^{21}Na

In the 1940 paper "Transmutation of the separated isotopes of neon by deuterons" Pollard et al. reported the observation of ^{21}Na at the Sloane Physics Laboratory of Yale University (1940Po01). Neon gas was bombarded with 2.6 MeV deuterons and the isotopes were separated by thermal diffusion. ^{21}Na produced in the reaction ^{20}Ne(d,n) and decay curves and absorption spectra were measured. "A rather weak gamma-ray was found but this did not decay with the 43-second half-life expected. In [the figure] the decay curve is shown. It has a half-life of 26±3 seconds and is almost certainly to be identified with Na^{21} discovered by Creutz, Fox, and Sutton (1940Cr06) and here produced by the reaction $Ne^{20}+H^{2} \rightarrow Na^{21}+n$." The work by Creutz et al. mentioned in the quote was only published as an abstract of a meeting.

Adapted from reference (2012Th10)

1940Cr06 E. C. Creutz, L. A. Delsasso, R. B. Sutton, M. G. White, and W. H. Barkas, Phys. Rev. **58**, 481 (1940).

1940Po01 E. Pollard and W. W. Watson, Phys. Rev. **58**, 12 (1940).

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

Please cite this abstract as: "FRIB Nuclear Data Group, *Discovery of Nuclides Project*, Isotope Database, doi:10.11578/frib/2279152"