^{132}I

In 1948, Katcoff et al. published the first identification of ^{132}I 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. "In three separate experiments the range of fragments that result in 77-hr. Te was found to be greater than the range of those whose mass is known to be 133. This places an upper limit of 132 on the mass of 77-hr. Te, its 5-min. Sb parent, and its 2.4-hr. I daughter. Masses lower than 132 are ruled out because they are assigned to other well-known isotopes. These facts combined with some secondary considerations (e.g., fission yield) establish the mass assignment at 132." In 1939/1940, a 2.3 hr (1939Ha20), a 2.5 h (1939Ab05), and a 2.4 h (1940Po02) half-life were reported without a mass assignment. Also, Abelson assigned the 2.4 h half-life to either ^{132}I, ^{134}I, or ^{136}I (1939Ab02).

Adapted from reference (2013Ka01)

1939Ab02 P. H. Abelson, Phys. Rev. **56**, 1 (1939).
1939Ab05 P. Abelson, Phys. Rev. **55**, 670 (1939).
1939Ha20 O. Hahn, F. Strassmann, and S. Flugge, Naturwissenschaften **27**, 544 (1939).
1940Po02 A. Polessitsky and N. Nemerovsky, Soviet Phys. Doklady **28**, 217 (1940).
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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