

$^{21}\text{N}(\text{p,pn})$ 2018Di01

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	C. G. Sheu, J. H. Kelley	ENSDF	31-Dec-2018

2018Di01: An $E(^{21}\text{N})=417$ MeV/nucleon secondary beam, from the FRS (FRagment Separator) at GSI facility, impinged on either a 922 mg/cm^2 CH_2 or a 935 mg/cm^2 C target located at the $\text{R}^3\text{B-LAND}$ setup. The 4π Crystal Ball array surrounded the targets and was used to measure γ -rays, while the ALADIN dipole magnet was used to deflect different mass and charge reaction products. Neutrons were momentum analyzed using the LAND, a Large Area Neutron Detector array, whilst the heavy fragments were tracked by two scintillators and a position sensitive time-of-flight wall; recoil protons were analyzed using two position sensitive drift chambers and a time-of-flight wall.

The ^{21}N 1n-removal cross section $\sigma_{\text{raw}}=7.55 \text{ mb}$ $6I$ was measured along with the transverse momentum distribution

$P_{\text{T}}(\text{r.m.s.})=102 \text{ MeV}/c$. Level energies, J^π and spectroscopic factors C^2S were also deduced based on shell-model calculations. See also (2018Go21).

 ^{20}N Levels

<u>E(level)[†]</u>	<u>J^π[†]</u>	<u>C^2S[†]</u>
0	2^-	1.97
600	0^-	0.16
900	3^-	2.98
1100	1^-	0.49

[†] From shell model calculations and comparison with the momentum distributions.