^{16}N

First evidence of the existence of ^{16}N was presented by Harkins et al. from the University of Chicago in the 1933 paper "Disintegration of Fluorine Nuclei by Neutrons and the Probable Formation of a New Isotope of Nitrogen (N^{16})" (1933Ha01). Neutrons irradiated a mixture of 30% difluor-dichlor-methane and 70% helium in a Wilson cloud chamber and 3200 pairs of photographs were taken. Ten photographs exhibited nuclear disintegrations. "The momentum and energy relations, together with other evidence, indicate that most, and probably all of these are disintegrations of fluorine nuclei... Thus for disintegrations in which the neutron is captured the reaction may be considered to be represented by $F_1^{19} + n_1^1 \rightarrow F_2^{20} \rightarrow N_2^{16} + He_0^4$, in which the subscripts represent the isotopic numbers and the superscripts the atomic masses."

Adapted from reference (2012Th01)

1933Ha01 W. D. Harkins, D. M. Gans, and H. W. Newson, Phys. Rev. **44**, 945 (1933).

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