^{168}Er(^{16}O,^{15}O),(^{12}C,^{11}C) 1981Bo16

History

Type	Author	Citation	Literature Cutoff Date
Full Evaluation	M. Shamsuzzoha Basunia	NDS 209,1 (2026)	1-Oct-2025

E(^{16}O)=120 MeV, E(^{12}C)=95 MeV from the Brookhaven National Laboratory tandem facility; θ=42°; enriched ^{168}Er targets; measured particle spectra (Q3D mag spect, FWHM=100-150 keV (for ^{16}O), 80-120 keV (for ^{11}C)), relative populations in (^{16}O,^{15}Oγ) and (^{12}C,^{11}Cγ) (L+1/2 final states strongly favored for ^{16}O; L+1/2 and L−1/2 states comparably favored for ^{12}C).

^{169}Er Levels

E(level)[†]	J$^{\pi}$[‡]	Comments
180 *20*	$(7/2)^-$	
510 *20*	$(13/2)^+$	
940 *20*	$(9/2^-)$	E(level): populated in (^{12}C,^{11}Cγ).
1150 *20*	$(13/2^+)$	J$^{\pi}$: from relative population strengths in the two reactions; 13/2$^+$ consistent with systematics for position of 13/2$^+$ 9/2[624] state in Er isotopes.
2300		E(level): represents peak labeled on spectrum for (^{16}O,^{15}Oγ), but not discussed in text by 1981Bo16.
≈3400		Very broad peak observed only in (^{16}O,^{15}Oγ); strength can be attributed to Er, but origin is not understood (1981Bo16).

[†] Populated both in (^{16}O,^{15}O) and (^{12}C,^{11}C) reactions, except where otherwise noted.
[‡] Adopted values, except where noted.