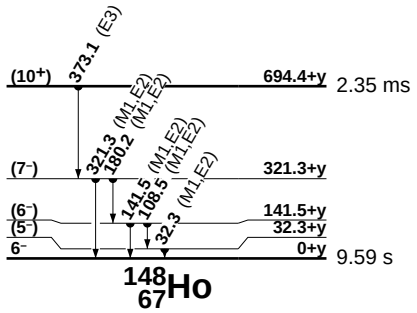
$^{148}_{67}$Ho (Continued)

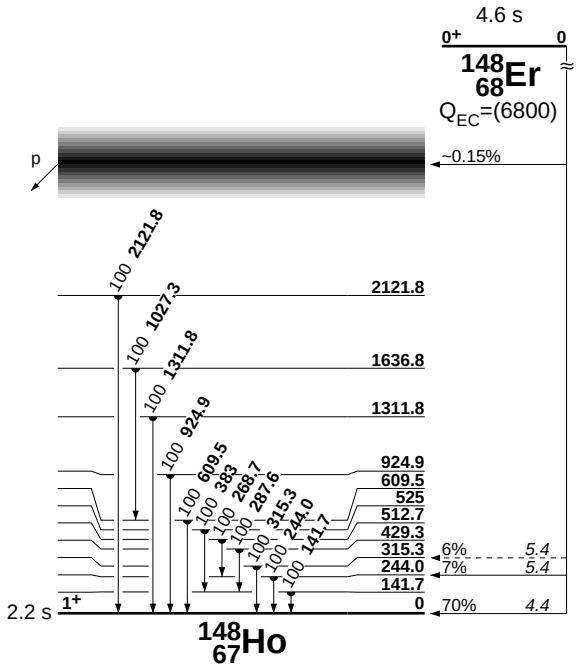
0+y, 6⁻, 9.59 *15* s, *[A]*, %EC+%β⁺=100, %ECp=0.08 *1*
32.3+y, (5⁻), *[A]* γ_{0+y}***32.3*** (M1,E2)
141.5+y, (6⁻), *[A]* γ_{32+y}***108.5*** (M1,E2) γ_{0+y}***141.5*** (M1,E2)
321.3+y, (7⁻), *[A]* γ_{142+y}***180.2*** (M1,E2) γ_{0+y}***321.3*** (M1,E2)
694.4+y, (10⁺), 2.35 *4* ms, *[A]*, %IT=100 γ_{321+y}***373.1*** (E3)

γ from ^{148}Ho IT decay :
32.3 (M1,E2), ***108.5*** (M1,E2), ***141.5*** (M1,E2), ***180.2*** (M1,E2), ***321.3*** (M1,E2), ***373.1*** (E3).

γ(^{148}*Dy*) from ^{148}Ho (9.59 s) EC+β⁺ decay **<** *for Iγ% multiply by 1.0* **>**
10.5 (†$_\gamma$0.49 *2*), ***94.3*** *2* (†$_\gamma$0.44 *5*) E1, ***101.5*** *3* (†$_\gamma$0.11 *6*) E2, ***115.6*** *3* (†$_\gamma$1.30 *5*), ***164.1*** *3* (†$_\gamma$0.37 *5*), ***261.5*** *5* (†$_\gamma$0.27 *7*), ***282.2*** *5* (†$_\gamma$0.20 *5*), ***304.5*** *2* (†$_\gamma$1.50 *7*) E2, ***353.6*** *4* (†$_\gamma$0.54 *8*), ***376.1*** *5* (†$_\gamma$0.57 *8*), ***382.6*** *2* (†$_\gamma$2.76 *13*) E1, ***389.6*** *2* (†$_\gamma$5.11 *9*) E2, ***425.7*** *4* (†$_\gamma$0.42 *8*), ***435.4*** *6*(u) (†$_\gamma$0.6 *1*), ***504.3*** *2* (†$_\gamma$18.62 *11*), ***540.5*** *5*(u) (†$_\gamma$0.46 *11*), ***542.0*** *5* (†$_\gamma$0.67 *11*), ***567.3*** *2* (†$_\gamma$1.16 *8*), ***583.7*** *3* (†$_\gamma$0.4 *1*), ***620*** *1* (†$_\gamma$2.79 *80*), ***661.3*** *2* (†$_\gamma$58.94 *16*) E2, ***665.8*** *4* (†$_\gamma$1.06 *16*), ***739.5*** *2* (†$_\gamma$5.73 *10*), ***750.0*** *2* (†$_\gamma$3.62 *9*), ***760.4*** *3*(u) (†$_\gamma$0.47 *7*), ***765.9*** *2* (†$_\gamma$2.06 *10*), ***917.3*** *4*(u) (†$_\gamma$0.32 *11*), ***930.0*** *3* (†$_\gamma$1.34 *10*), ***961.2*** *3*(u) (†$_\gamma$0.8 *1*), ***973.6*** *2* (†$_\gamma$1.64 *5*), ***996.0*** *4*(u) (†$_\gamma$0.45 *11*), ***1101.0*** *3* (†$_\gamma$2.92 *13*), ***1176.4*** *6*(u) (†$_\gamma$1.1 *3*), ***1202.2*** *4*(u) (†$_\gamma$0.49 *12*), ***1281.3*** *2* (†$_\gamma$5.66 *17*), ***1307.0*** *2* (†$_\gamma$1.44 *13*), ***1320.0*** *2* (†$_\gamma$2.54 *16*), ***1328.3*** *5* (†$_\gamma$0.79 *17*), ***1391.8*** *4*(u) (†$_\gamma$0.71 *14*), ***1397.3*** *3* (†$_\gamma$1.67 *17*), ***1405.9*** *2* (†$_\gamma$2.82 *18*), ***1483.4*** *2* (†$_\gamma$2.60 *16*), ***1500.3*** *2* (†$_\gamma$5.46 *13*), ***1504.3*** *6*(u) (†$_\gamma$1.3 *2*), ***1600.4*** *4*(u) (†$_\gamma$0.8 *2*), ***1639.4*** *4* (†$_\gamma$2.16 *12*), ***1661.5*** *8* (†$_\gamma$0.51 *12*), ***1677.8*** *2* (†$_\gamma$17.4 *11*) E2, ***1688.3*** *2* (†$_\gamma$82.47 *30*) E3, ***1861.5*** *4* (†$_\gamma$1.18 *14*), ***1939.7*** *3* (†$_\gamma$4.62 *17*), ***2043.4*** *4* (†$_\gamma$0.58 *13*), ***2110.2*** *4* (†$_\gamma$1.12 *13*), ***2284.6*** *4* (†$_\gamma$1.56 *13*), ***2291.4*** *4* (†$_\gamma$1.73 *14*), ***2412.4*** *4* (†$_\gamma$1.94 *15*), ***2600.9*** *4* (†$_\gamma$0.75 *11*), ***2705.0*** *4* (†$_\gamma$1.23 *14*), ***2945.8*** *10* (†$_\gamma$0.27 *10*), ***3073.4*** *6* (†$_\gamma$0.52 *11*).

γ(^{148}*Dy*) from ^{148}Ho (2.2 s) EC+β⁺ decay **<** *for Iγ% multiply by 1.0* **>**
1677.7 *3* (†$_\gamma$7.4 *14*).





$^{148}_{68}$Er

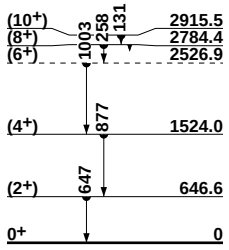
Δ: (–51800) S_n: (12700) S_p: (2800) Q_{EC}: (6800) Q_α: (2600)

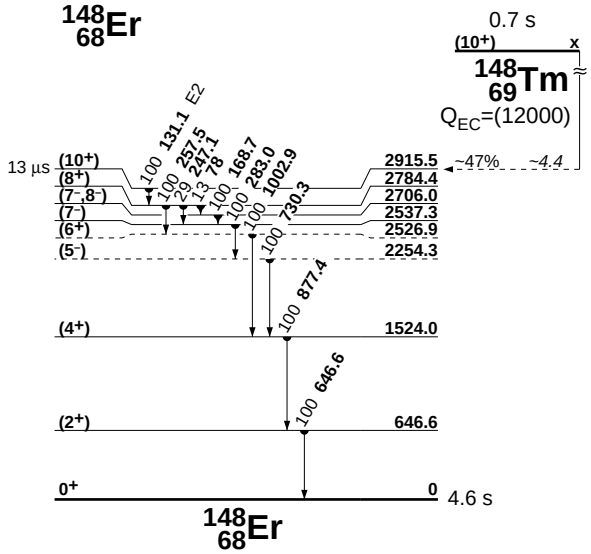
Populating Reactions and Decay Modes
A ^{148}Tm EC decay (82No08)
B ^{92}Mo(^{58}Ni,2pγ) E=250 MeV (82No07)

Levels and γ-ray branchings:
0, 0⁺, 4.6 *2* s, *[AB]*, %EC+%β⁺=100, %ECp≈0.15
646.6 *3*, (2⁺), *[AB]* γ_0***646.6*** *3* (†$_\gamma$100)
1524.0 *4*, (4⁺), *[AB]* γ_{647}***877.4*** *3* (†$_\gamma$100)
2254.3 *5*(?), (5⁻), *[AB]* γ_{1524}***730.3*** *3* (†$_\gamma$100)
2526.9 *5*(?), (6⁺), *[AB]* γ_{1524}***1002.9*** *3* (†$_\gamma$100)
2537.3 *6*, (7⁻), *[AB]* γ_{2254}***283.0*** *3* (†$_\gamma$100)
2706.0 *7*, (7⁻,8⁻), *[B]* γ_{2537}***168.7*** *3* (†$_\gamma$100)
2784.4 *6*, (8⁺), *[AB]* γ_{2706}***78*** *1* (†$_\gamma$13) γ_{2537}***247.1*** *3* (†$_\gamma$29 *19*) γ_{2527}***257.5*** *3* (†$_\gamma$100 *39*)
2915.5 *7*, (10⁺), 13 *3* μs, *[AB]* γ_{2784}***131.1*** *3* (†$_\gamma$100) E2

γ(^{148}*Ho*) from ^{148}Er (4.6 s) EC+β⁺ decay **<** *for Iγ% multiply by 0.071* **>**
141.7 *1* (†$_\gamma$60 *3*), ***244.0*** *1* (†$_\gamma$100 *5*), ***268.7***, ***287.6*** *4* (†$_\gamma$30 *5*), ***315.3*** *1* (†$_\gamma$97 *7*), ***383*** *1* (†$_\gamma$24 *7*), ***609.5*** *3* (†$_\gamma$81 *6*), ***924.9*** *4* (†$_\gamma$33 *7*), ***1027.3*** *4* (†$_\gamma$28 *7*), ***1311.8*** *3* (†$_\gamma$126 *11*), ***2121.8*** *5* (†$_\gamma$16 *5*).

γ(^{147}*Dy*) from ^{148}Er (4.6 s) ECp decay :
12.5 (†$_\gamma$≈0.3), ***21.5*** (†$_\gamma$3.3 *4*), ***58.0*** *1* (†$_\gamma$33 *3*) E1, ***81.9*** *1* (†$_\gamma$20 *1*) E2, ***92.3*** *3* (†$_\gamma$1.0 *3*), ***151.2*** *3* (†$_\gamma$2.5 *5*), ***197.1*** *1* (†$_\gamma$71 *3*) M1, ***218.6*** *1* (†$_\gamma$5.5 *5*) (E2), ***243.4*** *3* (†$_\gamma$5 *1*) (E2), ***244.1*** *2* (†$_\gamma$7.6 *7*) (E2), ***244.3*** *2* (†$_\gamma$16 *3*) (M1), ***255.2*** *2* (†$_\gamma$19 *1*) (E1), ***256.9*** *1* (†$_\gamma$65 *3*) (M1), ***387.7*** *1* (†$_\gamma$88 *3*) (E1), ***632.1*** *1* (†$_\gamma$35 *2*) (E1), ***677.2*** *2* (†$_\gamma$8.5 *7*) (E2), ***1653.4*** *2* (†$_\gamma$100 *4*) (E2), ***1711.5*** *2* (†$_\gamma$32 *2*) (M2+E3).





$^{148}_{69}$Tm

Δ: (–39800) S_n: (11400) Q_p: (100) Q_{EC}: (12000) Q_α: (2800)

Populating Reactions and Decay Modes
^{92}Mo(^{58}Ni,np) (82No08)

Levels and γ-ray branchings:
x, (10⁺), 0.7 *2* s, %EC+%β⁺=100

γ(^{148}*Er*) from ^{148}Tm (0.7 s) EC+β⁺ decay **<** *for Iγ% multiply by 1.0* **>**
131.1 *3*, ***247.1*** *3*(?) (†$_\gamma$15 *10*), ***257.5*** *3* (†$_\gamma$52 *20*), ***283.0*** *3*(?) (†$_\gamma$46 *20*), ***646.6*** *3* (†$_\gamma$100), ***730.3*** *3* (†$_\gamma$35 *15*), ***877.4*** *3* (†$_\gamma$72 *25*), ***1002.9*** *3* (†$_\gamma$55 *20*).