

^{129}Xe

Stable ^{129}Xe was identified by Aston in November 1920 in “The constitution of the elements” (1920As03). Xenon gas was used in the Cavendish mass spectrograph. In February of 1920 Aston had assigned 5 lines of xenon isotopes: “The partial pressure, of xenon (atomic weight 130.2) in the gas used was only sufficient to show its singly charged lines clearly. These appear to follow the whole number rule, and rough provisional values for the five made out may be taken as 128, 130, 131, 133, and 135.” (1920As03). In the November 1920 paper Aston reassigned the 128 line to mass 129 and stated: “Owing to the kindness of Prof. Collie and Dr. Masson in providing me with a sample of gas rich in xenon, I have been able to identify two more probable isotopes of that element and obtain trustworthy values for the atomic weights of the five already found. The provisional figures given for these turn out to be too low. The values quoted below were obtained from the position of the second-order line 64.5. They should be trustworthy to about one fifth of a unit.”

Adapted from reference (2013Ka01)

1920As03 F. W. Aston, *Nature* **106**, 468 (1920).

2013Ka01 J. Kathawa, C. Fry, and M. Thoennessen, *At. Data Nucl. Data Tables* **99**, 22 (2013).

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