

## <sup>159</sup>Sm

<sup>159</sup>Sm was discovered in 1986 by Mach et al. with the results published in their paper titled “Identification of four new neutron rare-earth isotopes” (1986Ma12). <sup>159</sup>Sm was produced in thermal neutron fission of <sup>235</sup>U at Brookhaven National Laboratory. X-rays and  $\gamma$ -rays were measured at the on-line mass separator TRISTAN. “Four new neutron-rich, fission-product nuclei have been identified at the on-line mass separator TRISTAN at Brookhaven National Laboratory. Their half-lives have been measured to be, for <sup>156</sup>Pm,  $T_{1/2} = 28.2 \pm 1.1$  sec; for <sup>159</sup>Sm,  $T_{1/2} = 15 \pm 2$  sec; for <sup>160</sup>Sm,  $T_{1/2} = 8.7 \pm 1.4$  sec; and for <sup>161</sup>Eu,  $T_{1/2} = 27 \pm 3$  sec.”

Adapted from reference (2013Ma01)

1986Ma12 H. Mach, A. Piotrowski, R. L. Gill, R. F. Casten, and D. D. Warner, Phys. Rev. Lett. **56**, 1547 (1986).

2013Ma01 E. May and M. Thoennessen, At. Data Nucl. Data Tables **99**, 1 (2013).

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