

¹³Be

An unbound resonance in ¹³Be was first reported in 1983 by Aleksandrov et al. in “Observation of the isotope ¹³Be in the reaction ¹⁴C(⁷Li,⁸B)” (1983A120). An 82 MeV ⁷Li beam accelerated by the Kurchatov Institute Isochronous Cyclotron bombarded a self-supporting ¹⁴C target. ¹³Be was identified by measuring charged particles in a Δ-E, transmission E and anti-coincidence energy telescope. “...This permits one to conclude that the observed maximum in the reaction ¹⁴C(⁷Li,⁸B) is due to the formation of the residual nucleus ¹³Be... On the basis of the calibration carried out, it was found that the mass defect of the ¹³Be nucleus is 35±0.5 MeV and consequently the isotope ¹³Be is unstable by 1.8 MeV against the decay ¹³Be → ¹²Be + n.” The instability of ¹³Be was demonstrated by Poskanzer et al. in 1968 (1968Po04).

Adapted from reference (2012Th01)

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