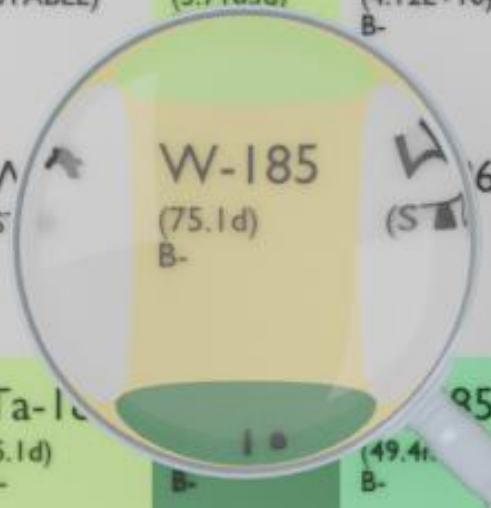




Re-182 (54.0h) C	Re-183 (70.0d) EC	Re-184 (38.0d) ECB+	Re-185 (STABLE)	Re-186 (3.7183d) B-	Re-187 (4.12E+10y) B-	Re-188 (17.0040h) B-	Re-189 (24.3h) B-	Re-190 (3.1m) B-
W-181 (121.2d) C	W-182 (STABLE)	W-183 (STABLE)	W-184 (STABLE)	W-185 (75.1 d) B-	W-186 (STABLE)	W-187 (23.72h) B-	W-188 (69.78d) B-	W-189 (STABLE)
Ta-180 (8.152h) CB-	Ta-181 (STABLE)	Ta-182 (114.43d) B-	Ta-183 (5.1 d) B-	Ta-184 (STABLE)	Ta-185 (49.4h) B-	Ta-186 (10.5m) B-	Ta-187 (STABLE)	Ta-188 (STABLE)

TUNGSTEN-185

SUMMARY DATA

GENERAL

CLASSIFICATION

Isotope: W-185
Atomic number (Z): 74
Mass number (A): 185
Neutron number (N): 111

RADIOACTIVE DECAY

Decay modes: β^-
Half-life: 75.1 [d]
Decay constant: $1.0682\text{e-}07$ [1/s]
Daughters: Re-185 (100.0%)
Radioactive daughters: None

DOSIMETRIC CONSTANTS

Mean alpha energy: 0.0 [MeV]
Mean electron energy: 0.12696 [MeV]
Mean photon energy: $5\text{e-}05$ [MeV]
Air kerma rate constant, Γ_{10} : $5.084\text{e-}21$ [Gy $\cdot$ m²/Bq $\cdot$ s]
Air kerma coefficient, K_{air} : $5.084\text{e-}21$ [Gy $\cdot$ m²/Bq $\cdot$ s]
Equilibrium dose constant for weakly-penetrating radiations (α and/or electrons), Δ_{wp} : $2.034\text{e-}14$ [Gy $\cdot$ kg/Bq $\cdot$ s]
Equilibrium dose constant for alphas, Δ_{α} : $0.000\text{e+}00$ [Gy $\cdot$ kg/Bq $\cdot$ s]

Equilibrium dose constant for betas/electrons, $\Delta_{\beta,\beta^+,e^-}$: 2.034×10^{-14} [Gy·kg/Bq·s]

Equilibrium dose constant for photons, Δ_p : 8.011×10^{-18} [Gy·kg/Bq·s]

DOSE POINT KERNELS (PLOT)

Dose point kernel source: **Graves, et al. Medical Physics. 2019 Nov.; 46(11):5284-5293.**

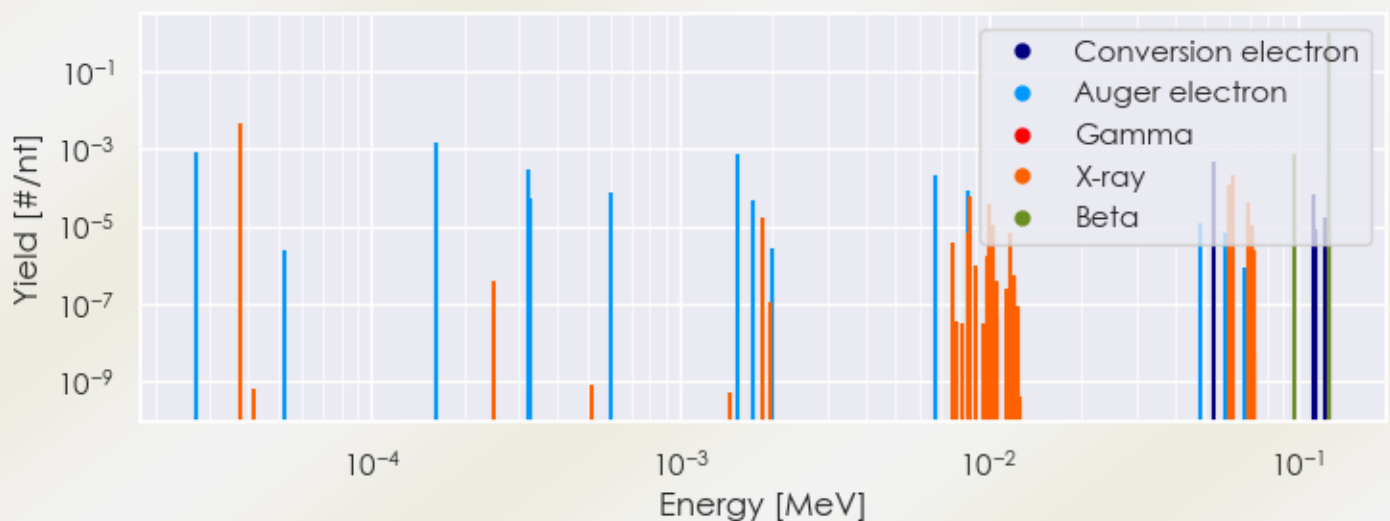
Note: Bins are spaced every 0.1 mm until a radius of 10 cm, and every 1 mm until a radius of 2 m.



Download tabulated dose point kernel file here: www.mirdsoft.org/products/MIRDspecs/W-185 DPK.csv

SUMMARY SPECTRA (PLOT)

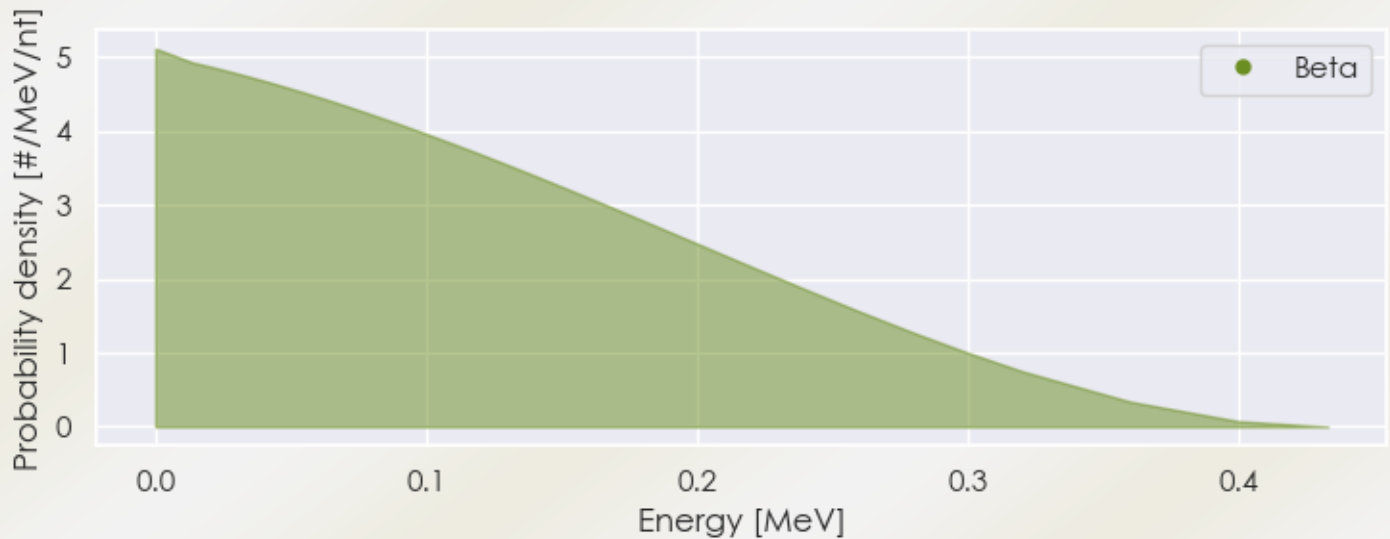
Spectra source: **ICRP Publication 107: Nuclear Decay Data for Dosimetric Calculations. Ann. ICRP 2008, 38 (3).**



Download tabulated summary spectra file here: www.mirdsoft.org/products/MIRDspecs/W-185 Summary Spectrum.csv

BETA SPECTRA (PLOT)

Spectra source: **ICRP Publication 107: Nuclear Decay Data for Dosimetric Calculations. Ann. ICRP 2008, 38 (3).**



Download tabulated beta spectra file here: www.mirdsoft.org/products/MIRDspecs/W-185 Beta Spectrum.csv

TABULATED DATA

SUMMARY SPECTRA (TABLE)

Spectra source: **ICRP Publication 107: Nuclear Decay Data for Dosimetric Calculations. Ann. ICRP 2008, 38 (3).**

Note: Radiations with yield < 0.01 are excluded from the table, but are available in the linked *.csv data.

Download tabulated summary spectra file here: www.mirdsoft.org/products/MIRDspecs/W-185 Summary Spectrum.csv

Energy [MeV]	Yield [# / nt] if > 0.01	Radiation type
1.26943e-01	9.993e-01	Beta

USEFUL LINKS

Isotope decay characteristics are periodically updated as better measurements can be made - changes that may not be reflected on this page. Please see useful links:

National Nuclear Data Center (NNDC): <https://www.nndc.bnl.gov/nudat3/mird/>

International Atomic Energy Agency (IAEA) Livechart: <https://www-nds.iaea.org/relnsd/vcharthtml/VChartHTML.html>

REFERENCE LINKS

ICRP Report 107: <https://www.icrp.org/publication.asp?id=ICRP%20Publication%20107>

Graves et al. Dose Point Kernels: <https://doi.org/10.1002/mp.13789>

MIRD Decay Schemes 2nd Edition: https://sites.snmmi.org/SNMML-MAIN/iCore/Store/StoreLayouts/Item_Detail.aspx?iProductCode=0-932004-80-6