^{33}Na

In 1972, Klapisch et al. reported the first observation of ^{33}Na in "Half-life of the new isotope ^{32}Na; Observation of ^{33}Na and other new isotopes produced in the reaction of high-energy protons on U" (1972Kl04). Uranium targets were bombarded with 24 GeV protons from the CERN proton synchrotron. ^{33}Na was identified by on-line mass spectrometry and decay curves were measured. "A search was made for ^{33}Na using the same procedure during a 3-h experiment with a total of 7×10^{15} protons, and [the table] gives the number of counts at the locations where ^{33}Na peaks are expected. It is seen that a significant number of counts over the background arises for the first three pairs of peaks. Adding them channel by channel, two peaks of ^{33}Na are found with 86 ± 15 and 61 ± 15 counts, respectively, after a background of 76 ± 9 has been subtracted." The half-life of ^{33}Na was listed in a table as 120(15) s.

Adapted from reference (2012Th10)

1972Kl04 R. Klapisch, C. Thibault, A. M. Poskanzer, R. Prieels *et al.*, Phys. Rev. Lett. **29**, 1254 (1972).

2012Th10 M. Thoennessen, At. Data Nucl. Data Tables **98**, 933 (2012).

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