

¹¹⁷La

“New strongly deformed proton emitter: ¹¹⁷La” was published in 2001 by Soramel et al. documenting the first observation of ¹¹⁷La (2001So02). The reaction ⁶⁴Zn(⁵⁸Ni,p4n)¹¹⁷La with a 310 MeV ⁵⁸Ni beam from the Legnaro Tandem + LINAC accelerator was used and ¹¹⁷La was identified with a recoil mass spectrometer and a double sided silicon strip detector placed at the focal plane. “The nucleus has two levels that decay to the ground state of ¹¹⁶Ba with $E_p=783(6)$ keV [$T_{1/2}=22(5)$ ms] and $E_p=933(10)$ keV [$T_{1/2}=10(5)$ ms].” Less than six months later Mahmud et al. (2001Ma69) and most recently Liu et al. (2011Li28) confirmed the observation of the ground state but found no evidence for the isomeric state.

Adapted from reference (2012Ma48)

- 2001Ma69 H. Mahmud, C. N. Davids, P. J. Woods, T. Davinson *et al.*, Phys. Rev. C **64**, 031303 (2001).
- 2001So02 F. Soramel, A. Guglielmetti, L. Stroe, L. Muller *et al.*, Phys. Rev. C **63**, 031304 (2001).
- 2011Li28 Z. Liu, D. Seweryniak, P. J. Woods, C. N. Davids *et al.*, Phys. Lett. B **702**, 24 (2011).
- 2012Ma48 E. May and M. Thoennessen, At. Data Nucl. Data Tables **98**, 960 (2012).

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