

Adopted Levels

Type	Author	History	Citation	Literature Cutoff Date
Full Evaluation	Balraj Singh and Jun Chen [#]		NDS 147, 1 (2018)	30-Nov-2017

S(n)=10110 CA; S(p)=−1560 SY; Q(α)=6970 SY [2017Wa10](#),[1997Mo25](#)

Estimated uncertainties (syst,[2017Wa10](#)): ΔS(p)=ΔQ(α)=100.

S(n) from [1997Mo25](#); S(p) and Q(α) from [2017Wa10](#).

S(2p)=−580 370, Q(εp)=11370 320 (syst,[2017Wa10](#)). S(2n)=22110 (theory, [1997Mo25](#)).

[2001Ke05](#) and [2002Ma61](#) for the identification of ^{164}Ir are conference reports.

[2002Ma61](#) (conference paper): ^{164}Ir produced and identified in reaction $^{92}\text{Mo}(^{78}\text{Kr},\text{p}5\text{n})$ E=437 MeV, fragment mass analyzer (FMA) with gas-filled position-sensitive parallel grid avalanche counter (PGAC) and double-sided silicon strip detector (DSSD) detectors at focal plane; ATLAS facility at Argonne. Isotopic identification by observation of an 1807 proton group in correlation with α particles from ^{163}Os α decay. Deduced S(p)=1844 9, including correction for electron screening.

[2001Ke05](#) (conference paper): ^{164}Ir produced and identified in reaction $^{106}\text{Cd}(^{64}\text{Zn},\text{p}5\text{n})$, gas-filled recoil mass separator (RITU) with position-sensitive parallel plate avalanche counter (PPAC) and double-sided silicon strip detector (DSSD) detectors at focal plane. Isotopic identification by observation of an 1817 proton group in correlation with Eα=6493 10 from ^{163}Os α decay.

[2014Dr02](#): ^{164}Ir produced in $^{92}\text{Mo}(^{78}\text{Kr},\text{p}5\text{n})$ reaction at 428-450 MeV using RITU separator and GREAT spectrometer at Jyvaskyla. Measured Eα, T_{1/2}, α branching ratio.

[2002So02](#): Compilation and evaluation of proton decay data.

For theoretical calculations of half-life by proton decay, consult NSR database for about 30 references. These are listed in the ENSDF dataset as document records.

[Additional information 1](#).

 ^{164}Ir Levels

E(level)	J ^π	T _{1/2}	Comments
0?			%p=?; %α=?; %ε+%β ⁺ =? Ground state of ^{164}Ir is not yet identified. From systematics, 2017Au03 give half-life=1 ms and J ^π =2 [−] . Theoretical half-life=0.14 s (1997Mo25).
0+x	(9 ⁺)	70 μs 10	%α=4 2 (2014Dr02); %p>0; %ε+%β ⁺ =? Alpha decay is reported by 2014Dr02 and proton decay by 2001Ke05 , 2002Ma61 and 2014Dr02 . E(level),J ^π : the observed proton activity is assigned to a possible high-spin isomer in ^{164}Ir (2002Ma61) in comparison with similar assignment for ^{166}Ir . Possible configuration=πh _{11/2} ⊗νf _{7/2} , the proton emitting orbital is most likely πh _{11/2} . From systematics x=260 100 (syst, 2017Au03). T _{1/2} : measured by 2014Dr02 from proton decay curve using method of maximum likelihood. Others: 69 ms +41−29 from α-decay events (2014Dr02), 58 μs +46−18 (2002Ma61) and 113 μs +62−30 (2001Ke05). E(p)=1814 6 (2014Dr02), 1807 14 (2002Ma61) and 1817 9 (2001Ke05) from decay of ^{164}Ir . Eα=6880 10 from decay of ^{164}Ir , observed by 2014Dr02 .