

²⁰O

The discovery of ²⁰O was described in the 1959 paper “Oxygen-20” by Jarmie and Silbert (1959Ja01). An enriched ¹⁸O gas target was bombarded with 2.6 MeV tritons from an electrostatic accelerator at the Los Alamos Scientific Laboratory and ²⁰O was formed in the (t,p) reaction. The ejectiles were analyzed in a double-focussing magnetic spectrometer and detected in a CsI crystal scintillation spectrometer. “Two proton groups associated with O²⁰ were observed. These are assumed to be due to the ground state and first excited state of O²⁰. The Q for the reaction O¹⁸(t,p)O²⁰ is 3.12±0.04 Mev. This then gives a preliminary value for the mass of O²⁰ of 20.01036±0.00004 amu or a mass excess of 9.65±0.04 Mev.”

Adapted from reference (2012Th01)

1959Ja01 N. Jarmie and M. G. Silbert, Phys. Rev. Lett. **3**, 50 (1959).

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”