

Table 15.18 from (1986AJ01): Radiative decays in ^{15}O ^a

| E_i (MeV) | J_i^π | E_f (MeV) | J_f^π | Branch (%) | δ^b | |
|--------------------|-------------------|-------------|-----------------|-----------------|---|--|
| 5.24 | $\frac{5}{2}^+$ | 0 | $\frac{1}{2}^-$ | 100 | $+0.10 \pm 0.04$ (E3/M2) | |
| 6.18 ^c | $\frac{3}{2}^-$ | 0 | $\frac{1}{2}^-$ | 100 | -0.125 ± 0.007 (E2/M1) ^k | |
| 6.79 ^d | $\frac{3}{2}^+$ | 0 | $\frac{1}{2}^-$ | 100 | -0.02 ± 0.02 (M2/E1) | |
| 6.86 ^e | $\frac{5}{2}^+$ | 5.24 | $\frac{5}{2}^+$ | 100 | $+0.04 \pm 0.03$ (E2/M1) | |
| 7.28 ^f | $\frac{7}{2}^+$ | 0 | $\frac{1}{2}^-$ | 3.8 ± 1.2 | | |
| | | 5.24 | $\frac{5}{2}^+$ | 96.2 ± 1.2 | | |
| | | 0 | $\frac{1}{2}^-$ | 3.5 ± 0.5 | | |
| | | 5.18 | $\frac{1}{2}^+$ | 15.8 ± 0.6 | | |
| | | 6.18 | $\frac{3}{2}^-$ | 57.5 ± 0.4 | | |
| 7.56 ^g | $\frac{1}{2}^+$ | 6.79 | $\frac{3}{2}^+$ | 23.2 ± 0.6 | | |
| | | 6.86 | $\frac{5}{2}^+$ | 1 | | |
| | | | | | | |
| | | | | | | |
| 8.28 | $\frac{3}{2}^+$ | 0 | $\frac{1}{2}^-$ | 53.8 ± 0.25 | Γ (eV) 0.531^m | |
| | | 5.24 | $\frac{5}{2}^+$ | 42.7 ± 0.5 | 0.405 | |
| | | 6.18 | $\frac{3}{2}^-$ | 2.2 ± 0.6 | 0.021 | |
| | | 6.86 | $\frac{5}{2}^+$ | 1.2 ± 0.3 | 0.011 | |
| 8.74 | $\frac{1}{2}^+$ | 5.18 | $\frac{1}{2}^+$ | 67 | 0.32 | |
| | | 6.18 | $\frac{3}{2}^-$ | 33 | 0.16 | |
| 8.922 ^h | $\frac{5}{2}^+$ | 0 | $\frac{1}{2}^-$ | 9 ± 4 | | |
| | | 5.18 | $\frac{1}{2}^+$ | 39 ± 3 | | |
| | | 6.18 | $\frac{3}{2}^-$ | 24 ± 3 | | |
| | | 6.86 | $\frac{5}{2}^+$ | 28 ± 3 | | |
| 8.922 ^h | $\frac{1}{2}^-$ | 0 | $\frac{1}{2}^-$ | 50 ± 25 | | |
| | | 5.18 | $\frac{1}{2}^+$ | 20 ± 10 | | |
| | | 6.18 | $\frac{3}{2}^-$ | 20 ± 10 | | |
| | | 6.86 | $\frac{5}{2}^+$ | (10 ± 10) | | |
| 8.982 ⁱ | $(\frac{3}{2})^-$ | 0 | $\frac{1}{2}^-$ | 94 ± 1 | | |
| | | 5.18 | $\frac{1}{2}^+$ | 6 ± 1 | | |
| 9.49 | $\frac{5}{2}^-$ | 0 | $\frac{1}{2}^-$ | 86 | 2.1 | |
| | | 5.24 | $\frac{5}{2}^+$ | 6.5 | 0.15 | |
| | | 6.18 | $\frac{3}{2}^-$ | 0.7 | 0.22 | |

Table 15.18 from (1986AJ01): Radiative decays in ^{15}O ^a (continued)

| E_i (MeV) | J_i^π | E_f (MeV) | J_f^π | Branch (%) | δ^b |
|--------------------|--------------------------------|-------------|-----------------|---------------|----------------------------|
| | | 6.86 | $\frac{5}{2}^+$ | 3.4 | 0.08 |
| | | 7.28 | $\frac{7}{2}^+$ | 5.1 | 0.11 |
| 9.50 ^j | $\frac{3}{2}^+(\frac{1}{2}^+)$ | 0 | $\frac{1}{2}^-$ | ≈ 100 | |
| 9.61 | $\frac{3}{2}^-$ | 0 | $\frac{1}{2}^-$ | 79 | 4.0 |
| | | 5.24 | $\frac{5}{2}^+$ | 19 | 1.0 |
| 10.46 | $(\frac{9}{2}^+)$ | 6.18 | $\frac{3}{2}^-$ | 2 | 0.1 |
| | | 5.24 | $\frac{5}{2}^+$ | 62 ± 6 | $18 \pm 6^{\text{n}}$ |
| | | 6.86 | $\frac{5}{2}^+$ | < 4 | < 1.5 |
| 10.48 | $(\frac{3}{2})^-$ | 7.28 | $\frac{7}{2}^+$ | 38 ± 6 | $11 \pm 4^{\text{n}}$ |
| | | 0 | $\frac{1}{2}^-$ | 60 ± 8 | $0.21 \pm 0.07^{\text{n}}$ |
| | | 5.24 | $\frac{5}{2}^+$ | 40 ± 6 | $0.14 \pm 0.01^{\text{n}}$ |
| 10.94 | $\frac{1}{2}^+$ | 6.18 | $\frac{3}{2}^-$ | < 4 | < 0.02 |
| | | 9.79 | $\frac{3}{2}^+$ | < 4 | < 0.02 |
| | | 0 | $\frac{1}{2}^-$ | 44 ± 8 | 14 ± 4 |
| 11.03 ^a | $\frac{1}{2}^-$ | 5.18 | $\frac{1}{2}^+$ | 34 ± 3 | 11 ± 2 |
| | | 6.18 | $\frac{3}{2}^-$ | 22 ± 8 | 7 ± 2 |
| | | 6.79 | $\frac{3}{2}^+$ | < 8 | < 3 |
| 11.22 | $\frac{3}{2}^+$ | 0 | $\frac{1}{2}^-$ | 100 | 1.4 ± 0.4 |
| | | 5.18 | $\frac{1}{2}^+$ | 74 ± 5 | 5.5 ± 0.5 |
| 11.57 | $\frac{5}{2}^-$ | 5.18 | $\frac{1}{2}^+$ | 14 ± 5 | 1.0 ± 0.2 |
| | | 5.24 | $\frac{5}{2}^+$ | 12 ± 5 | 0.9 ± 0.2 |
| | | 6.79 | $\frac{3}{2}^+$ | < 4 | < 0.4 |
| 11.75 ^a | $\frac{5}{2}^+$ | 0 | $\frac{1}{2}^-$ | 18 ± 9 | 0.3 ± 0.2 |
| | | 5.24 | $\frac{5}{2}^+$ | 63 ± 9 | 1.2 ± 0.1 |
| | | 6.18 | $\frac{3}{2}^-$ | 20 ± 9 | 0.4 ± 0.2 |
| 11.85 ^a | $\frac{5}{2}^-$ | 6.79 | $\frac{3}{2}^+$ | < 3 | < 0.1 |
| | | 5.24 | $\frac{5}{2}^+$ | 47 ± 7 | 5 ± 1 |
| 11.85 ^a | $\frac{5}{2}^-$ | 6.18 | $\frac{3}{2}^-$ | 53 ± 7 | 5 ± 1 |
| | | 5.24 | $\frac{5}{2}^+$ | 100 | 1.4 ± 0.6 |

- ^a For references and other comments see [Table 15.19 in \(1981AJ01\)](#).
- ^b δ = multipole mixing ratio.
- ^c Branches to $^{15}\text{O}^*(5.18, 5.24)$ are < 2.5% each.
- ^d Branches to $^{15}\text{O}^*(5.18, 5.24, 6.18)$ are < 3%, < 3% and < 7%, respectively.
- ^e Branches to $^{15}\text{O}^*(0, 5.18, 6.18)$ are < 10%, < 4% and < 0.4%, respectively.
- ^f Branches to $^{15}\text{O}^*(5.18, 6.18)$ are < 4% and < 2%, respectively.
- ^g Branchings shown to $^{15}\text{O}^*(5.18, 6.18, 6.79)$ are weighted means of values shown in [Table 15.19 of \(1981AJ01\)](#), recalculated to sum to 100% for all the transitions.
- ^h See, however, the comments in [reaction 14 of \(1981AJ01\)](#).
- ⁱ Branchings to $^{15}\text{O}^*(6.18, 6.86)$ are < 1% each.
- ^j Unresolved doublet: see [Table 15.21](#), and [Table 15.23 in \(1981AJ01\)](#).
- ^k Weighted mean of values shown in [Table 15.19 of \(1981AJ01\)](#).
- ^l Intensity < 25% of transition to $^{15}\text{O}^*(6.79)$.
- ^m Sum is 0.97 eV, but see [Table 15.21](#) [$\Gamma_\gamma = 1.4$ eV].
- ⁿ Γ_γ values assume J -values in column 2.