

${}^{16}\text{O}({}^{14}\text{N}, {}^{15}\text{C})$  2004Le12, 2003Le26

Type	Author	Citation	Literature Cutoff Date
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**2004Le12:**

The authors studied the excitation spectrum of the  ${}^{15}\text{F}$  nucleus using the  ${}^{16}\text{O}({}^{14}\text{N}, {}^{15}\text{C}){}^{15}\text{F}$  reaction. Angular distributions were analyzed using the FRESKO code.

A beam of 30 MeV/nucleon  ${}^{14}\text{N}$ , from the GANIL facility, impinged on a 0.60 mg/cm<sup>2</sup> thick V<sub>2</sub>O<sub>5</sub> foil located at the SPEG spectrometer target position. The reaction products were measured at  $\theta_{\text{lab}}=2.5^\circ \pm 1.2^\circ$ .

Three peaks were observed in the energy spectrum and were fitted using Breit-Wigner line-shapes that were folded with the resolution of FWHM=360 keV. A group of counts near  $E_{\text{res}}=6.8$  MeV is indicated in the spectrum, but not analyzed.

In (2003Le26) only the ground and first excited states were analyzed leading to slightly lower resonance energies and slightly different widths.

 ${}^{15}\text{F}$  Levels

E(level)	$J^\pi$	$\Gamma$	$E(\text{p}+{}^{14}\text{O})_{\text{cm}}$ (MeV)	Comments
0	1/2 <sup>+</sup>	≈0.6 MeV	1.56 13	$\Gamma$ : The observed width was $\Gamma=0.6$ MeV +8-4.
1.24×10 <sup>3</sup> 14	5/2 <sup>+</sup>	0.38 MeV 10	2.80 5	
3.24×10 <sup>3</sup> 13	(1/2 <sup>-</sup> )	0.15 MeV 10	4.80 1	
≈5.2×10 <sup>3</sup> ?			6.8	