

## $^{203}\text{Ra}$

The 1996 paper “Alpha decay studies of neutron-deficient radium isotopes” by Leino et al. described the observation of  $^{203}\text{Ra}$  (1996Le09). The fusion reactions  $^{175}\text{Lu}(^{35}\text{Cl},\text{xn})^{210-x}\text{Ra}$ ,  $^{170,171}\text{Yb}(^{40}\text{Ar},\text{xn})^{210-x,211-x}\text{Ra}$ , and  $^{170,171}\text{Yb}(^{36}\text{Ar},\text{xn})^{206-x,207-x}\text{Ra}$  were used at the cyclotron of the Department of Physics of University of Jyväskylä. After separation with the gas filled recoil separator RITU nuclei were stopped in a PIPS detector. “The alpha particle energy  $E_\alpha$  and the half-life  $T_{1/2}$  of an isomeric state of the new isotope,  $^{203m}\text{Ra}$ , have been determined to be  $(7615\pm 20)$  keV and  $(33^{+22}_{-10})$  ms, respectively. An assignment of another decay with  $E_\alpha = (7577\pm 20)$  keV and  $T_{1/2} = (1.1^{+5.0}_{-0.5})$  ms to  $^{203g}\text{Ra}$  is made on the basis of one observed three-decay chain.”

Adapted from reference (2013Fr09)

- 1996Le09 M. Leino, J. Uusitalo, R. G. Allatt, P. Armbruster *et al.*, *Z. Phys. A* **355**, 157 (1996).  
2013Fr09 C. Fry and M. Thoennessen, *At. Data Nucl. Data Tables* **99**, 497 (2013).

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