

$^{122}\text{Te}(\text{d},\text{d}')$  **1999Sc19**

| Type            | Author    | History<br>Citation | Literature Cutoff Date |
|-----------------|-----------|---------------------|------------------------|
| Full Evaluation | T. Tamura | NDS 108, 455 (2007) | 30-Sep-2006            |

**1999Sc19:** E(d)=26 MeV; broad-range magnetic spectrograph, measured deuteron energy spectra at  $\theta=20^\circ$ ,  $30^\circ$ , discussed in terms of IBM model and quasi-phonon model.

 $^{122}\text{Te}$  Levels

Population intensity (arbitrary units) for  $20^\circ$  and  $30^\circ$  are listed in level comments. Additional notes from **1999Sc19** are included in comments.

| E(level) <sup>†</sup> | Comments                                                                                                                                                                                                    |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0.0                   | I( $20^\circ$ )= $4150 \times 10^3$ 4, I( $30^\circ$ )= $381.0 \times 10^3$ 25.                                                                                                                             |
| 564.11 14             | I( $20^\circ$ )=19000 400, I( $30^\circ$ )=10000 700.                                                                                                                                                       |
| 1181.40 20            | I( $20^\circ$ )=618 18, I( $30^\circ$ )=330 40.                                                                                                                                                             |
| 1256.89 17            | I( $20^\circ$ )=1129 22, I( $30^\circ$ )=401 22.                                                                                                                                                            |
| 1357.59 26            | I( $20^\circ$ )=91 7, I( $30^\circ$ )=37 4.                                                                                                                                                                 |
| 1746.1 15             | E(level): $\Delta E=+1.5$ -0.3.<br>I( $20^\circ$ )=41 5, I( $30^\circ$ )=44 11.                                                                                                                             |
| 1751.5 4              | E(level): Calibration.<br>I( $20^\circ$ )=230 30, I( $30^\circ$ )=110 10 (sum for 1751.3+1752.6 levels at $20^\circ$ and $30^\circ$ ).                                                                      |
| 1909.6 4              | I( $20^\circ$ )=146 23, I( $30^\circ$ )=92 8.                                                                                                                                                               |
| 1940.3 4              | I( $20^\circ$ )=70 16, I( $30^\circ$ )=49 6.                                                                                                                                                                |
| 2041.4 5              | I( $20^\circ$ )=223 13, I( $30^\circ$ )=256 27.                                                                                                                                                             |
| 2099.02 24            | I( $20^\circ$ )=91 7, I( $30^\circ$ )=47 10.                                                                                                                                                                |
| 2196.4 4              | I( $20^\circ$ )=3300 400, I( $30^\circ$ )=1620 40.                                                                                                                                                          |
| 2203.9? 30            |                                                                                                                                                                                                             |
| 2285.36 17            | I( $20^\circ$ )=58 6, I( $30^\circ$ )=35 4 (sum for 2283.9+2287.4 levels at $20^\circ$ and $30^\circ$ ).                                                                                                    |
| 2310.65 28            | I( $20^\circ$ )=78 6, I( $30^\circ$ )=41 4.                                                                                                                                                                 |
| 2407.89 18            | I( $20^\circ$ )=405 12, I( $30^\circ$ )=358 13 (sum for 2407.6+2407.9 levels at $20^\circ$ and $30^\circ$ ).                                                                                                |
| 2449.02 24            | I( $20^\circ$ )=390 40, I( $30^\circ$ )=412 13.                                                                                                                                                             |
| 2500.43 30            | I( $20^\circ$ )=13.6 27, I( $30^\circ$ )=30.9 26.                                                                                                                                                           |
| 2508.7 4              | I( $20^\circ$ )=39 5, I( $30^\circ$ )=20.5 24.                                                                                                                                                              |
| 2560.18 27            | I( $20^\circ$ )=86 8, I( $30^\circ$ )=81 4.                                                                                                                                                                 |
| 2593.5 4              | I( $20^\circ$ )=24 4, I( $30^\circ$ )=75 4 (sum for 2592.4+2593.9 levels at $20^\circ$ and $30^\circ$ ).                                                                                                    |
| 2603.8 4              | I( $20^\circ$ )=121 8, I( $30^\circ$ )=110 5.                                                                                                                                                               |
| 2636.28 15            | I( $20^\circ$ )=84 7, I( $30^\circ$ )=25.6 28.                                                                                                                                                              |
| 2642.80 22            | I( $20^\circ$ )=28 5, I( $30^\circ$ )=14.3 25.                                                                                                                                                              |
| 2669.5 5              | I( $20^\circ$ )=14 4, I( $30^\circ$ )=6.4 15.                                                                                                                                                               |
| 2679.6 6              | I( $20^\circ$ )=16.0 27, I( $30^\circ$ )=2.0 13.                                                                                                                                                            |
| 2693.30 16            | I( $20^\circ$ )=118 7, I( $30^\circ$ )=127 5.                                                                                                                                                               |
| 2742.0 5              | E(level): admixture of other isotopes probably doublet.<br>I( $20^\circ$ )=44 5, I( $30^\circ$ )=27.6 22 (admixture of other isotopes at $20^\circ$ and $30^\circ$ ).                                       |
| 2757.7 13             | E(level): doublet ( <b>1999Sc19</b> ) or triplet (Adopted Levels).<br>I( $20^\circ$ )=4.1 25, I( $30^\circ$ )=5.4 13 (sum for possible triplet: 2756.1+2758.5+2758.8 levels at $20^\circ$ and $30^\circ$ ). |
| 2772.8 20             | I( $30^\circ$ )=15.8 26.                                                                                                                                                                                    |
| 2776.8 6              | I( $20^\circ$ )=59 5, I( $30^\circ$ )=17 10.                                                                                                                                                                |
| 2795.4 4              | I( $20^\circ$ )=127 14, I( $30^\circ$ )=35 7.                                                                                                                                                               |
| 2800.6 4              | I( $20^\circ$ )=274 14, I( $30^\circ$ )=116 8.                                                                                                                                                              |
| 2808.0 5              | I( $20^\circ$ )=27 7, I( $30^\circ$ )=13.8 23.                                                                                                                                                              |
| 2839.9? 22            | I( $20^\circ$ )=9.1 27, I( $30^\circ$ )=2.1? 11.                                                                                                                                                            |
| 2860.17 18            | I( $20^\circ$ )=33 4, I( $30^\circ$ )=54 4.                                                                                                                                                                 |
| 2882.9 9              | I( $20^\circ$ )=17.4 25, I( $30^\circ$ )=6.1 19.                                                                                                                                                            |
| 2899.1 4              | I( $20^\circ$ )=15.7 27, I( $30^\circ$ )=17 5.                                                                                                                                                              |
| 2914.7 4              | E(level): triplet ( <b>1999Sc19</b> ); multiplet (Adopted Levels).                                                                                                                                          |

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$^{122}\text{Te}(\text{d,d}')$  [1999Sc19](#) (continued) $^{122}\text{Te}$  Levels (continued)

| E(level) <sup>†</sup> | Comments                                                                                                                                   |
|-----------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
|                       | I(20°)=33 5 (multiplet), I(30°)=32 7 (multiplet) (sum for possible multiplet: 2911.24+2911.24+2913.5+2913.8+2915.9 levels at 20° and 30°). |
| 2929.48 25            | I(20°)=58 5, I(30°)=30.1 29.                                                                                                               |
| 2937.82 23            | I(20°)=62 6, I(30°)=20 4.                                                                                                                  |
| 2944.92 29            | I(20°)=61 6, I(30°)=119 6.                                                                                                                 |
| 2951.4 6              | I(20°)=10 4, I(30°)=10 4.                                                                                                                  |
| 2958.4 4              | I(20°)=32 4, I(30°)=19.6 28.                                                                                                               |
| 2969.4 10             | I(20°)=32 5, I(30°)=10.4 20.                                                                                                               |
| 2995.5 6              | I(20°)=17.7 29, I(30°)=5.3 17.                                                                                                             |
| 3037.6 4              | I(20°)=22 4, I(30°)=11.9 17.                                                                                                               |
| 3044.8 7              | I(20°)=29 6, I(30°)=12.6 19.                                                                                                               |
| 3049 4                | I(20°)=15 5, I(30°)=9.3 17.                                                                                                                |
| 3061.39 21            | I(20°)=39 5, I(30°)=18.3 22.                                                                                                               |
| 3068.44 20            | I(20°)=47 6, I(30°)=37 4.                                                                                                                  |
| 3094.1 5              | I(20°)=48 6, I(30°)=22.0 23.                                                                                                               |
| 3119.1 14             | I(20°)=12.6 27, I(30°)=3.4 11.                                                                                                             |
| 3135.7 4              | I(20°)=36 4, I(30°)=9.1 14.                                                                                                                |
| 3149.56 16            | I(20°)=58 5, I(30°)=54 4.                                                                                                                  |
| 3160.4 14             | I(20°)=12.1 29, I(30°)=5.9 4.                                                                                                              |
| 3183.5 5              | I(20°)=17 4, I(30°)=9.6 16.                                                                                                                |
| 3198.5 15             | I(20°)=12.7 29, I(30°)=14.2 19.                                                                                                            |
| 3211.0 8              | I(20°)=30 4, I(30°)=34.7 26.                                                                                                               |
| 3216.0 7              | I(20°)=15.2 29.                                                                                                                            |

<sup>†</sup> From [1999Sc19](#).