^{15}Be

An unbound resonance of ^{15}Be was first reported by Snyder et al. in "First observation of ^{15}Be" in 2013. (2013Sn02). It was populated using a neutron transfer reaction from a deuterated polyethylene target with a 59 MeV/u ^{14}Be secondary beam from the Coupled Cyclotron facility at the National Superconducting Cyclotron Laboratory at Michigan State University. The Modular Neutron Array (MoNA) was used to detect neutrons in coincidence with ^{14}Be fragments deflected by a large-gap dipole magnet: "Neutrons were measured in coincidence with outgoing ^{14}Be particles and the reconstructed decay energy spectrum exhibits a resonance at 1.8(1) MeV." ^{15}Be was expected to be unbound with respect to neutron emission because the heavier isotone ^{16}B had been shown to be unbound (1974Bo05). A previous search for an unbound resonance in ^{15}Be was unsuccessful (2011Sp01).

Adapted from reference (2014Th03)

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