^{1}H(^{14}O,^{13}N) 2015KaZU

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	J. H. Kelley, C. G. Sheu and J. E. Purcell	NDS 198,1 (2024)	1-Aug-2024

2015KaZU: ^{1}H(^{14}O,^{13}N) E≈250 MeV/nucleon at the RIKEN/SHARAQ facility. Measured the ^{14}O(p,2p) reaction in inverse kinematics; ^{13}N*(0, 3.5, 15) were populated.

See also (2015KaZY, 2018Go21, 2018At01, 2019Ph04).

2023Po05: ^{1}H(^{14}O,^{13}N) E=94 MeV/nucleon at RIKEN/RIBF; also studied ^{1}H(^{14}O,^{13}O). Measured the parallel momentum distributions and reaction cross sections. Analyzed quasifree knockout and other mechanisms. Deduced S=1.58 for the ground state in DWIA analysis.

^{13}N Levels

E(level)	J$^{\pi}$[†]	C^{2}S[†]	Comments
0	1/2^{-}	1.51 *8*	σ=251 μb *14*.
3.5×10^{3}	3/2^{-}	2.02 *14*	σ=326 μb *22*.
15×10^{3}	3/2^{-}	0.65 *19*	T=3/2 σ=63 μb *18*.

[†] From DWIA analysis of spectroscopic factors using the THREEDEE code (2015KaZU).