^{6}Be

An unbound state of ^{6}Be was first observed by Bogdanov et al. in 1958 "The (p,n) reaction on lithium and the ground state of the ^{6}Be nucleus" (1958Bo78). 9.6 MeV protons from the U.S.S.R. Academy of Sciences Nuclear Energy Institute 1.5 m cyclotron bombarded an enriched ^{6}Li target and ^{6}Be was produced in the (p,n) charge exchange reaction. ^{6}Li was identified by measuring the neutron time-of-flights in stilbene and tolane crystal scintillation counters. "The Q-value of the reaction ^{6}Li(p,n)^{6}Be (ground state) deduced from the experimental data is: Q = -5.2 ± 0.2 MeV and the mass defect of ^{6}Be is 20.3 ± 0.2 MeV." A previously reported half-life assigned to either ^{6}Be or ^{4}Li of 0.4 s (1954Ty33) could not be confirmed.

Adapted from reference (2012Th01)

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