

$^{166}\text{Er}(n,\gamma)$ E=th:primary 1970Mi01

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh and Jun Chen		NDS 191,1 (2023)	22-Aug-2023

Unassigned primary γ rays in 1970Mi01 from $^{166}\text{Er}(n,\gamma)$ or $^{167}\text{Er}(n,\gamma)$; not included in the Adopted dataset for ^{167}Er .

1970Mi01: thermal neutron beam from the FR2 reactor at Institut für Angewandte Kernphysik Karlsruhe. Measured E_γ , I_γ , $\gamma\gamma$ -coin with Ge(Li) and NaI(Tl) detectors.

Primary γ rays between 2481 keV and 4326 keV in Table 3 of 1970Mi01 are listed in this dataset with relative intensities. Gamma rays above 4330 keV have been assigned to ^{167}Er , and are listed in the main $^{166}\text{Er}(n,\gamma)$ dataset. Gamma rays in 2481-4326 keV region belong to any of the other Er isotopes, but primarily to ^{167}Er and ^{168}Er , as the isotopic abundances of the enriched target were: 95.6% ^{166}Er (49% σ cross section contribution), and 2.99% ^{167}Er (51% σ cross section contribution), while 1.07% ^{168}Er and 0.24% ^{170}Er made only 0.070% cross section contribution.

 $\gamma(^{167}\text{Er})$

These γ -ray data are not included in the Adopted Levels, Gammas dataset.

E_γ	E_γ	I_γ	E_γ	I_γ	E_γ	I_γ
$^x2481\ 8$	$^x2943\ 4$		$^x3364\ 5$	31 [#]	$^x3851\ ^\dagger\ 5$	79 [@]
$^x2506\ ^\ddagger\ 8$	$^x2954\ 6$		$^x3399\ 4$	76 [#]	$^x3874\ ^\dagger\ 6$	42 [@]
$^x2520\ 8$	$^x2972\ 5$		$^x3429\ 4$	79 [#]	$^x3891\ 4$	58 [@]
$^x2532\ 8$	$^x2988\ ^\dagger\ 6$		$^x3443\ 6$	41 [#]	$^x3915\ 5$	55 [@]
$^x2554\ ^\dagger\ 8$	$^x3033\ 5$		$^x3452\ 6$	56 [#]	$^x3922\ 6$	45 [@]
$^x2574\ 6$	$^x3043\ ^\dagger\ 5$		$^x3466\ 5$	64 [#]	$^x3942\ ^\ddagger\ 7$	<35 [@]
$^x2597\ 6$	$^x3058\ 7$		$^x3494\ 6$	41 [#]	$^x3956\ 6$	<35 [@]
$^x2620\ ^\dagger\ 6$	$^x3076\ 4$		$^x3518\ 4$	83 [#]	$^x3973\ 5$	39 [@]
$^x2648\ 6$	$^x3091\ 6$		$^x3541\ 4$	100 [#]	$^x3980\ ^\ddagger\ 7$	<35 [@]
$^x2660\ 6$	$^x3099\ 4$		$^x3574\ 7$	<35 [@]	$^x3990\ 5$	58 [@]
$^x2674\ 7$	$^x3116\ 7$		$^x3584\ 4$	68 [@]	$^x4002\ 7$	<35 [@]
$^x2696\ 5$	$^x3140\ 4$		$^x3616\ 5$	62 [@]	$^x4013\ ^\dagger\ 7$	50 [@]
$^x2705\ 6$	$^x3162\ 4$		$^x3625\ ^\ddagger\ 7$	<28 [@]	$^x4040\ 8$	<35 [@]
$^x2728\ 5$	$^x3173\ 6$		$^x3641\ 7$	<28 [@]	$^x4054\ ^\dagger\ 7$	47 [@]
$^x2736\ 7$	$^x3194\ 6$		$^x3655\ 5$	55 [@]	$^x4075\ 6$	53 [@]
$^x2753\ ^\ddagger\ 7$	$^x3202\ 5$	34 [#]	$^x3675\ 7$	<35 [@]	$^x4112\ 5$	79 [@]
$^x2766\ 7$	$^x3210\ 7$	39 [#]	$^x3685\ 5$	50 [@]	$^x4129\ 6$	68 [@]
$^x2786\ 6$	$^x3225\ 7$	28 [#]	$^x3696\ 4$	76 [@]	$^x4160\ 5$	100 [@]
$^x2800\ ^\ddagger\ 6$	$^x3240\ ^\dagger\ 5$	64 [#]	$^x3717\ 4$	65 [@]	$^x4176\ 7$	53 [@]
$^x2812\ 5$	$^x3249\ 5$	48 [#]	$^x3743\ ^\ddagger\ 7$	<35 [@]	$^x4229\ 7$	<35 [@]
$^x2830\ 5$	$^x3263\ 5$	38 [#]	$^x3757\ 4$	94 [@]	$^x4247\ 8$	<42 [@]
$^x2854\ 5$	$^x3295\ 5$	38 [#]	$^x3771\ 6$	50 [@]	$^x4270\ 5$	65 [@]
$^x2870\ ^\dagger\ 6$	$^x3309\ 5$	35 [#]	$^x3782\ 5$	55 [@]	$^x4285\ 8$	<35 [@]
$^x2891\ 4$	$^x3320\ 4$	52 [#]	$^x3788\ 6$	39 [@]	$^x4326\ 6$	79 [@]
$^x2907\ 6$	$^x3343\ 4$	41 [#]	$^x3804\ 5$	62 [@]		
$^x2923\ 6$	$^x3354\ 5$	36 [#]	$^x3822\ ^\dagger\ 6$	44 [@]		

[†] Doublet or possible doublet (1970Mi01).

[‡] Uncertain line (1970Mi01).

[#] Intensity relative to 100 for 3541-keV γ ray.

[@] Intensity relative to 100 for 4160-keV γ ray.

^x γ ray not placed in level scheme.