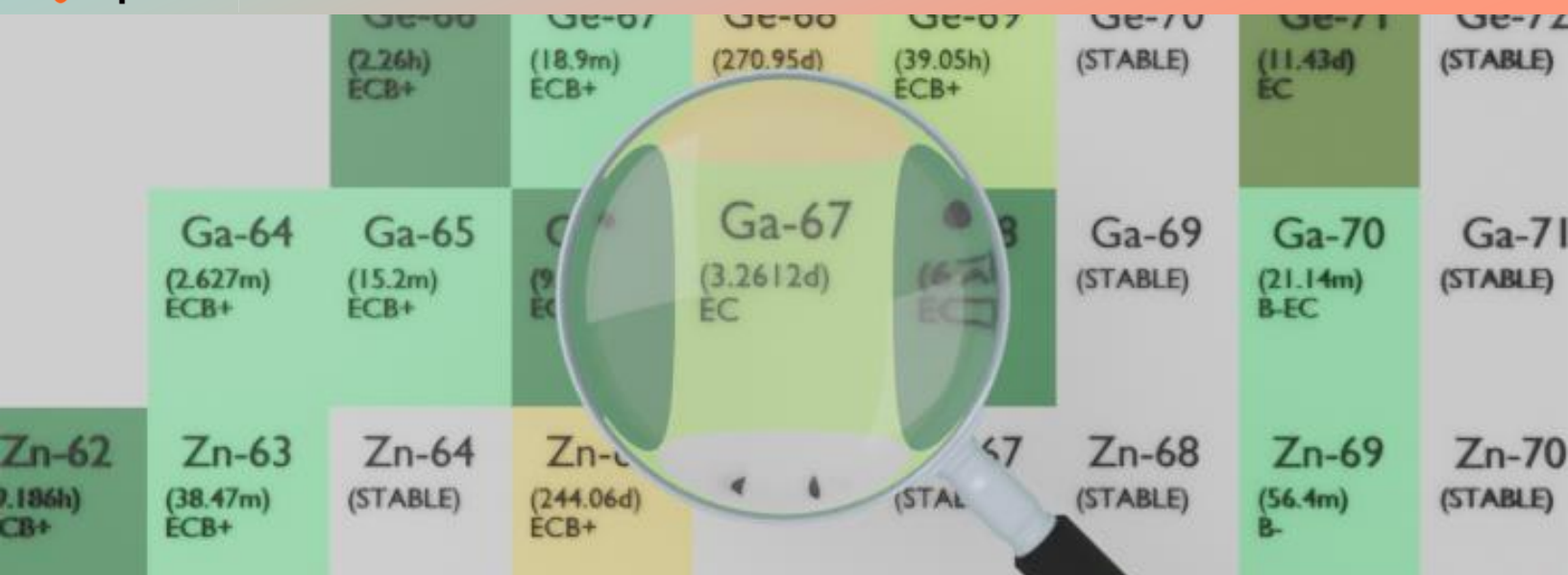




GALLIUM-67

SUMMARY DATA

GENERAL

CLASSIFICATION

Isotope: Ga-67
Atomic number (Z): 31
Mass number (A): 67
Neutron number (N): 36

RADIOACTIVE DECAY

Decay modes: Electron capture
Half-life: 3.261 [d]
Decay constant: 2.4600×10^{-6} [1/s]
Daughters: Zn-67 (100.0%)
Radioactive daughters: None

DOSIMETRIC CONSTANTS

Mean alpha energy: 0.0 [MeV]
Mean electron energy: 0.03633 [MeV]
Mean photon energy: 0.15954 [MeV]
Air kerma rate constant, Γ_{10} : 5.273×10^{-18} [Gy $\cdot$ m²/Bq $\cdot$ s]
Air kerma coefficient, K_{air} : 5.273×10^{-18} [Gy $\cdot$ m²/Bq $\cdot$ s]
Equilibrium dose constant for weakly-penetrating radiations (α and/or electrons), Δ_{wp} : 5.821×10^{-15} [Gy $\cdot$ kg/Bq $\cdot$ s]
Equilibrium dose constant for alphas, Δ_{α} : 0.000×10^0 [Gy $\cdot$ kg/Bq $\cdot$ s]

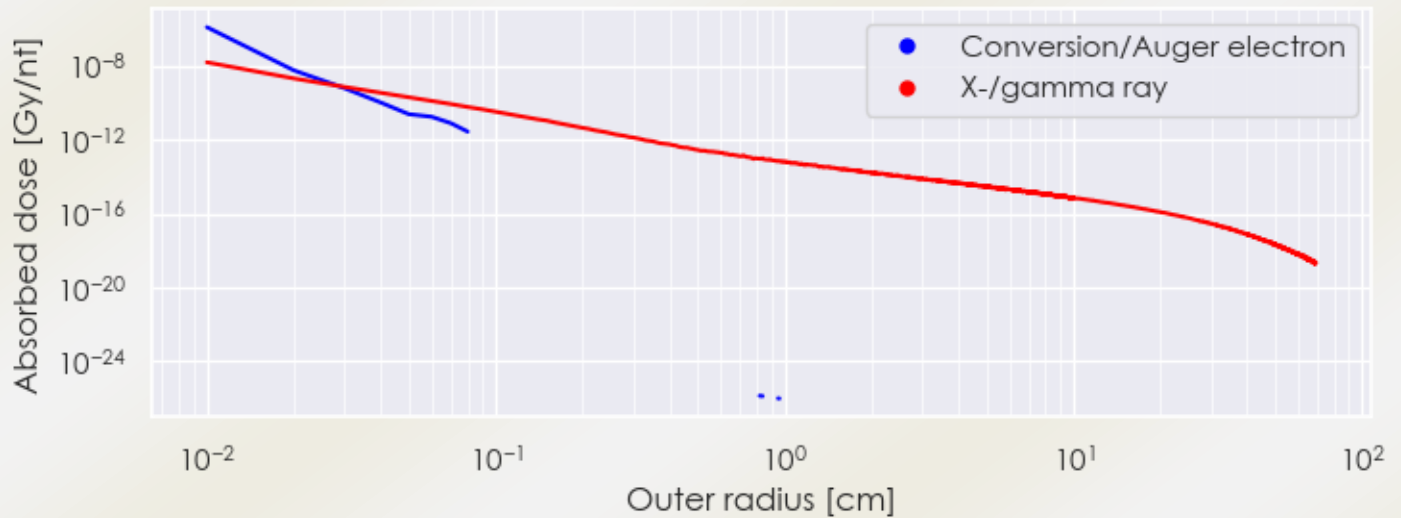
Equilibrium dose constant for betas/electrons, $\Delta_{\beta-, \beta+, e-}$: 5.821×10^{-15} [Gy·kg/Bq·s]

Equilibrium dose constant for photons, Δ_p : 2.556×10^{-14} [Gy·kg/Bq·s]

DOSE POINT KERNELS (PLOT)

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

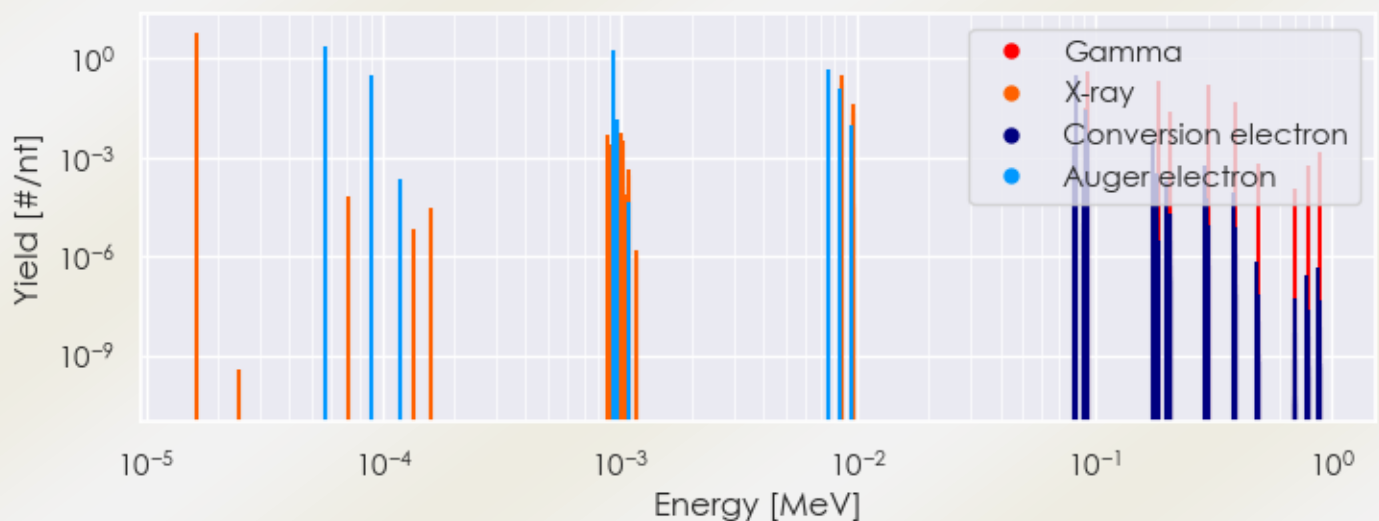
Note: Bins are spaced every 0.1 mm until a radius of 10 cm, and every 1 mm until a radius of 2 m.



Download tabulated dose point kernel file here: www.mirdsoft.org/products/MIRDspecs/Ga-67 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/Ga-67 Summary 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/Ga-67 Summary Spectrum.csv](http://www.mirdsoft.org/products/MIRDspecs/Ga-67%20Summary%20Spectrum.csv)

Energy [MeV]	Yield [# / n _t] if > 0.01	Radiation type
1.63544e-05	6.304e+00	X-ray
8.57190e-03	1.664e-01	X-ray
8.59639e-03	3.241e-01	X-ray
9.52867e-03	2.058e-02	X-ray
9.53181e-03	4.024e-02	X-ray
9.12660e-02	3.160e-02	Gamma
9.33110e-02	3.920e-01	Gamma
1.84577e-01	2.120e-01	Gamma
2.08951e-01	2.400e-02	Gamma
3.00219e-01	1.680e-01	Gamma
3.93529e-01	4.680e-02	Gamma
5.67906e-05	2.281e+00	Auger electron
8.98179e-05	3.170e-01	Auger electron
9.29483e-04	1.716e+00	Auger electron
9.76176e-04	1.354e-02	Auger electron
7.48697e-03	4.966e-01	Auger electron
8.45550e-03	1.268e-01	Auger electron
8.36886e-02	2.942e-01	Conversion electron
9.21266e-02	2.644e-02	Conversion electron

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/SNMMI-MAIN/iCore/Store/StoreLayouts/Item_Detail.aspx?iProductCode=0-932004-80-6