

$^{115}\text{Ag}$   $\beta^-$  decay (20.0 min) 1978Ma18

| Type            | Author       | History Citation     | Literature Cutoff Date |
|-----------------|--------------|----------------------|------------------------|
| Full Evaluation | Jean Blachot | NDS 113, 2391 (2012) | 1-Sep-2012             |

Parent:  $^{115}\text{Ag}$ :  $E=0.0$ ;  $J^\pi=1/2^-$ ;  $T_{1/2}=20.0$  min 5;  $Q(\beta^-)=3100$  30;  $\%\beta^-$  decay=100.0

Others: 1958Al90, 1964Ba36, 1970Hn01.

1978Ma18:  $\gamma$ ,  $\gamma\gamma$ ,  $\beta\gamma$ ,  $(\beta)(\text{ce})$ ,  $E\beta$ , F-K  $\beta\gamma$ ; scin-scin, scin-semi.

Measured  $\beta\gamma$  (1980Oh01) deduced  $T_{1/2}$ .

1981Me17: measured  $\gamma$ -singles.

Measured  $E\beta$ : 1964Ba36.

 $^{115}\text{Cd}$  Levels

| E(level)               | $J^\pi^\dagger$ | $T_{1/2}^\dagger$ | Comments   |
|------------------------|-----------------|-------------------|--|
| 0.0                    | $1/2^+$         | 53.46 h 5         |  |
| 181.01 $^\ddagger$ 23  | $(11/2)^-$      | 44.56 d 24        | E(level): deduced from cascade and crossover $\gamma$ rays originating from higher lying $\pi=-$ states. $719.9=472.7+247=326.1+236.1+181.0$ .<br>Yield of 44.6-d isomer via 20 min $^{115}\text{Ag}$ decay=5.7% 7 from level scheme. Others: 10.7% (1970Hn01), 8.5% (1968Kj01), 8% (1955Hi66), 9% (1952Wa06). |
| 229.04 8               | $(3/2)^+$       |                   |  |
| 360.53 11              | $(5/2)^+$       |                   |  |
| 393.81 $^\ddagger$ 21  | $(7/2)^-$       | 0.75 ns 3         | $T_{1/2}$ : from $\beta\gamma$ -coin (1980Oh01).   |
| 417.1 $^\ddagger$ 3    | $(9/2)^-$       |                   |  |
| 472.7 1                | $3/2^+, 5/2^+$  |                   |  |
| 473.9 3                | $(^+)$          |                   |  |
| 507.27 19              | $3/2^+, 5/2^+$  |                   |  |
| 649.12 9               | $1/2^+$         |                   |  |
| 719.9 $^\ddagger$ 2    | $(5/2)^-$       |                   |  |
| 749.44 23              | $3/2^+, 5/2^+$  |                   |  |
| 776.69 14              | $3/2^+, 5/2^+$  |                   |  |
| 962.68 17              | $1/2^+$         |                   |  |
| 1091.99 $^\ddagger$ 20 | $(3/2)^-$       |                   |  |
| 1126.2 3               |                 |                   |  |
| 1224.6 3               |                 |                   |  |
| 1317.20 24             | $3/2^+, 5/2^+$  |                   |  |
| 1358.3 4               | $3/2^+, 5/2^+$  |                   |  |
| 1485.55 23             |                 |                   |  |
| 1742.0 6               |                 |                   |  |
| 2077.6 8               |                 |                   |  |
| 2113.29 16             | $(1/2^+, 3/2)$  |                   |  |
| 2156.00 13             | $(3/2)^-$       |                   |  |
| 2183.9 4               |                 |                   |  |
| 2314.45 19             | $3/2^-$         |                   |  |
| 2383.46 20             | $3/2$           |                   |  |
| 2486.56 19             | $(1/2^-, 3/2)$  |                   |  |
| 2494.1 3               |                 |                   |  |
| 2526.9 3               |                 |                   |  |
| 2569.1 3               |                 |                   |  |
| 2635.9? 5              |                 |                   |  |
| 2659.4 3               |                 |                   |  |
| 2680.35 25             |                 |                   |  |
| 2713.9? 5              |                 |                   |  |
| 2906.3 3               | $1/2^-, 3/2^-$  |                   |  |

$^\dagger$  From Adopted Levels, except as noted.

Continued on next page (footnotes at end of table)

$^{115}\text{Ag}$   $\beta^-$  decay (20.0 min) **1978Ma18** (continued) $^{115}\text{Cd}$  Levels (continued)

‡ Low-lying  $\pi=-$  states of  $^{113}\text{Cd}$ ,  $^{115}\text{Cd}$ ,  $^{117}\text{Cd}$  occur regularly; see **1978Ma18** for empirical trends, and B(E2)-branching ratios from J(initial)=3/2 and 5/2 to J(final)=5/2,7/2,9/2.

 $\beta^-$  radiations

| E(decay)                 | E(level) | $I\beta^-$ † | Log ft                | Comments  |
|--------------------------|----------|--------------|-----------------------|---|
| ( $1.9 \times 10^2$ ) 3  | 2906.3   | 0.05         | 5.4                   | av $E\beta=53$ 9  |
| ( $4.2 \times 10^2$ ) 3  | 2680.35  | 0.1          | 6.2                   | av $E\beta=126$ 11  |
| ( $4.4 \times 10^2$ ) 3  | 2659.4   | 0.1          | 6.2                   | av $E\beta=133$ 11  |
| ( $5.3 \times 10^2$ ) 3  | 2569.1   | 0.15         | 6.3                   | av $E\beta=166$ 11  |
| ( $5.7 \times 10^2$ ) 3  | 2526.9   | 0.1          | 6.6                   | av $E\beta=181$ 12  |
| ( $6.1 \times 10^2$ ) 3  | 2494.1   | 0.15         | 6.5                   | av $E\beta=193$ 12  |
| ( $6.1 \times 10^2$ ) 3  | 2486.56  | 0.5          | 6.0                   | av $E\beta=196$ 12  |
| ( $7.2 \times 10^2$ ) 3  | 2383.46  | 0.7          | 6.1                   | av $E\beta=235$ 12<br>E(decay): 721 100 ( <b>1978Ma18</b> ) $\beta(2383\gamma)$ .   |
| ( $7.9 \times 10^2$ ) 3  | 2314.45  | 2.3          | 5.8                   | av $E\beta=262$ 12  |
| ( $9.2 \times 10^2$ ) 3  | 2183.9   | 0.3          | 6.9                   | av $E\beta=314$ 13  |
| ( $9.4 \times 10^2$ ) 3  | 2156.00  | 7.4 4        | 5.54 6                | av $E\beta=326$ 13<br>E(decay): <b>1978Ma18</b> : 948 100 $\beta(1379\gamma)$ , 875 100 $\beta(1507\gamma)$ , 936 100 $\beta(1927\gamma)$ ;<br><b>1964Ba36</b> : 1000 100 $\beta(1927\gamma, 2156\gamma)$ .   |
| ( $9.9 \times 10^2$ ) 3  | 2113.29  | 3.2 2        | 5.97 6                | av $E\beta=343$ 13<br>E(decay): 1093 100 ( <b>1978Ma18</b> ) $\beta(1641\gamma)$ , 1000 100 ( <b>1964Ba36</b> ) $\beta(1464\gamma)$ .   |
| ( $1.02 \times 10^3$ ) 3 | 2077.6   | 0.1          | 7.5                   | av $E\beta=358$ 13  |
| ( $1.36 \times 10^3$ ) 3 | 1742.0   | 0.1          | 8.0                   | av $E\beta=501$ 13  |
| ( $1.74 \times 10^3$ ) 3 | 1358.3   | 0.2          | 8.1                   | av $E\beta=670$ 14  |
| ( $1.78 \times 10^3$ ) 3 | 1317.20  | 0.2          | 8.2                   | av $E\beta=688$ 14  |
| ( $1.88 \times 10^3$ ) 3 | 1224.6   | 0.2          | 8.2                   | av $E\beta=730$ 14  |
| ( $1.97 \times 10^3$ ) 3 | 1126.2   | 0.2          | 8.3                   | av $E\beta=775$ 14  |
| ( $2.01 \times 10^3$ ) 3 | 1091.99  | 4.5 5        | 7.02 6                | av $E\beta=790$ 14<br>E(decay): <b>1978Ma18</b> : 2030 100 $\beta(373\gamma)$ , 1943 100 $\beta(698\gamma)$ .   |
| ( $2.14 \times 10^3$ ) 3 | 962.68   | 0.3          | 8.3                   | av $E\beta=849$ 14  |
| ( $2.32 \times 10^3$ ) 3 | 776.69   | 0.4          | 8.3                   | av $E\beta=935$ 14  |
| ( $2.35 \times 10^3$ ) 3 | 749.44   | 0.3          | 9.7 <sup>1u</sup>     | av $E\beta=946$ 14  |
| ( $2.45 \times 10^3$ ) 3 | 649.12   | 1.2 5        | 7.95 19               | av $E\beta=994$ 14<br>E(decay): 2450 100 ( <b>1964Ba36</b> ) $\beta(649\gamma)$ .   |
| ( $2.59 \times 10^3$ ) 3 | 507.27   | 0.4          | 8.5                   | av $E\beta=1059$ 14   |
| ( $2.63 \times 10^3$ ) 3 | 472.7    | 1.1 6        | 8.11 24               | av $E\beta=1075$ 14<br>E(decay): 2700 100 ( <b>1964Ba36</b> ) $\beta(472\gamma)$ .  |
| ( $2.74 \times 10^3$ ) 3 | 360.53   | 2.3 10       | 9.18 <sup>1u</sup> 20 | av $E\beta=1122$ 14   |
| ( $2.87 \times 10^3$ ) 3 | 229.04   | 12.5 15      | 7.22 6                | av $E\beta=1189$ 14<br>E(decay): 2950 100 ( <b>1964Ba36</b> ) $\beta(229\gamma)$ .  |
| ( $3.10 \times 10^3$ ) 3 | 0.0      | 60 15        | 6.67 11               | av $E\beta=1296$ 14<br>E(decay): 3200 100 ( <b>1964Ba36</b> ) scin, F-K analysis. Other: <b>1958A190</b> .<br>$I\beta^-$ : 60% 15 ( <b>1978Ma18</b> ) from $I\beta(\text{total})/I\beta(229 \text{ level})$ compared with $^{198}\text{Au}$<br>$I\beta(\text{total})/I\beta(412 \text{ level})$ . Others: 32% ( <b>1970Hn01</b> ), 19% ( <b>1964Ba36</b> ). |

† Absolute intensity per 100 decays.

<sup>115</sup>Ag β<sup>-</sup> decay (20.0 min) 1978Ma18 (continued)

γ(<sup>115</sup>Cd)

I<sub>γ</sub> normalization: for I(β<sup>-</sup>)=60% 15 to g.s. and Σ I(γ+ce)=5.7% to 44.6-d isomeric state, Σ I(γ+ce)=34% 15 to g.s..

| E <sub>γ</sub> <sup>†</sup> | I <sub>γ</sub> <sup>†‡</sup> | E <sub>i</sub> (level) | J <sub>i</sub> <sup>π</sup>        | E <sub>f</sub> | J <sub>f</sub> <sup>π</sup>        | Mult.   | δ    | α <sup>#</sup> | Comments   |
|-----------------------------|------------------------------|------------------------|------------------------------------|----------------|------------------------------------|---------|------|----------------|--|
| 113.2 3                     | 0.37 7                       | 473.9                  | ( <sup>+</sup> )                   | 360.53         | (5/2) <sup>+</sup>                 | [M1]    |      | 0.327 6        | α(K)=0.283 5; α(L)=0.0354 6; α(M)=0.00681 11;<br>α(N+..)=0.001282 21   |
| 131.6 2                     | 16 4                         | 360.53                 | (5/2) <sup>+</sup>                 | 229.04         | (3/2) <sup>+</sup>                 | M1      |      | 0.215          | α(N)=0.001213 20; α(O)=6.92×10 <sup>-5</sup> 11<br>α(K)=0.186 3; α(L)=0.0232 4; α(M)=0.00447 7;<br>α(N+..)=0.000841 13<br>α(N)=0.000795 12; α(O)=4.55×10 <sup>-5</sup> 7<br>E <sub>γ</sub> : others: 131.39 6 (1969WiZX), 131.4 2 (1970Hn01).<br>I <sub>γ</sub> : 23 3 (1981Me17).<br>Mult.: from α(K)exp=0.16 5.<br>I <sub>γ</sub> : 24 3 (1981Me17). |
| 212.8 1                     | 24.7 26                      | 393.81                 | (7/2) <sup>-</sup>                 | 181.01         | (11/2) <sup>-</sup>                | E2      |      | 0.1038         | α(K)=0.0863 13; α(L)=0.01421 20; α(M)=0.00277 4;<br>α(N+..)=0.000494 7<br>α(N)=0.000476 7; α(O)=1.80×10 <sup>-5</sup> 3<br>E <sub>γ</sub> : others: 213.5 2 (1970Hn01), 213.3 (1973BrXC).<br>I <sub>γ</sub> : 25.7 20 (1981Me17).<br>Mult.: from α(K)exp=0.071 15.<br>I <sub>γ</sub> : 25.7 20 (1981Me17).   |
| 229.1 1                     | 100                          | 229.04                 | (3/2) <sup>+</sup>                 | 0.0            | 1/2 <sup>+</sup>                   | M1+E2   | ≈2.2 | ≈0.0749        | α(K)≈0.0629; α(L)≈0.00979; α(M)≈0.00190; α(N+..)≈0.000342<br>α(N)≈0.000329; α(O)≈1.348×10 <sup>-5</sup><br>E <sub>γ</sub> : others: 229.09 15 (1969WiZX), 229.7 2 (1970Hn01).<br>δ,Mult.: from α(K)exp=0.061 8.  |
| 236.1 3                     | 4.6 4                        | 417.1                  | (9/2) <sup>-</sup>                 | 181.01         | (11/2) <sup>-</sup>                | [M1,E2] |      | 0.058 15       | α(K)=0.050 12; α(L)=0.0072 25; α(M)=0.0014 5;<br>α(N+..)=0.00025 9   |
| 243.6 6                     | 2.2 5                        | 472.7                  | 3/2 <sup>+</sup> ,5/2 <sup>+</sup> | 229.04         | (3/2) <sup>+</sup>                 | [M1]    |      | 0.0409         | α(N)=0.00024 8; α(O)=1.11×10 <sup>-5</sup> 18<br>α(K)=0.0355 6; α(L)=0.00435 7; α(M)=0.000835 13;<br>α(N+..)=0.0001576 25<br>α(N)=0.0001490 23; α(O)=8.62×10 <sup>-6</sup> 14  |
| 247.0 10                    | 1.0 5                        | 719.9                  | (5/2) <sup>-</sup>                 | 472.7          | 3/2 <sup>+</sup> ,5/2 <sup>+</sup> |         |      |                |  |
| 275.8 5                     | ≈0.4                         | 749.44                 | 3/2 <sup>+</sup> ,5/2 <sup>+</sup> | 473.9          | ( <sup>+</sup> )                   |         |      |                |  |
| 302.7 2                     | 3.9 4                        | 719.9                  | (5/2) <sup>-</sup>                 | 417.1          | (9/2) <sup>-</sup>                 | [E2]    |      | 0.0315         | α(K)=0.0267 4; α(L)=0.00390 6; α(M)=0.000756 11;<br>α(N+..)=0.0001372 20<br>α(N)=0.0001314 19; α(O)=5.82×10 <sup>-6</sup> 9  |
| 326.1 1                     | 11.3 12                      | 719.9                  | (5/2) <sup>-</sup>                 | 393.81         | (7/2) <sup>-</sup>                 | [M1,E2] |      | 0.022 3        | α(K)=0.0190 21; α(L)=0.0025 5; α(M)=0.00048 10;<br>α(N+..)=9.9×10 <sup>-5</sup> 18<br>I <sub>γ</sub> : 23 3 (1981Me17).  |
| 360.5 2                     | 1.81 22                      | 360.53                 | (5/2) <sup>+</sup>                 | 0.0            | 1/2 <sup>+</sup>                   | [E2]    |      | 0.0179         | α(K)=0.01530 22; α(L)=0.00214 3; α(M)=0.000413 6;<br>α(N+..)=7.55×10 <sup>-5</sup> 11<br>α(N)=7.21×10 <sup>-5</sup> 11; α(O)=3.39×10 <sup>-6</sup> 5   |

<sup>115</sup>Ag β<sup>-</sup> decay (20.0 min) 1978Ma18 (continued)

γ(<sup>115</sup>Cd) (continued)

| <u>E<sub>γ</sub><sup>†</sup></u> | <u>I<sub>γ</sub><sup>‡‡</sup></u> | <u>E<sub>i</sub>(level)</u> | <u>J<sub>i</sub><sup>π</sup></u>   | <u>E<sub>f</sub></u> | <u>J<sub>f</sub><sup>π</sup></u>   | <u>Mult.</u> | <u>α<sup>#</sup></u> | <u>Comments</u>   |
|----------------------------------|-----------------------------------|-----------------------------|------------------------------------|----------------------|------------------------------------|--------------|----------------------|---|
| 372.2 1                          | 11.6 13                           | 1091.99                     | (3/2 <sup>-</sup> )                | 719.9                | (5/2 <sup>-</sup> )                | [M1,E2]      | 0.0150 13            | α(K)=0.0129 10; α(L)=0.00169 24; α(M)=0.00032 5;<br>α(N+...)=6.0×10 <sup>-5</sup> 8<br>α(N)=5.7×10 <sup>-5</sup> 8; α(O)=2.99×10 <sup>-6</sup> 10   |
| 388.9 3                          | 2.6 3                             | 749.44                      | 3/2 <sup>+</sup> ,5/2 <sup>+</sup> | 360.53               | (5/2) <sup>+</sup>                 | [M1]         | 0.01235              | E <sub>γ</sub> : others: 372.6 2 (1970Hn01), 372.5 (1973BrXC).<br>α(K)=0.01076 16; α(L)=0.001298 19; α(M)=0.000249 4;<br>α(N+...)=4.70×10 <sup>-5</sup> 7<br>α(N)=4.44×10 <sup>-5</sup> 7; α(O)=2.60×10 <sup>-6</sup> 4 |
| 416.2 3                          | 1.29 19                           | 776.69                      | 3/2 <sup>+</sup> ,5/2 <sup>+</sup> | 360.53               | (5/2) <sup>+</sup>                 |              |                      |   |
| 420.2 3                          | 0.71 13                           | 649.12                      | 1/2 <sup>+</sup>                   | 229.04               | (3/2) <sup>+</sup>                 |              |                      |   |
| 472.7 1                          | 22.1 27                           | 472.7                       | 3/2 <sup>+</sup> ,5/2 <sup>+</sup> | 0.0                  | 1/2 <sup>+</sup>                   | [M1]         | 0.00769              | α=0.00769; α(K)=0.00670; α(L)=0.00080; α(M)=0.00015   |
| 507.3 4                          | 8.3 10                            | 507.27                      | 3/2 <sup>+</sup> ,5/2 <sup>+</sup> | 0.0                  | 1/2 <sup>+</sup>                   |              |                      |   |
| 547.8 3                          | 1.48 20                           | 776.69                      | 3/2 <sup>+</sup> ,5/2 <sup>+</sup> | 229.04               | (3/2) <sup>+</sup>                 |              |                      |   |
| <sup>x</sup> 565.0 5             | 0.65 14                           |                             |                                    |                      |                                    |              |                      |   |
| 584.6 5                          | 0.84 15                           | 1091.99                     | (3/2 <sup>-</sup> )                | 507.27               | 3/2 <sup>+</sup> ,5/2 <sup>+</sup> |              |                      |   |
| 602.1 5                          | 0.51 11                           | 962.68                      | 1/2 <sup>+</sup>                   | 360.53               | (5/2) <sup>+</sup>                 |              |                      |   |
| <sup>x</sup> 627.0 5             | 0.24 6                            |                             |                                    |                      |                                    |              |                      |   |
| 638.6 5                          | 0.5 2                             | 1358.3                      | 3/2 <sup>+</sup> ,5/2 <sup>+</sup> | 719.9                | (5/2 <sup>-</sup> )                |              |                      |   |
| 649.1 1                          | 16.5 21                           | 649.12                      | 1/2 <sup>+</sup>                   | 0.0                  | 1/2 <sup>+</sup>                   |              |                      | I <sub>γ</sub> : 32 6 (1981Me17).   |
| 653.3 5                          | 0.2 1                             | 1126.2                      |                                    | 472.7                | 3/2 <sup>+</sup> ,5/2 <sup>+</sup> |              |                      |   |
| 671.0 10                         | 0.78 13                           | 2156.00                     | (3/2) <sup>-</sup>                 | 1485.55              |                                    |              |                      |   |
| 698.1 1                          | 12.4 16                           | 1091.99                     | (3/2 <sup>-</sup> )                | 393.81               | (7/2) <sup>-</sup>                 |              |                      |   |
| 716.9 5                          | 0.39 11                           | 1224.6                      |                                    | 507.27               | 3/2 <sup>+</sup> ,5/2 <sup>+</sup> |              |                      |   |
| 732.6 5                          | 0.30 9                            | 1091.99                     | (3/2 <sup>-</sup> )                | 360.53               | (5/2) <sup>+</sup>                 |              |                      |   |
| 751.6 5                          | 0.64 13                           | 1224.6                      |                                    | 472.7                | 3/2 <sup>+</sup> ,5/2 <sup>+</sup> |              |                      |   |
| <sup>x</sup> 755.7 5             | 0.26 8                            |                             |                                    |                      |                                    |              |                      |   |
| <sup>x</sup> 762.4 7             | 0.25 5                            |                             |                                    |                      |                                    |              |                      |   |
| 765.8 7                          | 0.32 6                            | 1485.55                     |                                    | 719.9                | (5/2 <sup>-</sup> )                |              |                      |   |
| 776.6 2                          | 3.0 5                             | 776.69                      | 3/2 <sup>+</sup> ,5/2 <sup>+</sup> | 0.0                  | 1/2 <sup>+</sup>                   |              |                      |   |
| <sup>x</sup> 798.1 5             | 0.18 2                            |                             |                                    |                      |                                    |              |                      |   |
| <sup>x</sup> 801.7 5             | 0.33 6                            |                             |                                    |                      |                                    |              |                      |   |
| 829.1 5                          | 0.81 8                            | 2314.45                     | 3/2 <sup>-</sup>                   | 1485.55              |                                    |              |                      |   |
| 838.7 5                          | 0.28 5                            | 2156.00                     | (3/2) <sup>-</sup>                 | 1317.20              | 3/2 <sup>+</sup> ,5/2 <sup>+</sup> |              |                      |   |
| 844.4 5                          | 0.23 4                            | 1317.20                     | 3/2 <sup>+</sup> ,5/2 <sup>+</sup> | 472.7                | 3/2 <sup>+</sup> ,5/2 <sup>+</sup> |              |                      |   |
| 850.9 5                          | 0.77 9                            | 1358.3                      | 3/2 <sup>+</sup> ,5/2 <sup>+</sup> | 507.27               | 3/2 <sup>+</sup> ,5/2 <sup>+</sup> |              |                      |   |
| 863.1 7                          | 0.71 9                            | 1091.99                     | (3/2 <sup>-</sup> )                | 229.04               | (3/2) <sup>+</sup>                 |              |                      |   |
| <sup>x</sup> 869.3 5             | 0.18 4                            |                             |                                    |                      |                                    |              |                      |   |
| <sup>x</sup> 879.6 5             | 0.73 9                            |                             |                                    |                      |                                    |              |                      |   |
| <sup>x</sup> 888.5 5             | 0.31 5                            |                             |                                    |                      |                                    |              |                      |   |
| 897.2 5                          | 0.5 2                             | 1126.2                      |                                    | 229.04               | (3/2) <sup>+</sup>                 |              |                      |   |
| <sup>x</sup> 920.8 5             | 0.38 11                           |                             |                                    |                      |                                    |              |                      |   |
| 931.8 5                          | 0.96 10                           | 2156.00                     | (3/2) <sup>-</sup>                 | 1224.6               |                                    |              |                      |   |
| <sup>x</sup> 948.5 5             | 0.15 3                            |                             |                                    |                      |                                    |              |                      |   |
| 956.4 5                          | 0.23 3                            | 1317.20                     | 3/2 <sup>+</sup> ,5/2 <sup>+</sup> | 360.53               | (5/2) <sup>+</sup>                 |              |                      |   |

<sup>115</sup>Ag β<sup>-</sup> decay (20.0 min) **1978Ma18** (continued)

γ(<sup>115</sup>Cd) (continued)

| <u>E<sub>γ</sub><sup>†</sup></u> | <u>I<sub>γ</sub><sup>‡‡</sup></u> | <u>E<sub>i</sub>(level)</u> | <u>J<sub>i</sub><sup>π</sup></u>   | <u>E<sub>f</sub></u> | <u>J<sub>f</sub><sup>π</sup></u>   | <u>E<sub>γ</sub><sup>†</sup></u> | <u>I<sub>γ</sub><sup>‡‡</sup></u> | <u>E<sub>i</sub>(level)</u> | <u>J<sub>i</sub><sup>π</sup></u> | <u>E<sub>f</sub></u> | <u>J<sub>f</sub><sup>π</sup></u>   |
|----------------------------------|-----------------------------------|-----------------------------|------------------------------------|----------------------|------------------------------------|----------------------------------|-----------------------------------|-----------------------------|----------------------------------|----------------------|------------------------------------|
| 962.7 2                          | 3.0 3                             | 962.68                      | 1/2 <sup>+</sup>                   | 0.0                  | 1/2 <sup>+</sup>                   | <sup>x</sup> 1676.8 5            | 0.90 9                            |                             |                                  |                      |                                    |
| <sup>x</sup> 974.0 5             | 0.62 8                            |                             |                                    |                      |                                    | 1683.0 7                         | 0.18 4                            | 2156.00                     | (3/2) <sup>-</sup>               | 472.7                | 3/2 <sup>+</sup> ,5/2 <sup>+</sup> |
| 996.5 5                          | 0.89 10                           | 1224.6                      |                                    | 229.04               | (3/2) <sup>+</sup>                 | <sup>x</sup> 1700.5 7            | 0.16 4                            |                             |                                  |                      |                                    |
| 1000.3 5                         | 0.31 4                            | 2486.56                     | (1/2 <sup>-</sup> ,3/2)            | 1485.55              |                                    | 1711.2 5                         | 1.10 11                           | 2183.9                      |                                  | 472.7                | 3/2 <sup>+</sup> ,5/2 <sup>+</sup> |
| <sup>x</sup> 1005.2 5            | 0.20 3                            |                             |                                    |                      |                                    | <sup>x</sup> 1743.2 5            | 0.29 5                            |                             |                                  |                      |                                    |
| <sup>x</sup> 1010.3 5            | 0.36 5                            |                             |                                    |                      |                                    | 1752.7 5                         | 0.51 6                            | 2113.29                     | (1/2 <sup>+</sup> ,3/2)          | 360.53               | (5/2) <sup>+</sup>                 |
| 1022.2 5                         | 0.42 5                            | 1742.0                      |                                    | 719.9                | (5/2) <sup>-</sup>                 | 1767.2 5                         | 0.50 7                            | 2486.56                     | (1/2 <sup>-</sup> ,3/2)          | 719.9                | (5/2) <sup>-</sup>                 |
| 1029.6 5                         | 0.70 9                            | 2156.00                     | (3/2) <sup>-</sup>                 | 1126.2               |                                    | 1795.4 5                         | 1.75 17                           | 2156.00                     | (3/2) <sup>-</sup>               | 360.53               | (5/2) <sup>+</sup>                 |
| <sup>x</sup> 1049.7 6            | 0.45 7                            |                             |                                    |                      |                                    | 1807.2 5                         | 0.18 3                            | 2314.45                     | 3/2 <sup>-</sup>                 | 507.27               | 3/2 <sup>+</sup> ,5/2 <sup>+</sup> |
| <sup>x</sup> 1056.6 6            | 1.02 11                           |                             |                                    |                      |                                    | 1823.3 5                         | 0.25 4                            | 2183.9                      |                                  | 360.53               | (5/2) <sup>+</sup>                 |
| <sup>x</sup> 1064.1 6            | 0.51 8                            |                             |                                    |                      |                                    | 1841.6 3                         | 10.0 9                            | 2314.45                     | 3/2 <sup>-</sup>                 | 472.7                | 3/2 <sup>+</sup> ,5/2 <sup>+</sup> |
| <sup>x</sup> 1069.9 6            | 0.26 6                            |                             |                                    |                      |                                    | 1884.1 3                         | 1.87 17                           | 2113.29                     | (1/2 <sup>+</sup> ,3/2)          | 229.04               | (3/2) <sup>+</sup>                 |
| 1088.4 7                         | 0.32 6                            | 1317.20                     | 3/2 <sup>+</sup> ,5/2 <sup>+</sup> | 229.04               | (3/2) <sup>+</sup>                 | 1910.7 3                         | 1.54 14                           | 2383.46                     | 3/2                              | 472.7                | 3/2 <sup>+</sup> ,5/2 <sup>+</sup> |
| 1092 1                           | 0.95 30                           | 1091.99                     | (3/2) <sup>-</sup>                 | 0.0                  | 1/2 <sup>+</sup>                   | 1926.9 3                         | 7.5 6                             | 2156.00                     | (3/2) <sup>-</sup>               | 229.04               | (3/2) <sup>+</sup>                 |
| <sup>x</sup> 1106.3 7            | 0.26 6                            |                             |                                    |                      |                                    | 1979.8 5                         | 0.32 4                            | 2486.56                     | (1/2 <sup>-</sup> ,3/2)          | 507.27               | 3/2 <sup>+</sup> ,5/2 <sup>+</sup> |
| 1126.3 5                         | 1.27 12                           | 1126.2                      |                                    | 0.0                  | 1/2 <sup>+</sup>                   | <sup>x</sup> 2011.4 5            | 0.20 3                            |                             |                                  |                      |                                    |
| 1150.6 5                         | 1.30 12                           | 2113.29                     | (1/2 <sup>+</sup> ,3/2)            | 962.68               | 1/2 <sup>+</sup>                   | 2022.8 5                         | 0.58 7                            | 2383.46                     | 3/2                              | 360.53               | (5/2) <sup>+</sup>                 |
| <sup>x</sup> 1183.8 5            | 1.6 5                             |                             |                                    |                      |                                    | <sup>x</sup> 2041.5 5            | 0.24 4                            |                             |                                  |                      |                                    |
| 1193.4 5                         | 0.30 4                            | 2156.00                     | (3/2) <sup>-</sup>                 | 962.68               | 1/2 <sup>+</sup>                   | <sup>x</sup> 2074.1 7            | 0.09 2                            |                             |                                  |                      |                                    |
| 1222.8 5                         | 0.65 7                            | 2314.45                     | 3/2 <sup>-</sup>                   | 1091.99              | (3/2) <sup>-</sup>                 | <sup>x</sup> 2082.1 5            | 0.70 7                            |                             |                                  |                      |                                    |
| <sup>x</sup> 1234.3 5            | 0.31 5                            |                             |                                    |                      |                                    | 2095.7 7                         | 0.10 3                            | 2569.1                      |                                  | 472.7                | 3/2 <sup>+</sup> ,5/2 <sup>+</sup> |
| <sup>x</sup> 1242.2 5            | 0.21 4                            |                             |                                    |                      |                                    | 2113.2 3                         | 6.5 6                             | 2113.29                     | (1/2 <sup>+</sup> ,3/2)          | 0.0                  | 1/2 <sup>+</sup>                   |
| 1256.6 5                         | 0.70 8                            | 1485.55                     |                                    | 229.04               | (3/2) <sup>+</sup>                 | <sup>x</sup> 2127.0 5            | 0.27 4                            |                             |                                  |                      |                                    |
| <sup>x</sup> 1308.8 7            | 0.26 4                            |                             |                                    |                      |                                    | <sup>x</sup> 2137.5 5            | 0.12 1                            |                             |                                  |                      |                                    |
| 1317.3 5                         | 0.48 6                            | 1317.20                     | 3/2 <sup>+</sup> ,5/2 <sup>+</sup> | 0.0                  | 1/2 <sup>+</sup>                   | 2156.1 3                         | 15.6 13                           | 2156.00                     | (3/2) <sup>-</sup>               | 0.0                  | 1/2 <sup>+</sup>                   |
| 1336.7 7                         | 0.28 5                            | 2113.29                     | (1/2 <sup>+</sup> ,3/2)            | 776.69               | 3/2 <sup>+</sup> ,5/2 <sup>+</sup> | <sup>x</sup> 2167.3 7            | 0.13 2                            |                             |                                  |                      |                                    |
| 1357.8 7                         | 0.61 6                            | 2077.6                      |                                    | 719.9                | (5/2) <sup>-</sup>                 | 2173.3 7                         | 0.18 2                            | 2680.35                     |                                  | 507.27               | 3/2 <sup>+</sup> ,5/2 <sup>+</sup> |
| 1379.3 3                         | 3.34 27                           | 2156.00                     | (3/2) <sup>-</sup>                 | 776.69               | 3/2 <sup>+</sup> ,5/2 <sup>+</sup> | 2183.7 10                        | 0.21 2                            | 2183.9                      |                                  | 0.0                  | 1/2 <sup>+</sup>                   |
| 1394.6 4                         | 0.95 9                            | 2486.56                     | (1/2 <sup>-</sup> ,3/2)            | 1091.99              | (3/2) <sup>-</sup>                 | 2186.6 10                        | 0.08 1                            | 2659.4                      |                                  | 472.7                | 3/2 <sup>+</sup> ,5/2 <sup>+</sup> |
| 1406.6 4                         | 1.20 11                           | 2156.00                     | (3/2) <sup>-</sup>                 | 749.44               | 3/2 <sup>+</sup> ,5/2 <sup>+</sup> | 2207.9 7                         | 0.07 2                            | 2569.1                      |                                  | 360.53               | (5/2) <sup>+</sup>                 |
| 1435.9 7                         | 0.50 6                            | 2156.00                     | (3/2) <sup>-</sup>                 | 719.9                | (5/2) <sup>-</sup>                 | 2257.2 5                         | 0.10 2                            | 2486.56                     | (1/2 <sup>-</sup> ,3/2)          | 229.04               | (3/2) <sup>+</sup>                 |
| 1464.2 4                         | 2.66 23                           | 2113.29                     | (1/2 <sup>+</sup> ,3/2)            | 649.12               | 1/2 <sup>+</sup>                   | 2265.1 5                         | 0.12 2                            | 2494.1                      |                                  | 229.04               | (3/2) <sup>+</sup>                 |
| 1485.2 4                         | 0.72 8                            | 1485.55                     |                                    | 0.0                  | 1/2 <sup>+</sup>                   | <sup>x</sup> 2296.4 7            | 0.31 4                            |                             |                                  |                      |                                    |
| 1506.9 3                         | 6.6 7                             | 2156.00                     | (3/2) <sup>-</sup>                 | 649.12               | 1/2 <sup>+</sup>                   | <sup>x</sup> 2302.3 7            | 0.18 3                            |                             |                                  |                      |                                    |
| <sup>x</sup> 1528.1 10           | 0.11 2                            |                             |                                    |                      |                                    | 2314.2 5                         | 0.24 3                            | 2314.45                     | 3/2 <sup>-</sup>                 | 0.0                  | 1/2 <sup>+</sup>                   |
| <sup>x</sup> 1531.2 10           | 0.25 4                            |                             |                                    |                      |                                    | 2340.1 5                         | 0.37 4                            | 2569.1                      |                                  | 229.04               | (3/2) <sup>+</sup>                 |
| 1535.0 10                        | 0.35 5                            | 2183.9                      |                                    | 649.12               | 1/2 <sup>+</sup>                   | <sup>x</sup> 2374.2 7            | 0.08 2                            |                             |                                  |                      |                                    |
| 1564.9 5                         | 0.22 4                            | 2314.45                     | 3/2 <sup>-</sup>                   | 749.44               | 3/2 <sup>+</sup> ,5/2 <sup>+</sup> | 2383.5 3                         | 1.20 12                           | 2383.46                     | 3/2                              | 0.0                  | 1/2 <sup>+</sup>                   |
| 1594.8 5                         | 0.31 5                            | 2314.45                     | 3/2 <sup>-</sup>                   | 719.9                | (5/2) <sup>-</sup>                 | <sup>x</sup> 2415.0 5            | 0.12 2                            |                             |                                  |                      |                                    |
| 1606.3 5                         | 1.42 14                           | 2113.29                     | (1/2 <sup>+</sup> ,3/2)            | 507.27               | 3/2 <sup>+</sup> ,5/2 <sup>+</sup> | 2430.3 7                         | 0.10 2                            | 2659.4                      |                                  | 229.04               | (3/2) <sup>+</sup>                 |
| 1640.7 5                         | 3.2 5                             | 2113.29                     | (1/2 <sup>+</sup> ,3/2)            | 472.7                | 3/2 <sup>+</sup> ,5/2 <sup>+</sup> | <sup>x</sup> 2435.5 7            | 0.28 3                            |                             |                                  |                      |                                    |
| 1648.4 5                         | 1.68 24                           | 2156.00                     | (3/2) <sup>-</sup>                 | 507.27               | 3/2 <sup>+</sup> ,5/2 <sup>+</sup> | <sup>x</sup> 2442.7 7            | 0.13 2                            |                             |                                  |                      |                                    |
| 1663.5 10                        | 0.42 13                           | 2383.46                     | 3/2                                | 719.9                | (5/2) <sup>-</sup>                 | 2451.1 3                         | 0.42 5                            | 2680.35                     |                                  | 229.04               | (3/2) <sup>+</sup>                 |
| 1664.7 10                        | 0.64 19                           | 2314.45                     | 3/2 <sup>-</sup>                   | 649.12               | 1/2 <sup>+</sup>                   | 2486.5 3                         | 0.44 5                            | 2486.56                     | (1/2 <sup>-</sup> ,3/2)          | 0.0                  | 1/2 <sup>+</sup>                   |

<sup>115</sup>Ag β<sup>-</sup> decay (20.0 min) [1978Ma18](#) (continued)

γ(<sup>115</sup>Cd) (continued)

| <u>E<sub>γ</sub><sup>†</sup></u> | <u>I<sub>γ</sub><sup>†‡</sup></u> | <u>E<sub>i</sub>(level)</u> | <u>J<sub>i</sub><sup>π</sup></u> | <u>E<sub>f</sub></u> | <u>J<sub>f</sub><sup>π</sup></u> | <u>E<sub>γ</sub><sup>†</sup></u> | <u>I<sub>γ</sub><sup>†‡</sup></u> | <u>E<sub>i</sub>(level)</u> | <u>J<sub>i</sub><sup>π</sup></u>    | <u>E<sub>f</sub></u> | <u>J<sub>f</sub><sup>π</sup></u> |
|----------------------------------|-----------------------------------|-----------------------------|----------------------------------|----------------------|----------------------------------|----------------------------------|-----------------------------------|-----------------------------|-------------------------------------|----------------------|----------------------------------|
| 2494.1 3                         | 0.74 7                            | 2494.1                      |                                  | 0.0                  | 1/2 <sup>+</sup>                 | 2659.4 3                         | 0.40 4                            | 2659.4                      |                                     | 0.0                  | 1/2 <sup>+</sup>                 |
| 2526.9 3                         | 0.52 6                            | 2526.9                      |                                  | 0.0                  | 1/2 <sup>+</sup>                 | 2680.7 5                         | 0.08 2                            | 2680.35                     |                                     | 0.0                  | 1/2 <sup>+</sup>                 |
| 2569.3 5                         | 0.30 4                            | 2569.1                      |                                  | 0.0                  | 1/2 <sup>+</sup>                 | 2713.9 5                         | 0.04 1                            | 2713.9?                     |                                     | 0.0                  | 1/2 <sup>+</sup>                 |
| 2635.9 5                         | 0.06 2                            | 2635.9?                     |                                  | 0.0                  | 1/2 <sup>+</sup>                 | 2906.3 3                         | 0.31 3                            | 2906.3                      | 1/2 <sup>-</sup> , 3/2 <sup>-</sup> | 0.0                  | 1/2 <sup>+</sup>                 |

<sup>†</sup> From [1978Ma18](#).

<sup>‡</sup> For absolute intensity per 100 decays, multiply by 0.18 8.

<sup>#</sup> Total theoretical internal conversion coefficients, calculated using the BrIcc code ([2008Ki07](#)) with Frozen orbital approximation based on γ-ray energies, assigned multiplicities, and mixing ratios, unless otherwise specified.

<sup>x</sup> γ ray not placed in level scheme.

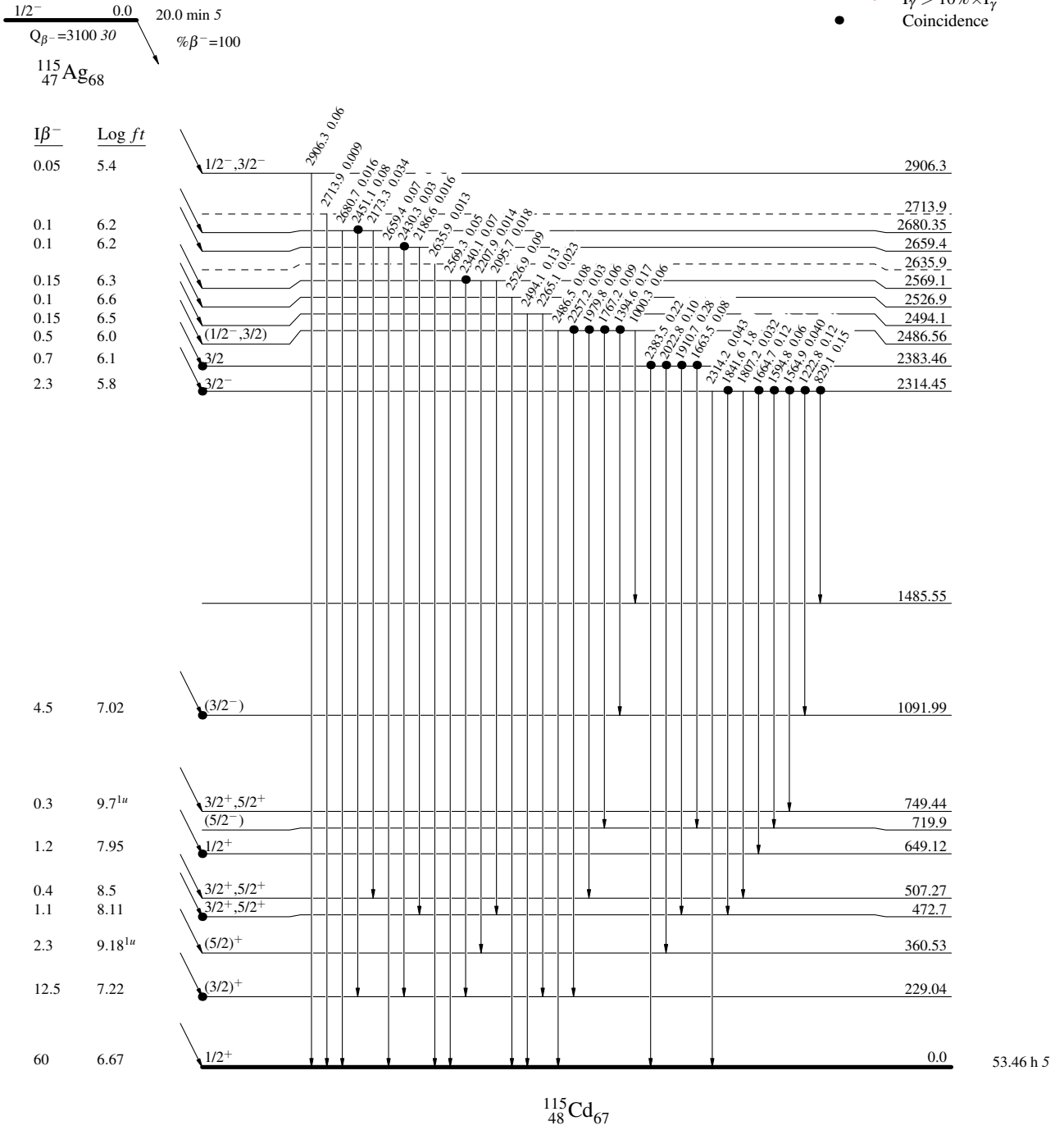
$^{115}\text{Ag} \beta^-$  decay (20.0 min) 1978Ma18

Decay Scheme

Intensities:  $I_{(\gamma+ce)}$  per 100 parent decays

Legend

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



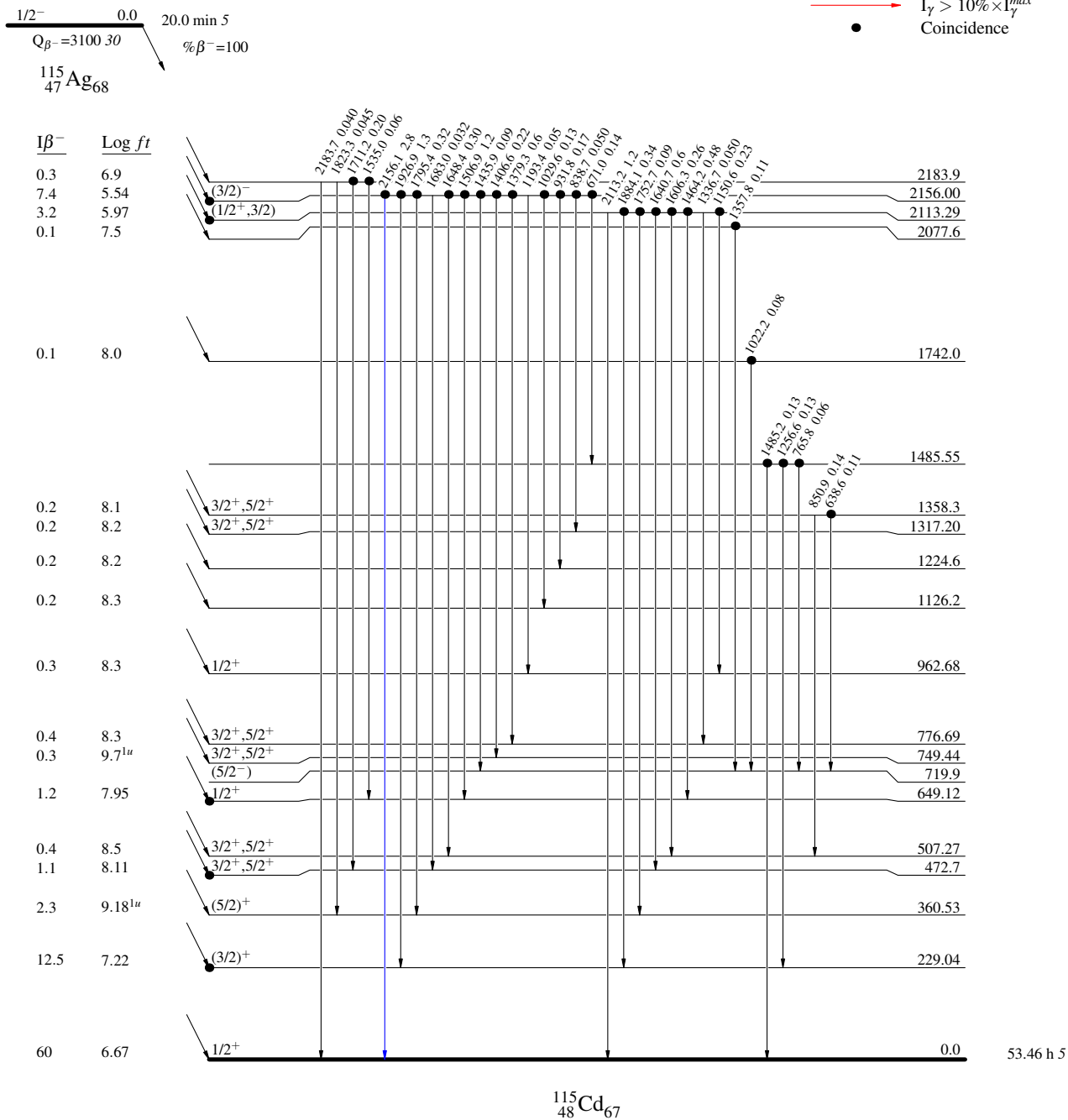
<sup>115</sup>Ag β<sup>-</sup> decay (20.0 min) 1978Ma18

Decay Scheme (continued)

Intensities: I<sub>(γ+ce)</sub> per 100 parent decays

Legend

- I<sub>γ</sub> < 2% × I<sub>γ</sub><sup>max</sup>
- I<sub>γ</sub> < 10% × I<sub>γ</sub><sup>max</sup>
- I<sub>γ</sub> > 10% × I<sub>γ</sub><sup>max</sup>
- Coincidence





$^{115}\text{Ag} \beta^-$  decay (20.0 min) 1978Ma18

Decay Scheme (continued)

Intensities:  $I_{(\gamma+ce)}$  per 100 parent decays

Legend

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

