

¹⁷O

Blackett identified ¹⁷O for the first time in 1925 in the paper “The Ejection of Protons from Nitrogen Nuclei, Photographed by the Wilson Method” at Cambridge ([1925BI01](#)). The tracks of alpha-particles from a thorium B + C source (²¹²Pb and ²¹²Bi) in a condensation chamber were photographed. “But amongst these normal forks due to elastic collisions, eight have been found of a strikingly different type... These eight tracks undoubtedly represent the ejection of a proton from a nitrogen nucleus. It was to be expected that a photograph of such an event would show an alpha-track branching into three... These eight forks however branch only into two... As no such track exists the alpha-particle cannot escape. In ejecting a proton from a nitrogen nucleus the alpha-particle is therefore itself bound to the nitrogen nucleus. The resulting new nucleus must have a mass 17, and, provided no electrons are gained or lost in the process, an atomic number of 8... It ought therefore to be an isotope of oxygen.”

Adapted from reference ([2012Th01](#))

[1925BI01](#) P. M. S. Blackett, Proc. Roy. Soc. (London) **107**, 349 (1925).

[2012Th01](#) M. Thoennessen, At. Data Nucl. Data Tables **98**, 43 (2012).

Please cite this abstract as: “FRIB Nuclear Data Group, *Discovery of Nuclides Project*, Isotope Database, doi:[10.11578/frib/2279152](https://doi.org/10.11578/frib/2279152)”