5 sec has been suggested (1967DaZY). From our data the partial level scheme shown in [the figure] was obtained." The first six γ-transitions of the ground state band in ^{122}Ba were measured.

Adapted from reference (2010Sh20)

1967DaZY J. M. D'Auria, Thesis, Yale Univ. (1967).

1974Co36 J. Conrad, R. Repnow, E. Grosse, H. Homeyer *et al.*, Nucl. Phys. A **234**, 157 (1974).

2010Sh20 A. Shore, A. Fritsch, J. Q. Ginepro, M. Heim *et al.*, At. Data Nucl. Data Tables **96**, 749 (2010).

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