

^{23}Mg

White et al. from the Palmer Physical Laboratory of Princeton University described the discovery of ^{23}Mg in 1939 in “Short-lived radioactivities induced in fluorine, sodium and magnesium by high energy protons” (1939Wh02). Sodium chloride targets were bombarded with 6 MeV protons and ^{23}Mg was produced in the charge-exchange reaction $^{23}\text{Na}(p,n)$. The resulting activities were measured with a Lauritsen electroscopes. “Sodium, in the form of NaCl, was bombarded for one minute with 6.0-Mev protons. A characteristic decay curve is shown in [the figure]. The half-life, as found by averaging several runs, is 11.6 ± 0.5 sec. We assume that the activity indicates the production of Mg^{23} , for all other possible reactions lead either to stable isotopes or well-known long periods.”

Adapted from reference (2012Th10)

1939Wh02 M. G. White, L. A. Delsasso, J. G. Fox, and E. C. Creutz, Phys. Rev. **56**, 512 (1939).

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

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