^{85}Sr

The first observation of ^{85}Sr was documented by DuBridge and Marshall in their paper 1940 paper entitled "Radioactive isotopes of Sr, Y, and Zr" (1940Du05). Rubidium targets were bombarded with 6.7 MeV protons at the University of Rochester. The activities of the reaction products were measured with a freon-filled ionization chamber, and the β and γ decays were measured with a magnetic cloud chamber and a β-ray spectrograph. "There are only two stable isotopes of Rb, of masses 85 and 87, the latter being naturally β-active with a period of 10^{10} years. Rb(p,n) reactions therefore would yield only Sr^{85} and Sr^{87}. Since Sr^{87} is stable it would appear necessary at first sight to assign all three periods to Sr^{85}. However it will be shown below that the 2.75-hr. period must be assigned to a metastable state of Sr^{87}. The 70-min. and 66-day periods are therefore assigned to Sr^{85}." The latter corresponds to the ground state of ^{85}Sr.

Adapted from reference (2012Pa21)

1940Du05 L. A. DuBridge and J. Marshall, Phys. Rev. **58**, 7 (1940).

2012Pa21 A. M. Parker and M. Thoennessen, At. Data Nucl. Data Tables **98**, 812 (2012).

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