

$^{170}\text{Er}({}^3\text{He},\alpha)$  1972Lo20

Type	Author	History Citation	Literature Cutoff Date
Full Evaluation	Coral M. Baglin	NDS 109, 2033 (2008)	15-Jun-2008

$E({}^3\text{He})=25.5$  MeV;  $\theta=40^\circ, 60^\circ$ ; erbium metal targets enriched to  $>95\%$  in  $^{170}\text{Er}$ ; measured E(level) (mag spect, photographic emulsions,  $\text{FWHM}\approx 40$  keV), absolute cross sections at two angles; used  $({}^3\text{He},\alpha)/(d,t)$  ((d,t) data from 1970Mu15) and  $({}^3\text{He},\alpha)(40^\circ)/({}^3\text{He},\alpha)(60^\circ)$  cross-section ratios and DWBA calculations to interpret levels populated.

 $^{169}\text{Er}$  Levels

E(level) <sup>†</sup>	$J^\pi$ <sup>‡</sup>	L <sup>#</sup>	$d\sigma/d\Omega(40^\circ)$ $\mu\text{b}/\text{sr}$ <sup>@</sup>
527	(13/2) <sup>+</sup>	6	135
847 15	(7/2) <sup>-</sup>		21
927 15	(9/2) <sup>-</sup>		25
1051 15	(9/2) <sup>-</sup>		17
1222 15	(7/2) <sup>-</sup>		31
1397 15	(11/2) <sup>-</sup>		128
1553 15	11/2 <sup>+</sup> ,13/2 <sup>+</sup>	6	88

<sup>†</sup> Determined by 1972Lo20 relative to E=527 for the 13/2<sup>+</sup> state. population of the g.s. was too weak to permit absolute energy determination.

<sup>‡</sup> From Adopted Levels.

<sup>#</sup> From  $({}^3\text{He},d)/(d,t)$  cross-section ratio systematics and comparison with DWBA calculations.

<sup>@</sup>  $d\sigma/d\Omega$  At 40° ( $\mu\text{b}/\text{sr}$ ); uncertainty 5% to 30%.