

## <sup>134</sup>Te

In 1948, Katcoff et al. published the first identification of <sup>134</sup>Te in “Ranges in air and mass identification of plutonium fission fragments” (1948Ka09). Plutonium foils were irradiated with neutrons in the Los Alamos homogeneous pile. Fission recoils were stopped in a series of fourteen zapon lacquer films. Differential range curves were extracted, the films chemically separated and the activities measured with a Geiger-Müller tube. “The same three experiments showed that fragments resulting in 43-min. Te have, within experimental error, very nearly the same range as those of mass 133. For the same reasons that were presented above, the mass of 43-min. Te and its 54-min. I daughter must be greater than 133. Since mass 135 is definitely assigned to other isotopes, 134 is very probably the correct mass number. Assignment to a greater mass would require series distortion of the range-mass curve.” Previously, Abelson had reported a 40 min (1939Ab05, 1939Ab04) and later a 43 min (1939Ab02) half-life without a mass assignment.

Adapted from reference (2013Ka01)

- 1939Ab02 P. H. Abelson, Phys. Rev. **56**, 1 (1939).
- 1939Ab04 P. Abelson, Phys. Rev. **55**, 876 (1939).
- 1939Ab05 P. Abelson, Phys. Rev. **55**, 670 (1939).
- 1948Ka09 S. Katcoff, J. A. Miskel, and C. W. Stanley, Phys. Rev. **74**, 631 (1948).
- 2013Ka01 J. Kathawa, C. Fry, and M. Thoennessen, At. Data Nucl. Data Tables **99**, 22 (2013).

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