

Table 16.12 from (1982AJ01): Radiative decays in  $^{16}\text{O}$  <sup>a</sup>

$E_i$ (MeV)	$J_i^\pi; T$	$E_f$ (MeV)	$J_f^\pi; T$	Branch (%)	$\Gamma_{\text{rad}}$ (eV)
6.05	$0^+; 0$	0	$0^+; 0$	100	$3.55 \pm 0.21$ <sup>b</sup>
6.13	$3^-; 0$	0	$0^+; 0$	100	$(2.60 \pm 0.13) \times 10^{-5}$
6.92	$2^+; 0$	0	$0^+; 0$	$> 99$	$0.100 \pm 0.004$ <sup>e</sup>
		6.05	$0^+; 0$	$(2.7 \pm 0.3) \times 10^{-2}$	$(2.7 \pm 0.3) \times 10^{-5}$
		6.13	$3^-; 0$	$\leq 8 \times 10^{-3}$	
7.12	$1^-; 0$	0	$0^+; 0$	$> 99$	$0.057 \pm 0.006$ <sup>f</sup>
		6.05	$0^+; 0$	$< 6 \times 10^{-4}$	
		6.13	$3^-; 0$	$(7.0 \pm 1.4) \times 10^{-2}$	
8.87	$2^-; 0$	0	$0^+; 0$	$7.2 \pm 0.8$	$(2.6 \pm 0.4) \times 10^{-4}$
		6.05	$0^+; 0$	$0.122 \pm 0.033$	$(3.1 \pm 1.0) \times 10^{-6}$
		6.13 <sup>h</sup>	$3^-; 0$	$76.0 \pm 3.0$	$(2.8 \pm 0.3) \times 10^{-3}$ <sup>g</sup>
		6.92	$2^+; 0$	$4.2 \pm 0.8$	$(1.5 \pm 0.3) \times 10^{-4}$
		7.12	$1^-; 0$	$12.6 \pm 2.0$	$(4.6 \pm 0.8) \times 10^{-4}$ <sup>g</sup>
9.63	$1^-; 0$	0	$0^+; 0$	$\approx 100$	$(23 \pm 3) \times 10^{-3}$
9.85	$2^+; 0$	0	$0^+; 0$	$61 \pm 4$	$(6.0 \pm 0.4) \times 10^{-3}$
		6.05	$0^+; 0$	$18 \pm 4$	$(1.9 \pm 0.4) \times 10^{-3}$
		6.92	$2^+; 0$	$21 \pm 4$	$(2.2 \pm 0.4) \times 10^{-3}$
10.35	$4^+; 0$	0	$0^+; 0$		$(5.6 \pm 2.0) \times 10^{-8}$
		6.13	$3^-; 0$		$< 1.0 \times 10^{-3}$
		6.92	$2^+; 0$	$\approx 100$	$(5.8 \pm 0.7) \times 10^{-2}$
10.96	$0^-; 0$ <sup>c</sup>	7.12	$1^-; 0$	$> 99$	$(0.08 \pm 0.05)$
11.10	$4^+; 0$	6.13	$3^-; 0$	<sup>a</sup>	$(3.1 \pm 1.3) \times 10^{-3}$
		6.92	$2^+; 0$	<sup>a</sup>	$(2.5 \pm 0.6) \times 10^{-3}$
11.52	$2^+; 0$	0	$0^+; 0$	91.7	$0.61 \pm 0.02$ <sup>a</sup>
		6.05	$0^+; 0$	$4.2 \pm 0.7$	$(2.8 \pm 0.6) \times 10^{-2}$
		6.92	$2^+; 0$	$4.0 \pm 1.0$	$(29 \pm 7) \times 10^{-3}$
		7.12	$1^-; 0$	$\leq 0.8$	
12.05	$0^+; 0$	0	$0^+; 0$		$4.03 \pm 0.09$ <sup>b</sup>
12.44	$1^-; 0$	0	$0^+; 0$	$\approx 100$	$12 \pm 2$
		6.05	$0^+; 0$	$1.2 \pm 0.4$ <sup>a</sup>	$0.12 \pm 0.04$
12.53	$2^-; 0$	0	$0^+; 0$		$(108 \pm 15) \times 10^{-3}$ <sup>a</sup>

Table 16.12 from (1982AJ01): Radiative decays in  $^{16}\text{O}$  <sup>a</sup> (continued)

$E_i$ (MeV)	$J_i^\pi; T$	$E_f$ (MeV)	$J_f^\pi; T$	Branch (%)	$\Gamma_{\text{rad}}$ (eV)
12.80	$0^-; 1$	6.13	$3^-; 0$	$60 \pm 6$	$2.1 \pm 0.2$
		6.92	$2^+; 0$	$< 10$	$\leq 0.34$
		7.12	$1^-; 0$	$15 \pm 3$	$0.5 \pm 0.1$
		8.87	$2^-; 0$	$25 \pm 3$	$0.9 \pm 0.1$
		7.12	$1^-; 0$	$\approx 100$	$2.5 \pm 0.2$
12.97	$2^-; 1$	0	$0^+; 0$		$(71 \pm 2) \times 10^{-3}$
13.09	$1^-; 1$	6.13	$3^-; 0$	$63 \pm 6$	$2.3 \pm 0.2$
		7.12	$1^-; 0$	$12 \pm 3$	$0.44 \pm 0.10$
		8.87	$2^-; 0$	$25 \pm 3$	$0.90 \pm 0.10$
		0	$0^+; 0$	$\approx 100$	$32 \pm 5^a$
		6.05	$0^+; 0$	$0.58 \pm 0.12$	
13.26 <sup>d</sup>	$3^-; 1$	7.12	$1^-; 0$	$3.1 \pm 0.8$	$1.4 \pm 0.04$
		6.13	$3^-; 0$	$> 85$	$9.2 \pm 1.5$

<sup>a</sup> See Tables 16.12 in (1971AJ02) and 16.15 in (1977AJ02) for the earlier work. See the latter table for the references for the values displayed here.

<sup>b</sup> Monopole matrix element in  $\text{fm}^2$ .

<sup>c</sup> Pairs due to this transition are not observed (1978AL19).

<sup>d</sup> For the radiative decay of higher states see Tables 16.13, 16.18 and 16.22.

<sup>e</sup> See also (1977LA15:  $94 \pm 10$  meV).

<sup>f</sup> "Best" value based on (1977LA15:  $60 \pm 10$  meV) and earlier values displayed in (1977AJ02).

<sup>g</sup>  $(3.0 \pm 0.5) \times 10^{-4}$  (M1),  $(2.5 \pm 0.3) \times 10^{-3}$  (E2); and  $< 6.4 \times 10^{-5}$  (M1),  $> 4 \times 10^{-4}$  (E2) for the transitions to  $^{16}\text{O}^*(6.13, 7.12)$ , respectively.

<sup>h</sup>  $E_\gamma = 2471.5 \pm 0.5$  keV for (8.87  $\rightarrow$  6.13) transition (1970GA09).