## $^{100}$Mo(n,$\gamma$) E=th:secondary 1990Se17

| History | | | |
|---|---|---|---|
| Type | Author | Citation | Literature Cutoff Date |
| Full Evaluation | Jean Blachot | ENSDF | 1-Jul-2006 |

E=thermal, enriched target 95.9%.
Others: 1973De39, 1973Ba57, 1975KaZB, 1978WeZM.
Measured $\gamma$ singles, $\gamma\gamma$ coin (semi).

### $^{101}$Mo Levels

| E(level)‡ | Jπ† | E(level)‡ | Jπ† | E(level)‡ | Jπ† |
|---|---|---|---|---|---|
| 0.0 | $1/2^+$ | 568.85 *6* | $1/2^+$ | 1098.99 *13* | $1/2^{(+)},3/2$ |
| 13.497 *9* | $3/2^+$ | 583.39 *12* | $7/2^+,9/2^+$ | 1109.23 *7* | $3/2^+$ |
| 56 *1* | ≥7/2 | 586.47 *12* | 1/2,3/2 | 1116.86 *12* | $3/2^{(+)},5/2,(1/2)$ |
| 57.015 *11* | $3/2^+,5/2^+$ | 626.36 *5* | 7/2,9/2 | 1199.41 *6* | $1/2^{(+)},3/2,5/2$ |
| 170.958 *14* | $3/2^+,5/2$ | 709.981 *27* | $1/2^{(+)},3/2$ | 1229.84 *8* | 3/2,5/2 |
| 237.732 *15* | $3/2^+,5/2^+$ | 797.16 *8* | $1/2^+,3/2$ | 1281.22 *11* | $3/2^+,5/2^{(+)}$ |
| 240.5 *10* | $7/2^+,9/2^+$ | 810.60 *6* | $1/2^{(+)},3/2,5/2^+$ | 1291.25 *9* | $3/2^-$ |
| 271 *1* | $9/2^-,11/2^-$ | 823.09 *5* | $1/2^{(+)},3/2,5/2^{(+)}$ | 1349.71 *9* | 1/2,3/2 |
| 289.531 *17* | $3/2^+,5/2^+$ | 830.43 *7* | $7/2^+,(9/2)^+$ | 1447.28 *9* | $3/2^{(+)},(1/2)$ |
| 293.786 *26* | $1/2^+,3/2,5/2^+$ | 854.07 *8* | $1/2^+,3/2$ | 1459.5 *12* | $(9/2^-,11/2^-)$ |
| 294.586 *16* | $1/2^+$ | 867.78 *8* | | 1559.9 *10* | |
| 315? *3* | $7/2,9/2^+$ | 902.842 *28* | $1/2^{(+)},3/2$ | 1620.0 *10* | |
| 318.858 *18* | $1/2^+,3/2^+,5/2^+$ | 909.83 *8* | $3/2^+,5/2^+,(1/2)$ | 1636.3 *10* | |
| 351.589 *19* | $3/2^+,5/2^+$ | 914.19 *13* | $7/2,9/2^+$ | 1687.1 *10* | |
| 454.549 *39* | $3/2^+,5/2^+$ | 974.78 *8* | $1/2^{(+)},3/2,5/2^{(+)}$ | 1699.8 *10* | |
| 479.777 *36* | $3/2^+,5/2^+$ | 984.17 *7* | $3/2^+,5/2^+$ | 1847.2 *10* | |
| 540.053 *35* | $1/2^+$ | 1011.01 *6* | $1/2^{(+)},(3/2)$ | 1861.2 *10* | |
| 563.5 *10* | $9/2^-,11/2^-$ | 1047.05 *21* | $1/2^+$ | 1978.6 *13* | |
| 567.546 *30* | $5/2^+$ | 1054.34 *14* | $1/2,3/2,5/2^+$ | 2110.3 *10* | |

† As given by 1990Se17, agree generally with Adopted Levels.
‡ The levels above 1447 keV are from 1975KaZB.

$\gamma(^{101}Mo)$

| $E_\gamma$ | $I_\gamma$[†][‡] | $E_i$(level) | $J_i^\pi$ | $E_f$ | $J_f^\pi$ | Mult. | $\alpha$[#] | Comments |
|---|---|---|---|---|---|---|---|---|
| 13.49 *10* | 78 *29* | 13.497 | $3/2^+$ | 0.0 | $1/2^+$ | | 10 *4* | $\alpha$: from intensity balance. |
| 37.0[a] *4* | 0.6 *2* | 351.589 | $3/2^+,5/2^+$ | 315? | $7/2,9/2^+$ | | | |
| 43.515 *5* | 23.7 *16* | 57.015 | $3/2^+,5/2^+$ | 13.497 | $3/2^+$ | | 14.1 *13* | $\alpha$: from intensity balance. |
| 56.892 *20* | 1.32 *18* | 57.015 | $3/2^+,5/2^+$ | 0.0 | $1/2^+$ | E2 | 9.2 | |
| 81.122 *5* | 39.7 *17* | 318.858 | $1/2^+,3/2^+,5/2^+$ | 237.732 | $3/2^+,5/2^+$ | | 1.3 *3* | |
| 113.935 *10* | 5.3 *3* | 170.958 | $3/2^+,5/2$ | 57.015 | $3/2^+,5/2^+$ | | | |
| 118.556 *11* | 5.3 *3* | 289.531 | $3/2^+,5/2^+$ | 170.958 | $3/2^+,5/2$ | | | |
| 123.0 *3* | 0.4 *2* | 293.786 | $1/2^+,3/2,5/2^+$ | 170.958 | $3/2^+,5/2$ | | | |
| 124.2 *2* | 0.5 *3* | 1098.99 | $1/2^{(+)},3/2$ | 974.78 | $1/2^{(+)},3/2,5/2^{(+)}$ | | | |
| 125.057 *11* | 5.2 *3* | 1109.23 | $3/2^+$ | 984.17 | $3/2^+,5/2^+$ | | | |
| [x]138.4 *2* | 2.2 *7* | | | | | | | |
| 140.8 *2* | 2.4 *6* | 709.981 | $1/2^{(+)},3/2$ | 568.85 | $1/2^+$ | | | |
| 143.1[a] *1* | 1.2 *4* | 315? | $7/2,9/2^+$ | 170.958 | $3/2^+,5/2$ | | | |
| 147.935 *18* | 4.1 *10* | 318.858 | $1/2^+,3/2^+,5/2^+$ | 170.958 | $3/2^+,5/2$ | | | |
| 157.466 *12* | 81.2 *10* | 170.958 | $3/2^+,5/2$ | 13.497 | $3/2^+$ | | | |
| 164.0[@] *2* | 0.9[@] *4* | 974.78 | $1/2^{(+)},3/2,5/2^{(+)}$ | 810.60 | $1/2^{(+)},3/2,5/2^+$ | | | |
| 164.0[@] *2* | 0.9[@] *4* | 1281.22 | $3/2^+,5/2^{(+)}$ | 1116.86 | $3/2^{(+)},5/2,(1/2)$ | | | |
| 164.96 *15* | 0.9 *4* | 454.549 | $3/2^+,5/2^+$ | 289.531 | $3/2^+,5/2^+$ | | | |
| 165.90 *25* | 0.7 *5* | 1447.28 | $3/2^{(+)},(1/2)$ | 1281.22 | $3/2^+,5/2^{(+)}$ | | | |
| 180.703 *19* | 109 *2* | 237.732 | $3/2^+,5/2^+$ | 57.015 | $3/2^+,5/2^+$ | | | |
| 180.8 *3* | 2.0 *5* | 351.589 | $3/2^+,5/2^+$ | 170.958 | $3/2^+,5/2$ | | | |
| 181.5 *2* | 3.2 *5* | 1291.25 | $3/2^-$ | 1109.23 | $3/2^+$ | | | |
| 182.1 *5* | 1.1 *5* | 240.5 | $7/2^+,9/2^+$ | 57.015 | $3/2^+,5/2^+$ | | | |
| 185.96 *5* | 2.8 *6* | 479.777 | $3/2^+,5/2^+$ | 293.786 | $1/2^+,3/2,5/2^+$ | | | |
| 188.46 *6* | 1.2 *5* | 540.053 | $1/2^+$ | 351.589 | $3/2^+,5/2^+$ | | | |
| 189.8 *2* | 1.0 *5* | 479.777 | $3/2^+,5/2^+$ | 289.531 | $3/2^+,5/2^+$ | | | |
| 202.5 *2* | 0.8 *5* | 1116.86 | $3/2^{(+)},5/2,(1/2)$ | 914.19 | $7/2,9/2^+$ | | | |
| 204.06 *6* | 1.4 *5* | 830.43 | $7/2^+,(9/2)^+$ | 626.36 | $7/2,9/2$ | | | |
| 216.82 *3* | 2.4 *5* | 454.549 | $3/2^+,5/2^+$ | 237.732 | $3/2^+,5/2^+$ | | | |
| 218.2[@] *4* | 1.6[@] *7* | 1229.84 | $3/2,5/2$ | 1011.01 | $1/2^{(+)},(3/2)$ | | | |
| 218.2[@] *4* | 1.6[@] *7* | 1447.28 | $3/2^{(+)},(1/2)$ | 1229.84 | $3/2,5/2$ | | | |
| 223.8 *3* | 3.7 *8* | 237.732 | $3/2^+,5/2^+$ | 13.497 | $3/2^+$ | | | |
| 230.18 *7* | 2.7 *5* | 709.981 | $1/2^{(+)},3/2$ | 479.777 | $3/2^+,5/2^+$ | | | |
| 231.1 *2* | 1.2 *6* | 1054.34 | $1/2,3/2,5/2^+$ | 823.09 | $1/2^{(+)},3/2,5/2^{(+)}$ | | | |
| 232.4 *2* | 2.0 *8* | 289.531 | $3/2^+,5/2^+$ | 57.015 | $3/2^+,5/2^+$ | | | |
| [x]233.3 *2* | 2.9 *8* | | | | | | | |
| 234.1 *2* | 3.4 *8* | 1281.22 | $3/2^+,5/2^{(+)}$ | 1047.05 | $1/2^+$ | | | |
| 236.78 *4* | 12.6 *11* | 293.786 | $1/2^+,3/2,5/2^+$ | 57.015 | $3/2^+,5/2^+$ | | | |
| 237.55 *2* | 95.0 *20* | 294.586 | $1/2^+$ | 57.015 | $3/2^+,5/2^+$ | | | |
| 238.4 *5* | 1.3 *7* | 237.732 | $3/2^+,5/2^+$ | 0.0 | $1/2^+$ | | | |
| 241.38[@] *5* | 1.0[@] *2* | 867.78 | | 626.36 | 7/2,9/2 | | | |

$\gamma(^{101}Mo)$ (continued)

| $E_\gamma$ | $I_\gamma$ †‡ | $E_i$(level) | $J_i^\pi$ | $E_f$ | $J_f^\pi$ |
|---|---|---|---|---|---|
| 241.38@ 5 | 1.0@ 2 | 1109.23 | 3/2$^+$ | 867.78 | |
| 274.9 2 | 6.6 18 | 568.85 | 1/2$^+$ | 293.786 | 1/2$^+$,3/2,5/2$^+$ |
| 276.10 4 | 56.8 12 | 289.531 | 3/2$^+$,5/2$^+$ | 13.497 | 3/2$^+$ |
| 277.98 4 | 4.8 9 | 567.546 | 5/2$^+$ | 289.531 | 3/2$^+$,5/2$^+$ |
| 280.25 4 | 36.8 9 | 293.786 | 1/2$^+$,3/2,5/2$^+$ | 13.497 | 3/2$^+$ |
| 281.05 4 | 45.5 12 | 294.586 | 1/2$^+$ | 13.497 | 3/2$^+$ |
| 283.5 2 | 4.2 19 | 454.549 | 3/2$^+$,5/2$^+$ | 170.958 | 3/2$^+$,5/2 |
| 287.86 11 | 3.0 14 | 914.19 | 7/2,9/2$^+$ | 626.36 | 7/2,9/2 |
| 289.63 5 | 6.7 13 | 289.531 | 3/2$^+$,5/2$^+$ | 0.0 | 1/2$^+$ |
| 292.0 2 | 4.0 22 | 586.47 | 1/2,3/2 | 294.586 | 1/2$^+$ |
| 293.81 11 | 20.3 5 | 293.786 | 1/2$^+$,3/2,5/2$^+$ | 0.0 | 1/2$^+$ |
| 294.59& 4 | 44& 3 | 294.586 | 1/2$^+$ | 0.0 | 1/2$^+$ |
| 294.59& 4 | 38& 3 | 351.589 | 3/2$^+$,5/2$^+$ | 57.015 | 3/2$^+$,5/2$^+$ |
| 305.5 2 | 74 7 | 318.858 | 1/2$^+$,3/2$^+$,5/2$^+$ | 13.497 | 3/2$^+$ |
| x309.0 3 | 7.4 12 | | | | |
| x311.21 17 | 2.3 13 | | | | |
| 317.5 3 | 2.1 13 | 797.16 | 1/2$^+$,3/2 | 479.777 | 3/2$^+$,5/2$^+$ |
| 326.45 10 | 0.9 3 | 909.83 | 3/2$^+$,5/2$^+$,(1/2) | 583.39 | 7/2$^+$,9/2$^+$ |
| 329.93 6 | 4.1 3 | 567.546 | 5/2$^+$ | 237.732 | 3/2$^+$,5/2$^+$ |
| 331.2 3 | 1.8 3 | 568.85 | 1/2$^+$ | 237.732 | 3/2$^+$,5/2$^+$ |
| 335.34 5 | 2.2 3 | 902.842 | 1/2$^{(+)}$,3/2 | 567.546 | 5/2$^+$ |
| 338.5 3 | 1.4 3 | 351.589 | 3/2$^+$,5/2$^+$ | 13.497 | 3/2$^+$ |
| 340.5 2 | 1.2 3 | 909.83 | 3/2$^+$,5/2$^+$,(1/2) | 568.85 | 1/2$^+$ |
| 343.4 2 | 1.4 3 | 823.09 | 1/2$^{(+)}$,3/2,5/2$^{(+)}$ | 479.777 | 3/2$^+$,5/2$^+$ |
| 351.595 15 | 19.9 14 | 351.589 | 3/2$^+$,5/2$^+$ | 0.0 | 1/2$^+$ |
| 355.7 3 | 0.5 3 | 810.60 | 1/2$^{(+)}$,3/2,5/2$^+$ | 454.549 | 3/2$^+$,5/2$^+$ |
| 358.41 4 | 4.3 5 | 709.981 | 1/2$^{(+)}$,3/2 | 351.589 | 3/2$^+$,5/2$^+$ |
| x364.99 15 | 2.2 13 | | | | |
| 367.5 2 | 2.1 12 | 1281.22 | 3/2$^+$,5/2$^{(+)}$ | 914.19 | 7/2,9/2$^+$ |
| 369.79 5 | 4 2 | 909.83 | 3/2$^+$,5/2$^+$,(1/2) | 540.053 | 1/2$^+$ |
| 374.6 2 | 0.6 4 | 854.07 | 1/2$^+$,3/2 | 479.777 | 3/2$^+$,5/2$^+$ |
| 388.59 7 | 4.6 14 | 626.36 | 7/2,9/2 | 237.732 | 3/2$^+$,5/2$^+$ |
| 392.9 4 | 2.5 14 | 1447.28 | 3/2$^{(+)}$,(1/2) | 1054.34 | 1/2,3/2,5/2$^+$ |
| x395.8 3 | 3.8 4 | | | | |
| 398.0@ 3 | 1.6@ 9 | 454.549 | 3/2$^+$,5/2$^+$ | 57.015 | 3/2$^+$,5/2$^+$ |
| 398.0@ 3 | 4.3@ 26 | 568.85 | 1/2$^+$ | 170.958 | 3/2$^+$,5/2 |
| 399.0 2 | 5 2 | 854.07 | 1/2$^+$,3/2 | 454.549 | 3/2$^+$,5/2$^+$ |
| 406.80@ 6 | 3.5@ 14 | 1116.86 | 3/2$^{(+)}$,5/2,(1/2) | 709.981 | 1/2$^{(+)}$,3/2 |
| 406.80@ 6 | 3.5@ 14 | 1229.84 | 3/2,5/2 | 823.09 | 1/2$^{(+)}$,3/2,5/2$^{(+)}$ |
| 412.1 3 | 3.9 18 | 583.39 | 7/2$^+$,9/2$^+$ | 170.958 | 3/2$^+$,5/2 |
| x414.6 3 | 1.0 5 | | | | |





$^{101}_{42}Mo_{59}$-3

$\gamma(^{101}$Mo) (continued)

| $E_\gamma$ | $I_\gamma$ †‡ | $E_i$(level) | $J_i^\pi$ | $E_f$ | $J_f^\pi$ |
|---|---|---|---|---|---|
| 415.9 *3* | 2.8 *13* | 709.981 | $1/2^{(+)}$,3/2 | 293.786 | $1/2^+$,3/2,$5/2^+$ |
| 420.43 *3* | 5.4 *8* | 709.981 | $1/2^{(+)}$,3/2 | 289.531 | $3/2^+$,$5/2^+$ |
| 423.3 *4* | 0.8 *5* | 479.777 | $3/2^+$,$5/2^+$ | 56 | ≥7/2 |
| 436.7 *5* | 2.7 *15* | 1291.25 | $3/2^-$ | 854.07 | $1/2^+$,3/2 |
| 441.01 *5* | 19.4 *19* | 454.549 | $3/2^+$,$5/2^+$ | 13.497 | $3/2^+$ |
| 454.0 *3* | 3.3 *16* | 454.549 | $3/2^+$,$5/2^+$ | 0.0 | $1/2^+$ |
| 459.0 *3* | 3.3 *18* | 810.60 | $1/2^{(+)}$,3/2,$5/2^+$ | 351.589 | $3/2^+$,$5/2^+$ |
| 466.35 *4* | 18.4 *15* | 479.777 | $3/2^+$,$5/2^+$ | 13.497 | $3/2^+$ |
| 480.1 *4* | 12 *4* | 479.777 | $3/2^+$,$5/2^+$ | 0.0 | $1/2^+$ |
| 507.2 *7* | 1.5 *4* | 797.16 | $1/2^+$,3/2 | 289.531 | $3/2^+$,$5/2^+$ |
| 526.55 *5* | 18.5 *13* | 540.053 | $1/2^+$ | 13.497 | $3/2^+$ |
| 539.6 *3* | 6.0 *15* | 709.981 | $1/2^{(+)}$,3/2 | 170.958 | $3/2^+$,5/2 |
| 540.21 *17* | 10.7 *20* | 540.053 | $1/2^+$ | 0.0 | $1/2^+$ |
| 554.2 *5* | 2.6 *17* | 567.546 | $5/2^+$ | 13.497 | $3/2^+$ |
| 555.34 *6* | 17.5 *12* | 568.85 | $1/2^+$ | 13.497 | $3/2^+$ |
| 559.4 *2* | 1.3 *5* | 797.16 | $1/2^+$,3/2 | 237.732 | $3/2^+$,$5/2^+$ |
| 560.3 *5* | 3.8 *16* | 854.07 | $1/2^+$,3/2 | 293.786 | $1/2^+$,3/2,$5/2^+$ |
| 567.4 *3* | 9.5 *10* | 567.546 | $5/2^+$ | 0.0 | $1/2^+$ |
| 569.17 *7* | 6.7 *6* | 1109.23 | $3/2^+$ | 540.053 | $1/2^+$ |
| 583.96 *3* | 15.8 *20* | 902.842 | $1/2^{(+)}$,3/2 | 318.858 | $1/2^+$,$3/2^+$,$5/2^+$ |
| 586.40 *14* | 11 *1* | 586.47 | 1/2,3/2 | 0.0 | $1/2^+$ |
| 603.69 *15* | 2.6 *5* | 1229.84 | 3/2,5/2 | 626.36 | 7/2,9/2 |
| 608.21 *2* | 14.1 *25* | 902.842 | $1/2^{(+)}$,3/2 | 294.586 | $1/2^+$ |
| 616.78 *14* | 1.7 *3* | 1447.28 | $3/2^{(+)}$,(1/2) | 830.43 | $7/2^+$,$(9/2)^+$ |
| 620.8& *3* | 1.2& *3* | 909.83 | $3/2^+$,$5/2^+$,(1/2) | 289.531 | $3/2^+$,$5/2^+$ |
| 620.8& *3* | 1.2& *3* | 914.19 | 7/2,$9/2^+$ | 293.786 | $1/2^+$,3/2,$5/2^+$ |
| 623.4 *5* | 4.7 *3* | 914.19 | 7/2,$9/2^+$ | 289.531 | $3/2^+$,$5/2^+$ |
| 626.17 *10* | 2.2 *8* | 797.16 | $1/2^+$,3/2 | 170.958 | $3/2^+$,5/2 |
| 630.1 *4* | 1.1 *6* | 867.78 | | 237.732 | $3/2^+$,$5/2^+$ |
| 631.79 *10* | 2.6 *3* | 1199.41 | $1/2^{(+)}$,3/2,5/2 | 567.546 | $5/2^+$ |
| [x]634.6 *2* | 1.5 *8* | | | | |
| 636.7 *2* | 1.6 *3* | 1447.28 | $3/2^{(+)}$,(1/2) | 810.60 | $1/2^{(+)}$,3/2,$5/2^+$ |
| 639.62 *7* | 3.8 *14* | 810.60 | $1/2^{(+)}$,3/2,$5/2^+$ | 170.958 | $3/2^+$,5/2 |
| [x]645.7 *2* | 3.9 *3* | | | | |
| [x]651.1 *3* | 2.9 *6* | | | | |
| 652.5 *2* | 0.9 *2* | 823.09 | $1/2^{(+)}$,3/2,$5/2^{(+)}$ | 170.958 | $3/2^+$,5/2 |
| [x]657.9 *4* | 0.9 *3* | | | | |
| 664.9 *2* | 3.4 *14* | 902.842 | $1/2^{(+)}$,3/2 | 237.732 | $3/2^+$,$5/2^+$ |
| [x]679.4 *3* | 2.7 *3* | | | | |
| 682.9 *2* | 4.7 *4* | 854.07 | $1/2^+$,3/2 | 170.958 | $3/2^+$,5/2 |
| 691.7 *3* | 4.3 *3* | 1011.01 | $1/2^{(+)}$,(3/2) | 318.858 | $1/2^+$,$3/2^+$,$5/2^+$ |
| 695.0 *5* | 11 *5* | 1047.05 | $1/2^+$ | 351.589 | $3/2^+$,$5/2^+$ |







$^{101}_{42}Mo_{59}$-4

## $^{100}$Mo(n,$\gamma$) E=th:secondary 1990Se17 (continued)

### $\gamma(^{101}Mo)$ (continued)

| $E_\gamma$ | $I_\gamma$ †‡ | $E_i$(level) | $J_i^\pi$ | $E_f$ | $J_f^\pi$ |
|---|---|---|---|---|---|
| 696.2 *2* | 10 *2* | 867.78 | | 170.958 | $3/2^+$,5/2 |
| 697.7 *2* | 3 *2* | 1281.22 | $3/2^+$,$5/2^{(+)}$ | 583.39 | $7/2^+$,$9/2^+$ |
| x707.5 *3* | 2.8 *3* | | | | |
| 716.41 *7* | 36 *2* | 1011.01 | $1/2^{(+)}$,(3/2) | 294.586 | $1/2^+$ |
| 719.67 *7* | 13.2 *14* | 1199.41 | $1/2^{(+)}$,3/2,5/2 | 479.777 | $3/2^+$,$5/2^+$ |
| 722.44 *6* | 11 *3* | 1291.25 | $3/2^-$ | 568.85 | $1/2^+$ |
| 737.0 *1* | 4.5 *6* | 974.78 | $1/2^{(+)}$,3/2,$5/2^{(+)}$ | 237.732 | $3/2^+$,$5/2^+$ |
| 740.3 *2* | 1.4 *10* | 797.16 | $1/2^+$,3/2 | 57.015 | $3/2^+$,$5/2^+$ |
| 753.8 *2* | 1.3 *9* | 810.60 | $1/2^{(+)}$,3/2,$5/2^+$ | 57.015 | $3/2^+$,$5/2^+$ |
| 757.8 *3* | 2.9 *8* | 1109.23 | $3/2^+$ | 351.589 | $3/2^+$,$5/2^+$ |
| 760.1 *3* | 2.2 *9* | 1054.34 | 1/2,3/2,$5/2^+$ | 294.586 | $1/2^+$ |
| 765.9 *2* | 7 *2* | 1116.86 | $3/2^{(+)}$,5/2,(1/2) | 351.589 | $3/2^+$,$5/2^+$ |
| 783.6 *3* | 3.8 *9* | 797.16 | $1/2^+$,3/2 | 13.497 | $3/2^+$ |
| 790.0 *5* | 2.7 *8* | 1109.23 | $3/2^+$ | 318.858 | $1/2^+$,$3/2^+$,$5/2^+$ |
| 797.10 *21* | 6.0 *5* | 854.07 | $1/2^+$,3/2 | 57.015 | $3/2^+$,$5/2^+$ |
| x806.7 *2* | 3.1 *6* | | | | |
| 810.8 *4* | 5.3 *3* | 810.60 | $1/2^{(+)}$,3/2,$5/2^+$ | 0.0 | $1/2^+$ |
| 814.9 *2* | 1.7 *4* | 1109.23 | $3/2^+$ | 294.586 | $1/2^+$ |
| 823.08 *6* | 6.0 *15* | 823.09 | $1/2^{(+)}$,3/2,$5/2^{(+)}$ | 0.0 | $1/2^+$ |
| 840.63 *15* | 3.4 *7* | 854.07 | $1/2^+$,3/2 | 13.497 | $3/2^+$ |
| 853.1 *3* | 5.7 *4* | 909.83 | $3/2^+$,$5/2^+$,(1/2) | 57.015 | $3/2^+$,$5/2^+$ |
| 854.1 *2* | 5.3 *7* | 854.07 | $1/2^+$,3/2 | 0.0 | $1/2^+$ |
| 902.98 *10* | 5.3 *4* | 902.842 | $1/2^{(+)}$,3/2 | 0.0 | $1/2^+$ |
| 918.5 *5* | 5 *2* | 974.78 | $1/2^{(+)}$,3/2,$5/2^{(+)}$ | 56 | ≥7/2 |
| x924.51 *15* | 3.3 *3* | | | | |
| 926.3 *5* | 4 *2* | 984.17 | $3/2^+$,$5/2^+$ | 57.015 | $3/2^+$,$5/2^+$ |
| x929.1 *2* | 4.6 *4* | | | | |
| 940.4 *5* | 6.7 *7* | 1229.84 | 3/2,5/2 | 289.531 | $3/2^+$,$5/2^+$ |
| 962.4 *2* | 4.4 *4* | 1281.22 | $3/2^+$,$5/2^{(+)}$ | 318.858 | $1/2^+$,$3/2^+$,$5/2^+$ |
| 967.9 *3* | 13.4 *15* | 1447.28 | $3/2^{(+)}$,(1/2) | 479.777 | $3/2^+$,$5/2^+$ |
| 970.9 *2* | 11.2 *25* | 984.17 | $3/2^+$,$5/2^+$ | 13.497 | $3/2^+$ |
| 972.6 *3* | 32 *2* | 1291.25 | $3/2^-$ | 318.858 | $1/2^+$,$3/2^+$,$5/2^+$ |
| x973.4 *3* | 9.6 *18* | | | | |
| 997.58 *10* | 1.8 *4* | 1011.01 | $1/2^{(+)}$,(3/2) | 13.497 | $3/2^+$ |
| x1007.8 *2* | 4.7 *5* | | | | |
| x1025.02 *10* | 3.8 *4* | | | | |
| 1030.85 *10* | 9.3 *5* | 1349.71 | 1/2,3/2 | 318.858 | $1/2^+$,$3/2^+$,$5/2^+$ |
| 1042.6 *5* | 12.0 *20* | 1098.99 | $1/2^{(+)}$,3/2 | 57.015 | $3/2^+$,$5/2^+$ |
| 1052.8 *3* | 8.0 *6* | 1109.23 | $3/2^+$ | 56 | ≥7/2 |
| 1054.4 *3* | 7.0 *5* | 1054.34 | 1/2,3/2,$5/2^+$ | 0.0 | $1/2^+$ |
| x1074.8 *2* | 0.5 *2* | | | | |
| 1084.8 *6* | 2.6 *10* | 1098.99 | $1/2^{(+)}$,3/2 | 13.497 | $3/2^+$ |





$^{101}_{42}Mo_{59}$-5

## $^{100}$Mo(n,$\gamma$) E=th:secondary 1990Se17 (continued)

### $\gamma(^{101}Mo)$ (continued)

| $E_\gamma$ | $I_\gamma$ †‡ | $E_i$(level) | $J_i^\pi$ | $E_f$ | $J_f^\pi$ | $E_\gamma$ | $I_\gamma$ †‡ | $E_i$(level) | $J_i^\pi$ | $E_f$ | $J_f^\pi$ |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [x]1097.48 *10* | 8.4 *4* | | | | | [x]1235.63 *15* | 1.0 *4* | | | | |
| [x]1107.9 *2* | 4.2 *5* | | | | | [x]1278.5 *2* | 0.5 *2* | | | | |
| 1119.9 *3* | 12 *2* | 1291.25 | $3/2^-$ | 170.958 | $3/2^+$,5/2 | [x]1287.3 *3* | 3.9 *5* | | | | |
| 1127.8 *2* | 1.5 *5* | 1447.28 | $3/2^{(+)}$,(1/2) | 318.858 | $1/2^+$,$3/2^+$,$5/2^+$ | [x]1300.32 *15* | 6.1 *6* | | | | |
| [x]1130.6 *2* | 1.6 *6* | | | | | [x]1315.2 *3* | 1.8 *4* | | | | |
| 1153.0 *3* | 7.0 *8* | 1447.28 | $3/2^{(+)}$,(1/2) | 294.586 | $1/2^+$ | [x]1405.57 *15* | 5.7 *4* | | | | |
| 1157.5 *3* | 7.8 *8* | 1447.28 | $3/2^{(+)}$,(1/2) | 289.531 | $3/2^+$,$5/2^+$ | [x]1433.2 *2* | 13.5 *11* | | | | |
| [x]1208.1 *2* | 2.1 *5* | | | | | [x]1440.4 *2* | 2.0 *5* | | | | |
| 1229.70 *10* | 3.1 *4* | 1229.84 | 3/2,5/2 | 0.0 | $1/2^+$ | 1447.7 *4* | 3.9 *6* | 1447.28 | $3/2^{(+)}$,(1/2) | 0.0 | $1/2^+$ |

† Absolute photons/1000 n-captures are listed; normalized via the 191 keV in $^{101}$Tc decay, the 2% uncertainty in the normalization transition not included.
‡ For intensity per 100 neutron captures, multiply by 0.1.
# Total theoretical internal conversion coefficients, calculated using the BrIcc code (2008Ki07) with Frozen orbital approximation based on $\gamma$-ray energies, assigned multipolarities, and mixing ratios, unless otherwise specified.
@ Multiply placed with undivided intensity.
& Multiply placed with intensity suitably divided.
a Placement of transition in the level scheme is uncertain.
x $\gamma$ ray not placed in level scheme.





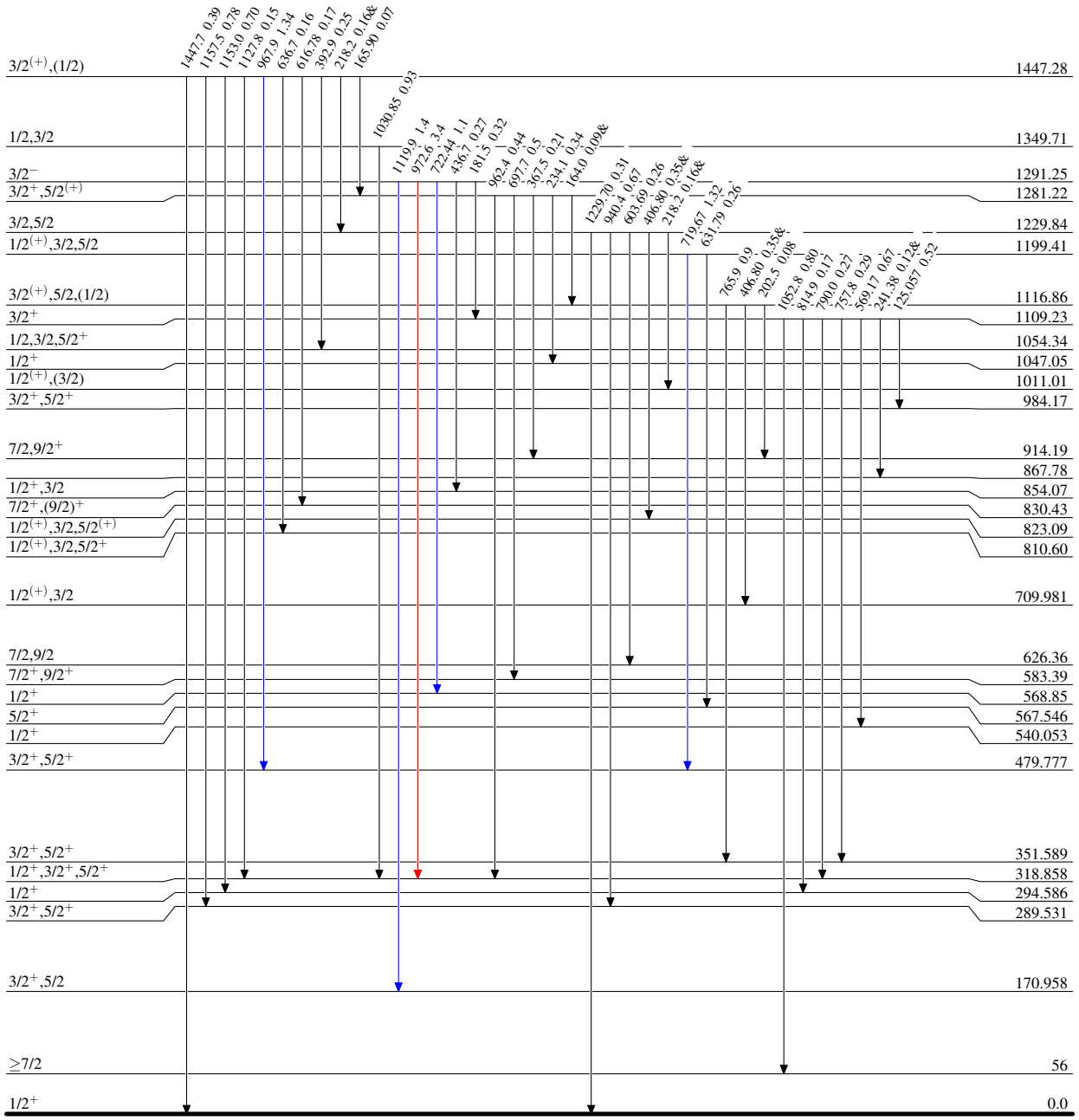
$^{101}_{42}Mo_{59}$-6

## $^{100}$Mo(n,γ) E=th:secondary 1990Se17

### Level Scheme

Intensities: Photons /100 N-captures
& Multiply placed: undivided intensity given

Legend
$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$



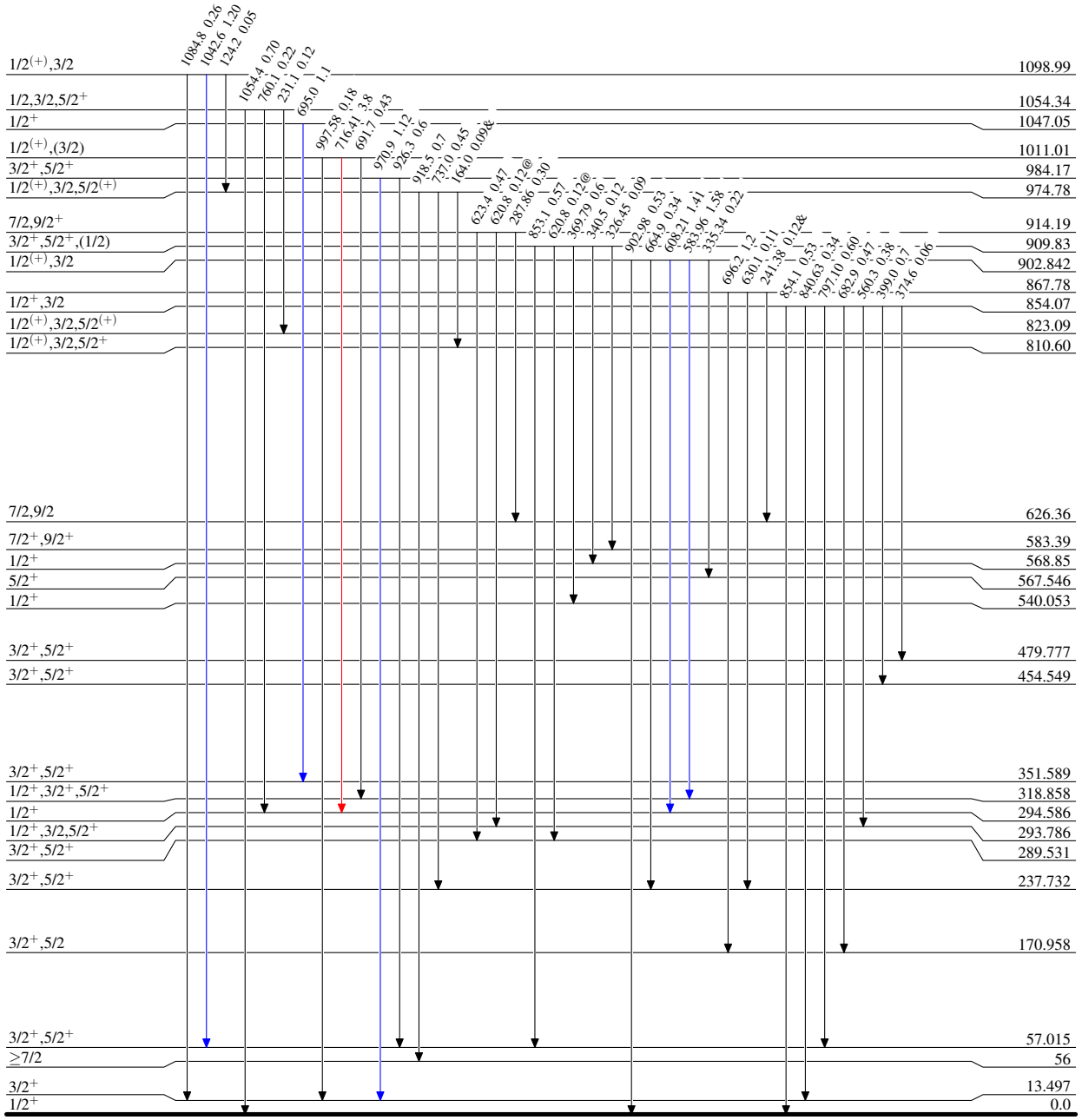

$^{101}_{42}Mo_{59}$

## $^{100}$Mo(n,γ) E=th:secondary 1990Se17

### Level Scheme (continued)

Intensities: Photons /100 N-captures
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided

Legend
$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$



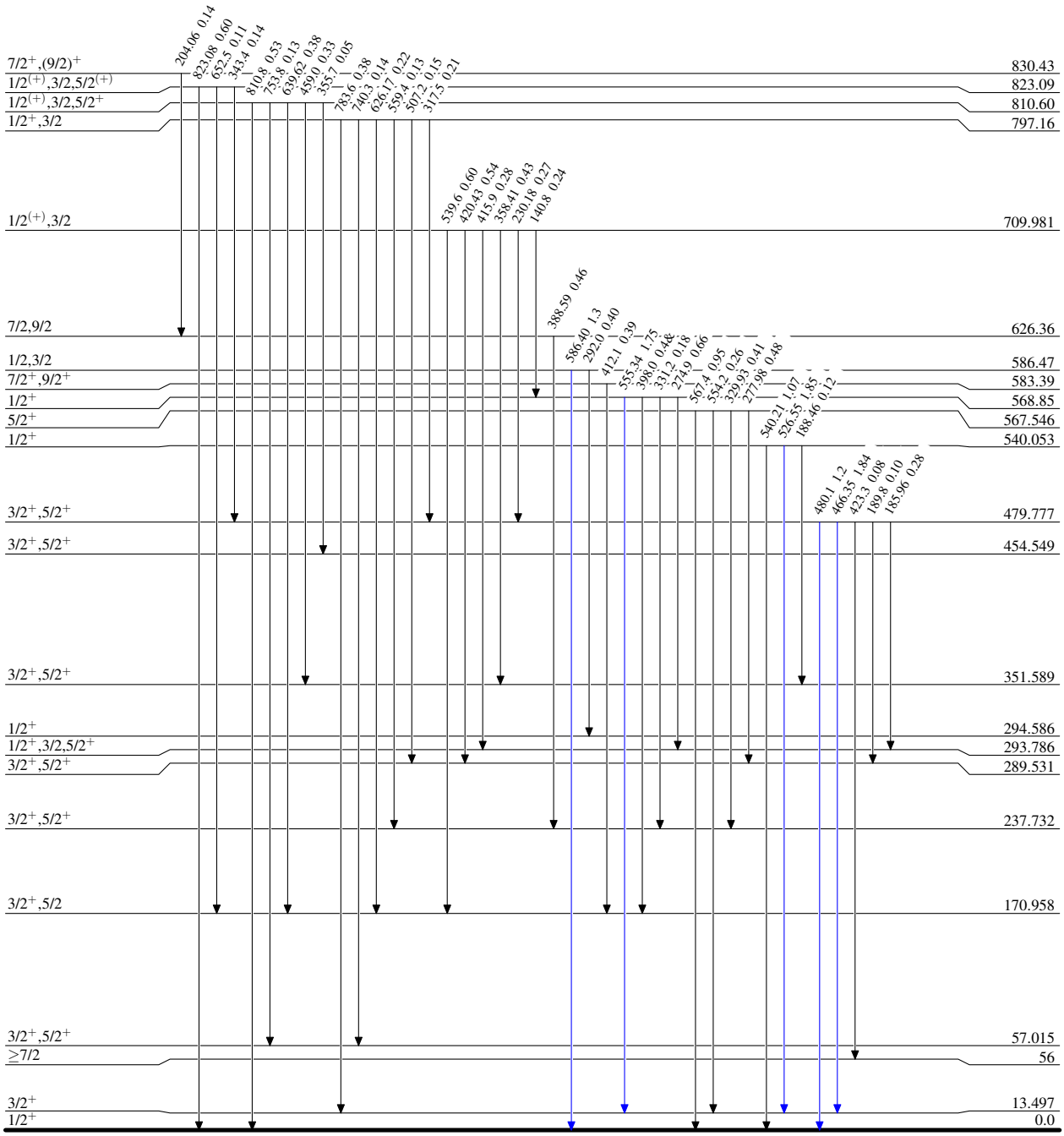

$^{101}_{42}Mo_{59}$

## $^{100}$Mo(n,γ) E=th:secondary 1990Se17

### Level Scheme (continued)

Intensities: Photons /100 N-captures
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided

Legend
$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$



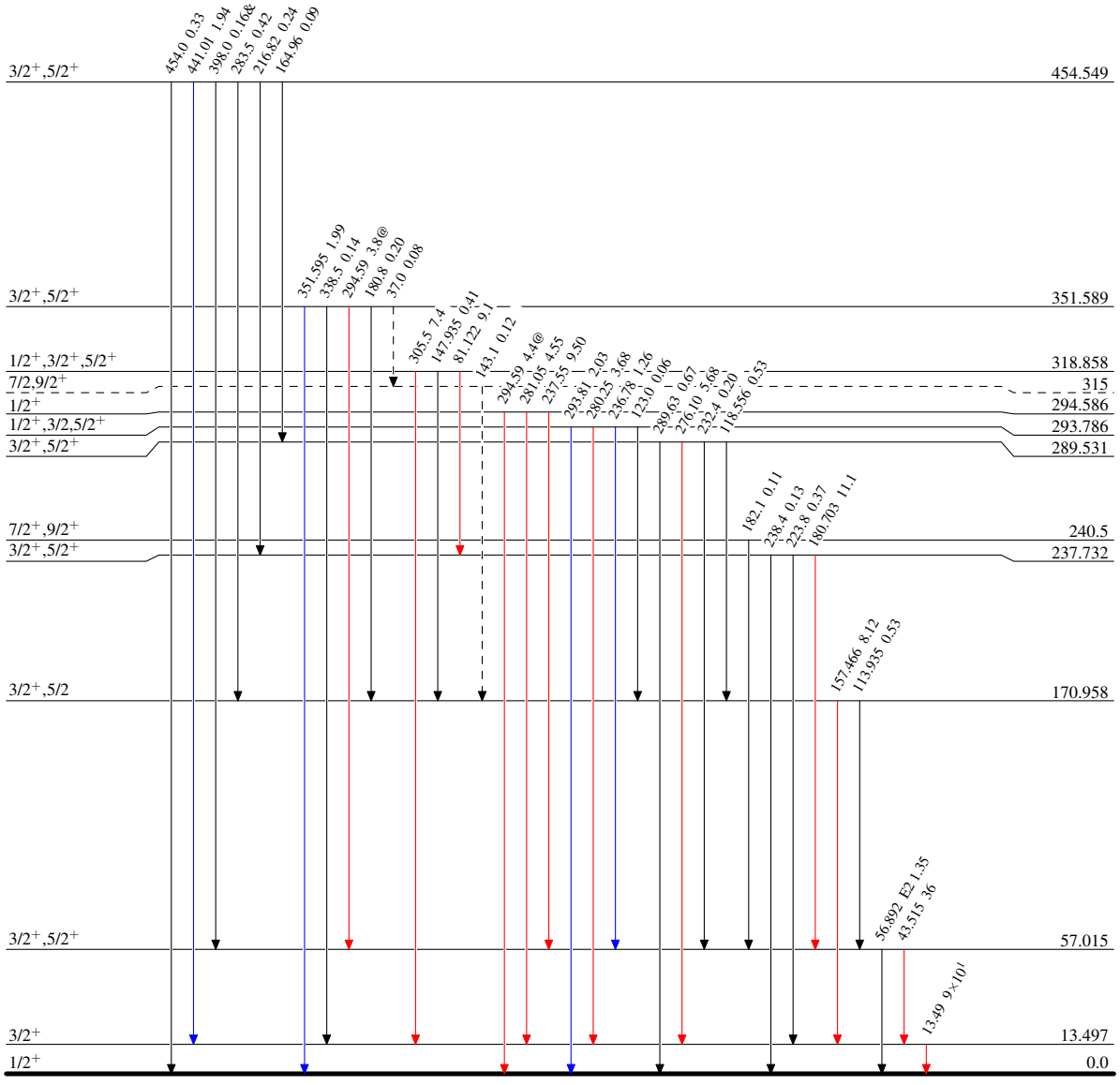

$^{101}_{42}Mo_{59}$

## $^{100}$Mo(n,γ) E=th:secondary 1990Se17

### Level Scheme (continued)

Intensities: Photons /100 N-captures
& Multiply placed: undivided intensity given
@ Multiply placed: intensity suitably divided

Legend
$I_\gamma < 2\% \times I_\gamma^{max}$
$I_\gamma < 10\% \times I_\gamma^{max}$
$I_\gamma > 10\% \times I_\gamma^{max}$
γ Decay (Uncertain)




$^{101}_{42}Mo_{59}$