^{36}Ar

In 1920, ^{36}Ar was first measured by Aston in "The constitution of the elements" (1920As01). The isotope was identified in a mass spectrometer at Cambridge, England. "Argon (atomic weight 39.88 Ramsay; 39.91 Leduc) gives a very strong line exactly at 40, with double charge at 20 and triple charge at $13\frac{1}{3}$. The last line, being closely bracketed by known reference lines at 13 and, 14, provides very trustworthy values. At first this was thought to be its only constituent, but further photographs showed an associated faint line at 36. This has not yet been proved an element by double and triple charges, as the probable presence of OH_2 and the certain presence of C prevent this, but other lines of reasoning make it extremely probable that this is a true isotope, the presence of which to the extent of 3 per cent. is enough to account for the fractional atomic weight quoted."

Adapted from reference (2012Th10)

1920As01 F. W. Aston, Nature **105**, 8 (1920).
2012Th10 M. Thoennessen, At. Data Nucl. Data Tables **98**, 933 (2012).

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