Recommended Nuclear Decay Data

Re-188

Decay Mode: β^-		Half-Life: (17.0035 ± 0.022) d			[2]
Radiation Type		**Energy (keV)**	**Intensity (%)**		**Ref.**
Auger-L		6.88	6.5	5	[4]
Auger-K		48.3	0.19	9	[4]
ce-K		81.17	4.9	3	[4]
ce-L		142.07	5.5	4	[4]
ce-M		151.99	1.40	9	[4]
ce-NOP		154.39	0.420	25	[4]
β^-max		178.6	0.107	7	[4]
β^-max		354.3	0.186	10	[4]
β^-max		657.2	0.52	3	[4]
β^-max		1033.3	0.64	3	[4]
β^-max		1486.7	1.60	14	[4]
β^-max		1964.7	25.1	13	[4]
β^-max		2119.7	71.6	15	[4]
X-ray L	Σ	9.9	3.14	15	[2]
X-ray Kα	Σ	62.45	3.797	15	[2]
X-ray Kβ	Σ	71.73	0.986	11	[2]
γ		155.03	15.79	15	[2]
γ		477.99	1.089	10	[2]
γ		632.98	1.366	13	[2]
γ		635.00	0.1641	19	[2]
γ		672.53	0.1209	13	[2]
γ		824.50	0.0169	5	[2]
γ		829.46	0.436	4	[2]
γ		931.34	0.594	6	[2]

weak γ's omitted (intensity < 1 %)

Recommended Nuclear Decay Data

Decay Mode

α	Alpha
β-, β+	Beta
EC	Electron capture
IT	Isomeric transition

Half-Life

s	Seconds
m	Minutes
h	Hours
d	Days
y	Years

Energy

All energies are given in keV. Normally there are energies listed with an intensity ≥ 1 %.

Radiation Type

Auger-L/K	L or K-shell auger electron
ce-K-1	K-shell conversion electron transition 1
ce-L-2	L-shell conversion electron transition 2
α	Alpha particle
β^- max, β^+ max	Beta particle (maximal energy)
β^- av, β^+ av	Beta particle (average energy)
X-ray L	L X-ray
X-ray Kα, Kβ	K X-rays
γ	Gamma ray
γ Annih.	Annihilation radiation
Σ	Signifies weighted mean energies and intensities

Intensity

Values are given in percent. The format used for the uncertainties in the listed values can be illustrated by the following examples:

1.2	56	=	1.2	±	5.6
1.23	56	=	1.23	±	0.56

References

[1] PTB-6.11-97-1, Braunschweig, Oktober 1997
[2] PTB-Ra-16/5, Braunschweig, Mai 2000
[3] LMRI. Table de radionuclides. 1982 ff
[4] NCRP Report No.58, 2nd Edition, February 1985
[5] Table de Radionuclidés, BNM-CEA/DTA/LPRI Commissariat à l´Énergie Atomique – France 1999
[6] National Nuclear Data Center USA, Brookhaven National Laboratory Upton N.Y.
[7] Table of Isotopes, 8th Edition, 1996
[8] BNM-CEA/DTA/DAMRI Nuclear and Atomic Decay Data ; 19/12/98

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