^{128}Nd

In 1985, ^{128}Nd was identified by Lister et al. in "Deformation of Very Light Rare-Earth Nuclei" (1985Li13). A ^{40}Ca beam from the Daresbury Laboratory Van de Graaff accelerator was incident on a ^{92}Mo target and ^{128}Nd was produced in the fusion-evaporation reaction ^{92}Mo(^{40}Ca,2p2n). Gamma rays, neutrons and charged particles were detected and new ground-state bands observed. "This letter reports results on the ground-state bands in the even-even nuclei $^{128}_{58}$Ce$_{68}$, $^{128,130,132}_{60}$Nd$_{68,70,72}$, $^{134,136}_{62}$Sm$_{72,74}$, and $^{138,140}_{64}$Gd$_{74,76}$." An earlier identification and half-life measurement of 4(2) s (1983Ni05) was later reassigned to ^{128}Pr (1985Wi07).

Adapted from reference (2012Gr02)

1983Ni05 J. M. Nitschke, M. D. Cable, and W. D. Zeitz, Z. Phys. A **312**, 265 (1983).

1985Li13 C. J. Lister, B. J. Varley, R. Moscrop, W. Gelletly *et al.*, Phys. Rev. Lett. **55**, 810 (1985).

1985Wi07 P. A. Wilmarth, J. M. Nitschke, P. K. Lemmertz, and R. B. Firestone, Z. Phys. A **321**, 179 (1985).

2012Gr02 J. L. Gross, J. Claes, J. Kathawa, and M. Thoennessen, At. Data Nucl. Data Tables **98**, 75 (2012).

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