

<sup>162</sup>Er(d,t) 1969Tj01

| Type            | Author      | History Citation    | Literature Cutoff Date |
|-----------------|-------------|---------------------|------------------------|
| Full Evaluation | C. W. Reich | NDS 112,2497 (2011) | 1-Jun-2011             |

Data are from the (d,t) study of 1969Tj01 with E(d)=12.1 MeV and t measured in magnetic spectrograph at 60°, 90°, and 125° with FWHM=6 keV.  
 For <sup>162</sup>Er(d,t), measured Q=-2952 10 keV and S(n)=9215 10 keV.

<sup>161</sup>Er Levels

Additional information 1.

| E(level)         | J <sup>π</sup> †     | (dσ/dΩ), μb/sr at 90° | Comments  |
|------------------|----------------------|-----------------------|---|
| 0‡               | 3/2 <sup>-</sup>     | 55                    |   |
| 144‡             | 7/2 <sup>-</sup>     | 77                    |   |
| 172#             | 5/2 <sup>-</sup>     | 9                     |   |
| 189@             | (9/2 <sup>+</sup> )  | 34                    |   |
| 212              |                      | 5                     | J <sup>π</sup> : levels at 212 and 217 are assigned as 5/2 <sup>+</sup> and 7/2 <sup>+</sup> members of the mixed positive-parity band in Adopted Levels. |
| 250‡             | 9/2 <sup>-</sup>     | 7                     |   |
| 268              |                      | 50                    | J <sup>π</sup> : assigned as 7/2,5/2[523] plus the 13/2 member of the positive-parity band by 1969Tj01 and in Adopted Levels.                             |
| 369&             | 3/2 <sup>+</sup>     | 79                    |   |
| 388              |                      | 5                     | J <sup>π</sup> : assigned as 11/2,3/2[521] + 9/2 <sup>-</sup> ,5/2[523] by 1969Tj01 and in Adopted Levels.  |
| 396 <sup>a</sup> | 11/2 <sup>-</sup>    | 20                    |   |
| 463 <sup>b</sup> | 3/2 <sup>+</sup>     | 85                    |   |
| 481 <sup>c</sup> | 1/2 <sup>+</sup>     | 143                   |   |
| 495              |                      | 10                    | J <sup>π</sup> : assigned as 5/2 <sup>+</sup> ,3/2[402] in Adopted Levels.  |
| 522              |                      | 4                     |   |
| 540#             | (11/2 <sup>-</sup> ) | 3                     |   |
| 563              |                      | 13                    |   |
| 588              |                      |                       | J <sup>π</sup> : assigned as 7/2 <sup>+</sup> ,3/2[402] in Adopted Levels.  |
| 621              |                      | 21                    |   |
| 635              |                      | 27                    |   |
| 665              |                      | 4                     |   |
| 704              |                      | 10                    |   |
| 712              |                      | 23                    |   |
| 724              |                      | 10                    | J <sup>π</sup> : assigned as 3/2 <sup>-</sup> ,3/2[532] in Adopted Levels.  |
| 738              |                      | 8                     |   |
| 842              |                      | 7                     | J <sup>π</sup> : assigned as 5/2 <sup>-</sup> ,5/2[512] in Adopted Levels.  |

† From <sup>161</sup>Er Adopted Levels and agree with the assignments of 1969Tj01, except the 5/2[642] band assignment of 1969Tj01 is identified here as a Coriolis-mixed positive-parity band. Some additional assignments from the <sup>161</sup>Er Adopted Levels are noted in comments. The assignments of 1969Tj01 are based on agreement of experimental and calculated (d,t) cross sections and level spacings within bands.

‡ Band(A): 3/2[521] band.

# Band(B): 5/2[523] band.

@ Band(C): Coriolis-mixed positive-parity band, including 5/2[642].

& Band(D): bandhead of 3/2[651] mixed with 3/2[402].

<sup>a</sup> Band(E): bandhead of 11/2[505].

<sup>b</sup> Band(F): bandhead of 3/2[402] mixed with 3/2[651].

<sup>c</sup> Band(G): bandhead of 1/2[400].

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Band(B): 5/2[523] band

(11/2<sup>-</sup>)      540Band(F): Bandhead of  
3/2[402] mixed with  
3/2[651]3/2<sup>+</sup>      463Band(E): Bandhead of  
11/2[505]Band(D): Bandhead of  
3/2[651] mixed with  
3/2[402]11/2<sup>-</sup>      3963/2<sup>+</sup>      369

Band(A): 3/2[521] band

9/2<sup>-</sup>      250Band(C): Coriolis-mixed  
positive-parity band,  
including 5/2[642](9/2<sup>+</sup>)      1895/2<sup>-</sup>      1727/2<sup>-</sup>      1443/2<sup>-</sup>      0

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 $^{162}\text{Er}(\text{d,t})$  **1969Tj01 (continued)****Band(G): Bandhead of**  
**1/2[400]**1/2<sup>+</sup>                      **481** $^{161}_{68}\text{Er}_{93}$