

NuDat

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NuDat 2.5 – since March 2009

What's new:

Many more coloring options
in the chart of nuclides

Existing ones

- Half-life
- Decay Mode

Mass Related

- Sn
- Sp
- Q α
- S2n
- S2p
- Q2 β -
- Q2EC
- QECp
- Q β -n
- BE/A
- (BE-LDM Fit)/A

Nuclear Structure

- E2+
- E3-
- E4+
- E4+/E2+
- β 2
- B(E2)42/B(E2)20

Cross Sections (lots of nuclear structure effects on them)

- $\sigma(n,\gamma)$
- $\sigma(n,F)$
- 235U FY
- 239Pu FY

More zooming
possibilities

Wide Screen Option

Also, four new
powerful servers, two
as web servers and
two as database
servers. Migration took
quite some effort!

NuDat 2.5

Search and plot nuclear structure and decay data interactively. [More.](#)

Levels and Gammas Search

Ground and excited states (energy, $T_{1/2}$, spin/parity, decay modes), gamma rays (energy, intensity, multipolarity, coinc.)

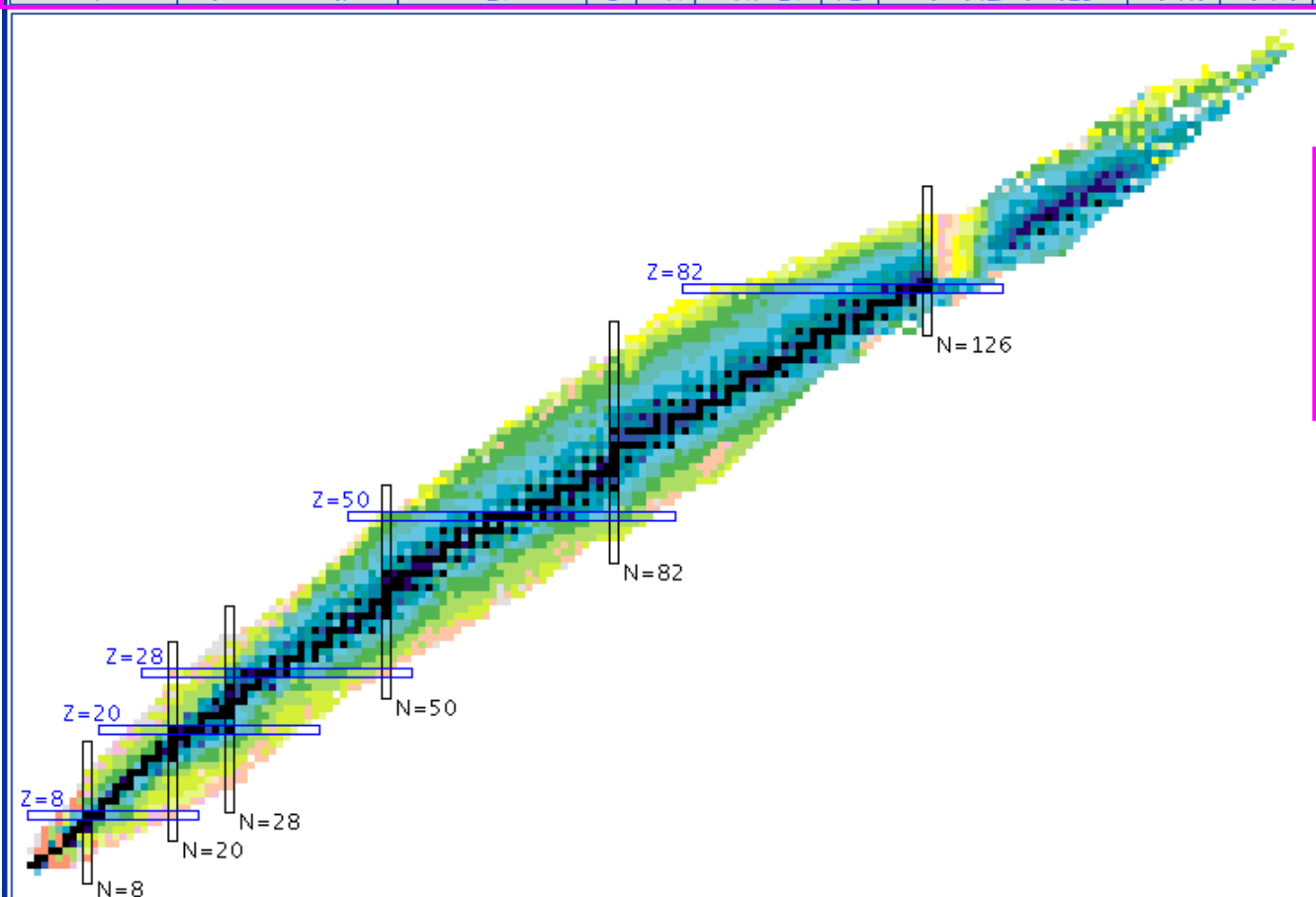
Nuclear Wallet Cards Search

Latest Ground and isomeric states properties

Decay Radiation Search

Radiation type, energy, intensity and dose following nuclear decay

Color code	Half-life	Decay Mode	S_n	S_p	Q_α	S_{2n}	S_{2p}	$Q_{2\beta^-}$	Q_{2EC}	Q_{ECp}	Q_{β^-n}
BE/A	(BE-LDM Fit)/A	E_{2+}	E_{3-}	E_{4+}	E_{4+}/E_{2+}	β_2	$B(E2)_{42}/B(E2)_{20}$	$\sigma(n,\gamma)$	$\sigma(n,F)$	235U FY	239Pu FY



☒ Tooltips
☒ On
☐ Off

Zoom
 1
 2
 3
 4
 5
 6
 7

Uncertainty
 NDS
 Standard
 Screen Size
 Narrow
 Wide

Nucleus
 go

Seconds

> 10+15	10-01
10+10	10-02
10+07	10-03
10+05	10-04
10+04	10-05
10+03	10-06
10+02	10-07
10+01	10-15
10+00	< 10-15
unknown	

NNDC ENSDF NSR
 Nuclear Wallet Cards

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Levels and Gammas Search

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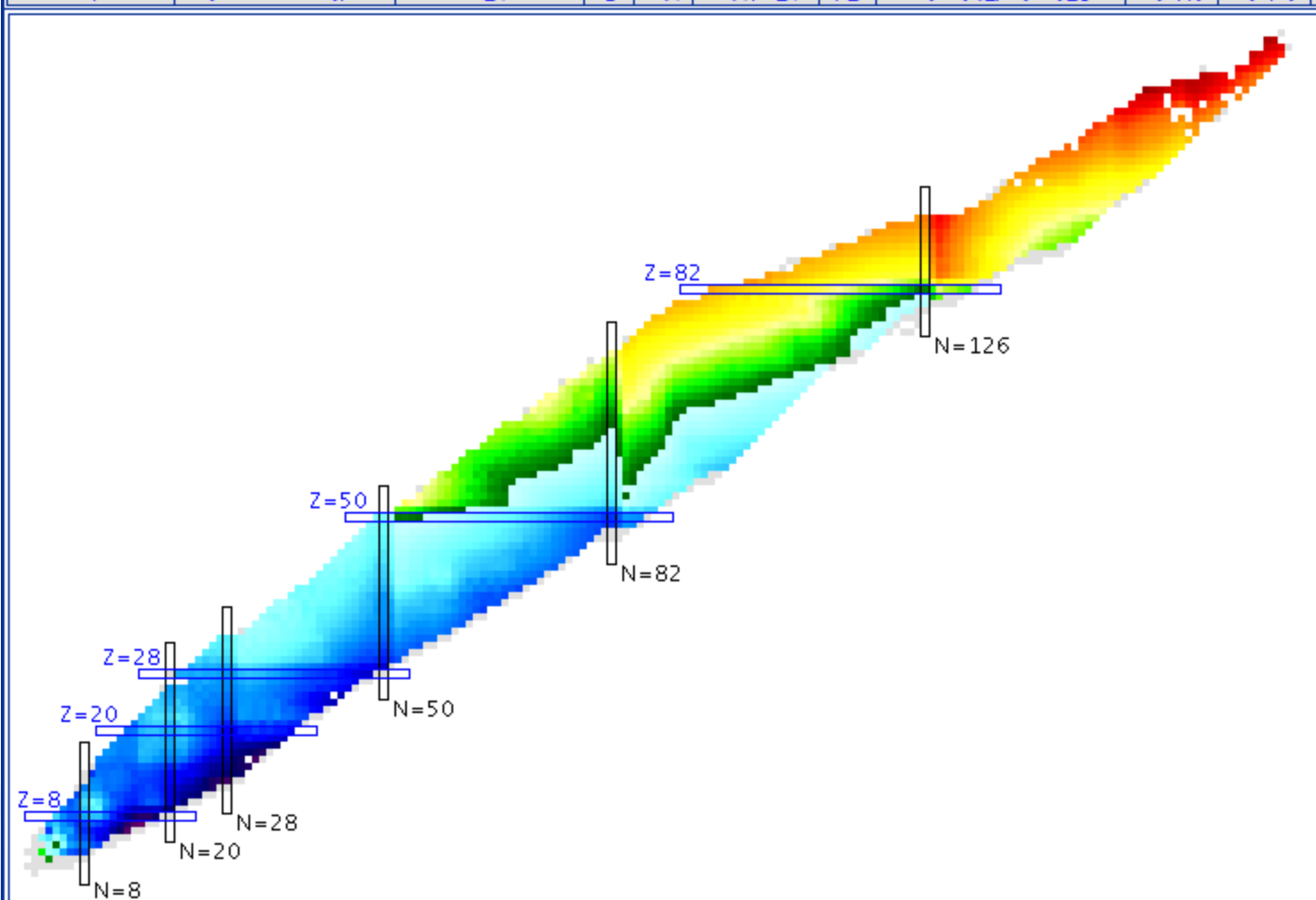
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keV

1.41E+4	-4.61E+3
1.22E+4	-6.49E+3
1.03E+4	-8.37E+3
8.52E+3	-1.02E+4
6.64E+3	-1.21E+4
4.76E+3	-1.40E+4
2.89E+3	-1.58E+4
1.01E+3	-1.77E+4
-8.64E+2	-1.96E+4
-2.74E+3	-2.15E+4
-4.61E+3	-2.33E+4

unknown



NNDC ENSDF NSR
Nuclear Wallet Cards

Interactive Chart of Nuclides

Click on a nucleus to obtain information

EN
RY

Search and plot nuclear structure and decay data interactively. [More.](#)

Ground and excited states (energy, $T_{1/2}$, spin/parity, decay modes), gamma rays (energy, intensity, multipolarity, coinc.)

Latest Ground and isomeric states properties

Radiation type, energy, intensity and dose following nuclear decay

Color code

BE/A

Half life

(BE-LDM Fit)/A

Decay Mode

E₂₊

S_n

E₃₋

S_p

E₄₊

Q_α

E₄₊ /E₂₊

S_{2n}

β₂

S_{2p}

B(E2)₄₂/B(E2)₂₀

Q_{2β-}

σ(n,γ)

Q_{2EC}

σ(n,F)

Q_{ECp}

235U FY

Q_{β-n}

239Pu FY

Z

84

82

80

78

76

74

72

70

193Rn

194Rn

195Rn

196Rn

197Rn

198Rn

199Rn

200Rn

201Rn

202Rn

203Rn

204Rn

205Rn

206Rn

207Rn

208Rn

191At

193At

194At

195At

196At

197At

198At

199At

200At

201At

202At

203At

204At

205At

206At

207At

188Po

189Po

190Po

191Po

192Po

193Po

194Po

195Po

196Po

197Po

198Po

199Po

200Po

201Po

202Po

203Po

204Po

205Po

206Po

184Bi

185Bi

186Bi

187Bi

188Bi

189Bi

190Bi

191Bi

192Bi

193Bi

194Bi

195Bi

196Bi

197Bi

198Bi

199Bi

200Bi

201Bi

202Bi

203Bi

204Bi

205Bi

178Pb

179Pb

180Pb

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192Pb

193Pb

194Pb

195Pb

196Pb

197Pb

198Pb

199Pb

200Pb

201Pb

202Pb

203Pb

204Pb

176Tl

177Tl

178Tl

179Tl

180Tl

181Tl

182Tl

183Tl

184Tl

185Tl

186Tl

187Tl

188Tl

189Tl

190Tl

191Tl

192Tl

193Tl

194Tl

195Tl

196Tl

197Tl

198Tl

199Tl

200Tl

201Tl

202Tl

203Tl

174Hg

175Hg

176Hg

177Hg

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200Hg

201Hg

202Hg

173Au

174Au

175Au

176Au

177Au

178Au

179Au

180Au

181Au

182Au

183Au

184Au

185Au

186Au

187Au

188Au

189Au

190Au

191Au

192Au

193Au

194Au

195Au

196Au

197Au

198Au

199Au

200Au

201Au

172Pt

173Pt

174Pt

175Pt

176Pt

177Pt

178Pt

179Pt

180Pt

181Pt

182Pt

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200Pt

171Ir

172Ir

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175Ir

176Ir

177Ir

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186Ir

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190Ir

191Ir

192Ir

193Ir

194Ir

195Ir

196Ir

197Ir

198Ir

199Ir

170Os

171Os

172Os

173Os

174Os

175Os

176Os

177Os

178Os

179Os

180Os

181Os

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183Os

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186Os

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194Os

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196Os

197Os

169Re

170Re

171Re

172Re

173Re

174Re

175Re

176Re

177Re

178Re

179Re

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184Re

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186Re

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194Re

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167Ta

168Ta

169Ta

170Ta

171Ta

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174Ta

175Ta

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177Ta

178Ta

179Ta

180Ta

181Ta

182Ta

183Ta

184Ta

185Ta

186Ta

187Ta

188Ta

189Ta

190Ta

166Hf

167Hf

168Hf

169Hf

170Hf

171Hf

172Hf

173Hf

174Hf

175Hf

176Hf

177Hf

178Hf

179Hf

180Hf

181Hf

182Hf

183Hf

184Hf

185Hf

186Hf

187Hf

188Hf

165Lu

166Lu

167Lu

168Lu

169Lu

170Lu

171Lu

172Lu

173Lu

174Lu

175Lu

176Lu

177Lu

178Lu

179Lu

180Lu

181Lu

182Lu

183Lu

184Lu

164Yb

165Yb

166Yb

167Yb

168Yb

169Yb

170Yb

171Yb

172Yb

173Yb

174Yb

175Yb

176Yb

177Yb

178Yb

179Yb

180Yb

181Yb

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keV

1.48E+1

1.24E+1

9.98

7.53

5.08

2.63

1.85E-1

-2.26

-4.71

-7.16

-9.61

-9.61

-1.20E+1

-1.45E+1

-1.69E+1

-1.94E+1

-2.18E+1

-2.43E+1

-2.67E+1

-2.92E+1

-3.16E+1

-3.41E+1

unknown

NND

NND

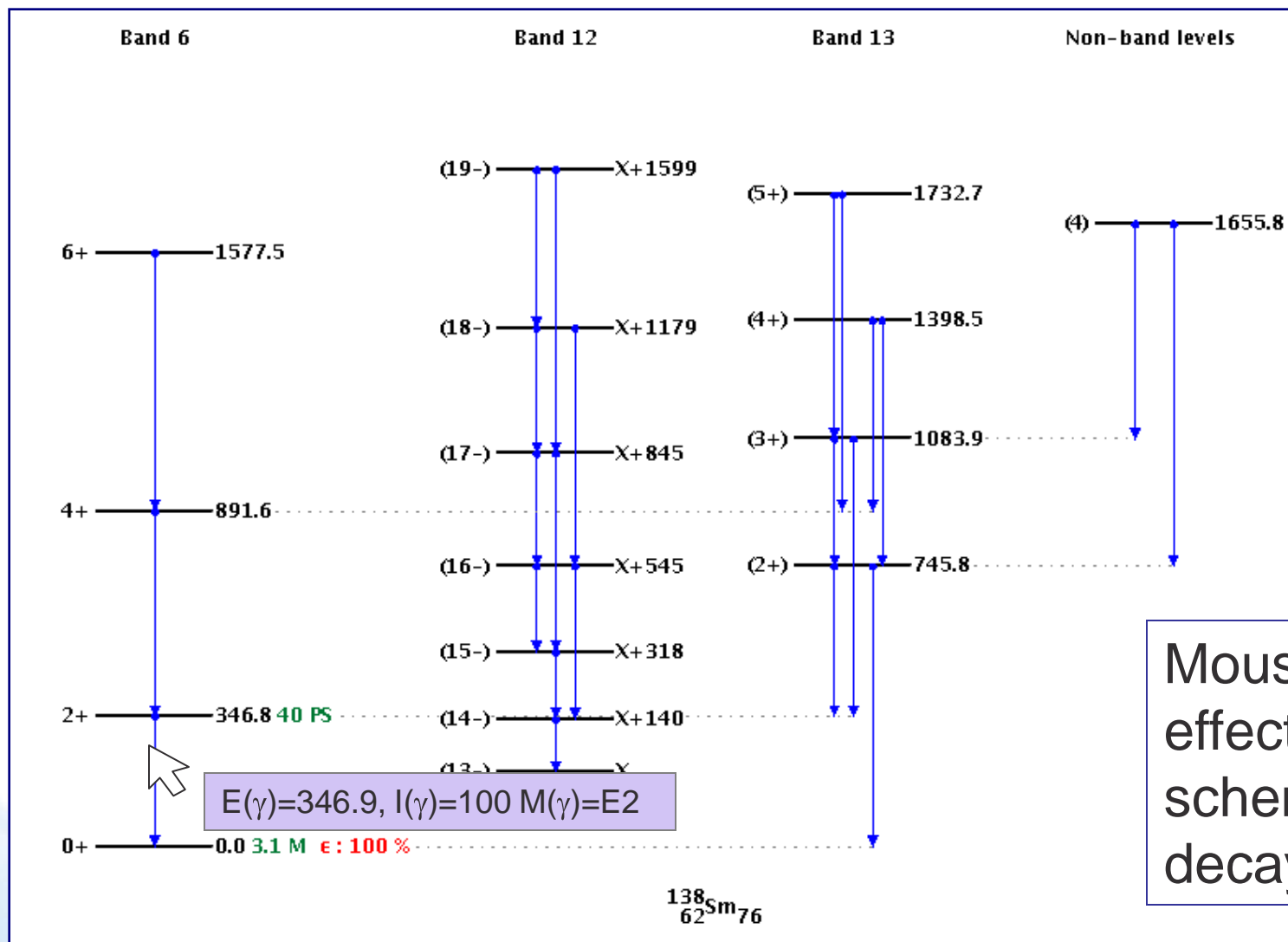
ENSDF

NSR

Nuclear Wallet Cards

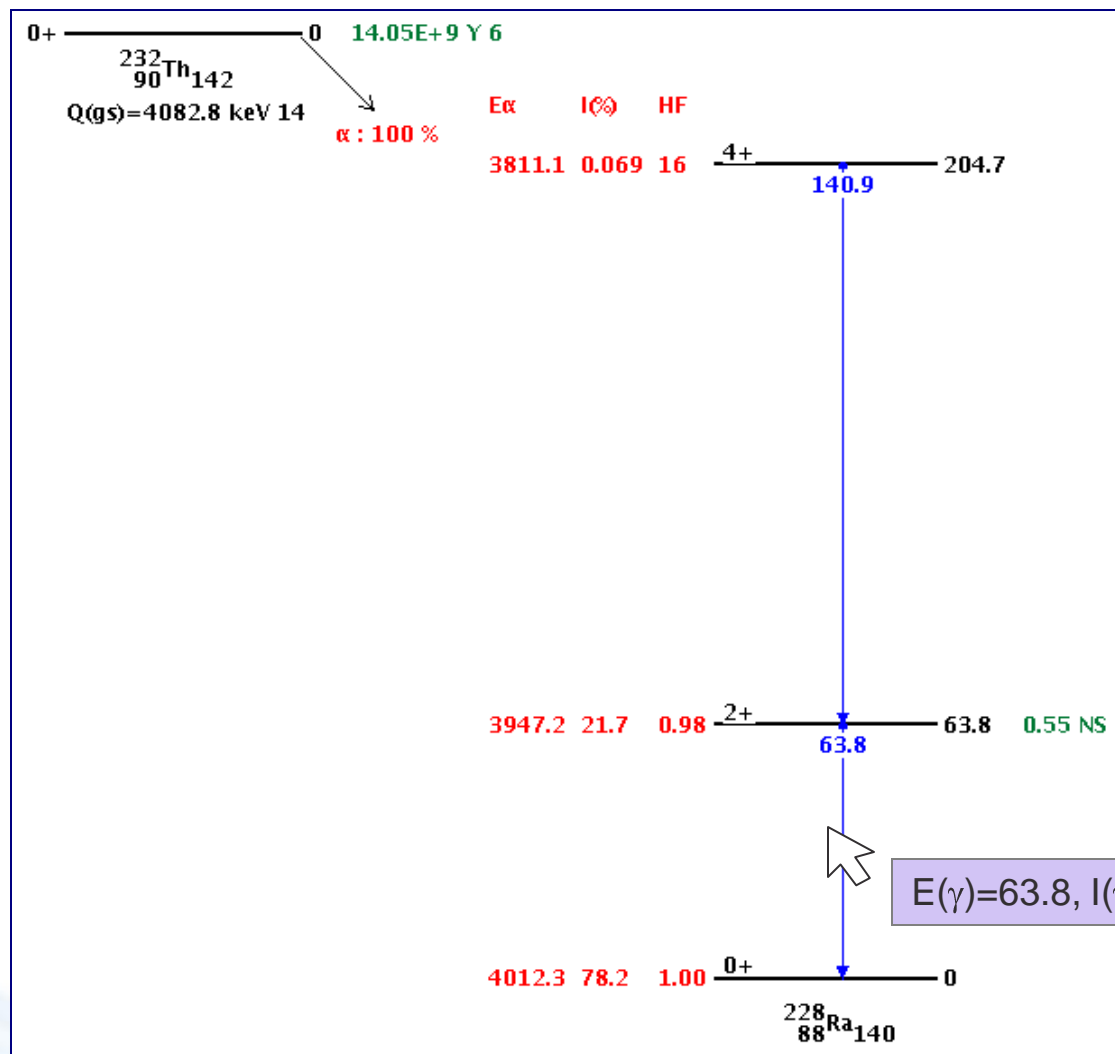
A list of levels, a level scheme and decay radiation information are available

NuDat 2.5 – What's new



Mouse over effects on level schemes and decay schemes

NuDat 2.5 – What's new



Mouse over
effects on
decay schemes

NuDat 2.5 – What's new

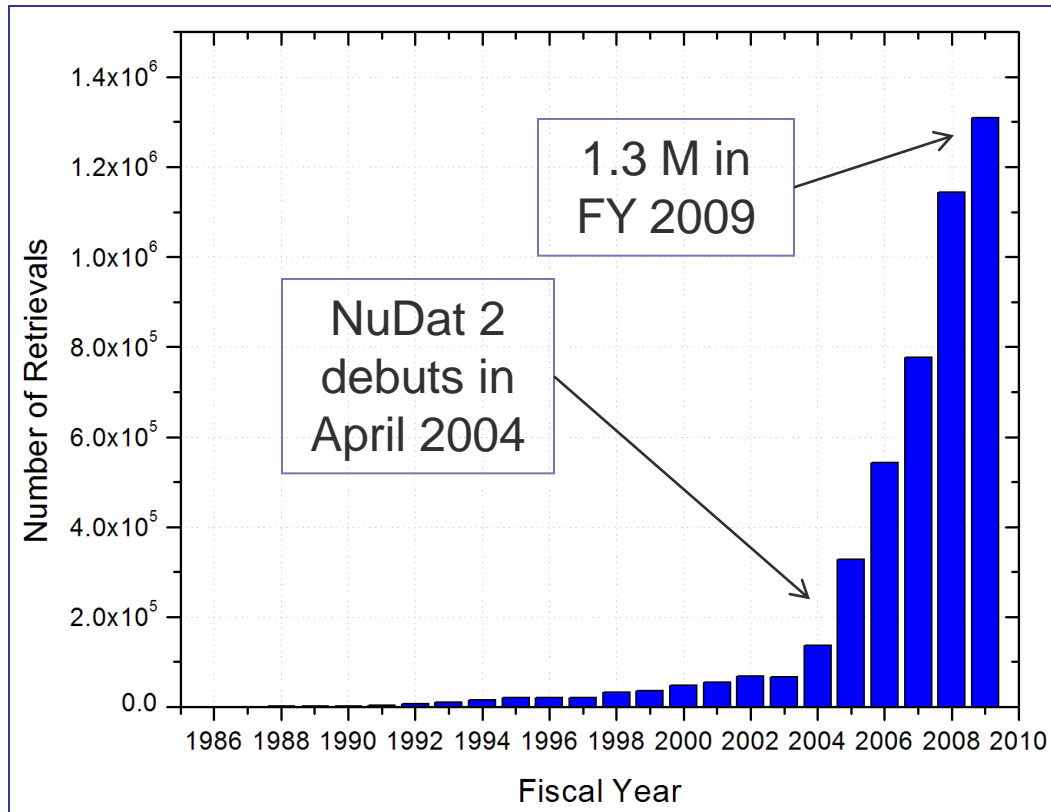
Gamma coincidence table in decay data,
following user request from DoE Nevada

Gamma Coincidence Data: **Preliminary**

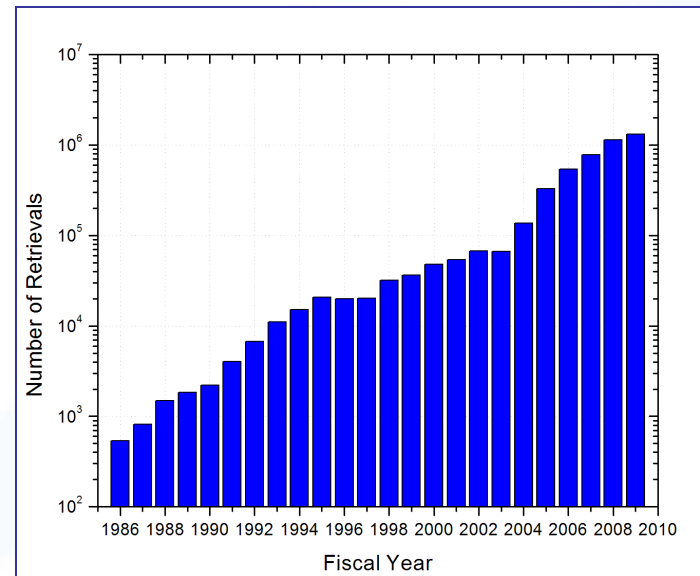
For each gamma, the list of gammas in coincidence is given.
If experimentally known, an estimate of the average time
interval (in seconds) between both gammas is given

E(γ)	Coincidence
63.81	140.88 (5.50E-10)
140.88	63.81 (5.50E-10)

NuDat Dissemination Statistics



23 years of
electronic access



NuDat 2.5 – What's in the pipeline

- Very common request: Make it work like google maps.... As if it were that easy
- Introduce double-click for zooming and centering
- Perhaps introduce mouse drag events?
- Provide comments in the list of levels
- Improve level and decay schemes (vectorial)