^{34}Ar

Miller and Kavanagh from the California Institute of Technology reported the observation of ^{34}Ar in the 1966 paper "Decay of ^{34}Ar" (1966Mi11). A 10 MeV ^{3}He from the ONR-CIT tandem accelerator bombarded a Sb_2S_3 target and ^{34}Ar was produced in the reaction ^{32}S(^{3}He,n). The resulting activities were measured with a NaI(Tl) crystal. "The bottom spectrum of [the figure] shows the difference in yields between the first and second seconds after beam turn-off. Only three statistically significant peaks remain. They are located at energies (in MeV) of 0.51, 0.67 and 1.02. The 0.51 and 1.02 peaks are due to annihilation quanta, singly and in random coincidence. The remaining peak, at 0.67 MeV, was found to have a half life of 1.2±0.3 s and is attributed to the decay of ^{34}Ar to the 0.67 MeV state of ^{34}Cl."

Adapted from reference (2012Th10)

1966Mi11 R. G. Miller and R. W. Kavanagh, Phys. Lett. **22**, 461 (1966).
2012Th10 M. Thoennessen, At. Data Nucl. Data Tables **98**, 933 (2012).

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