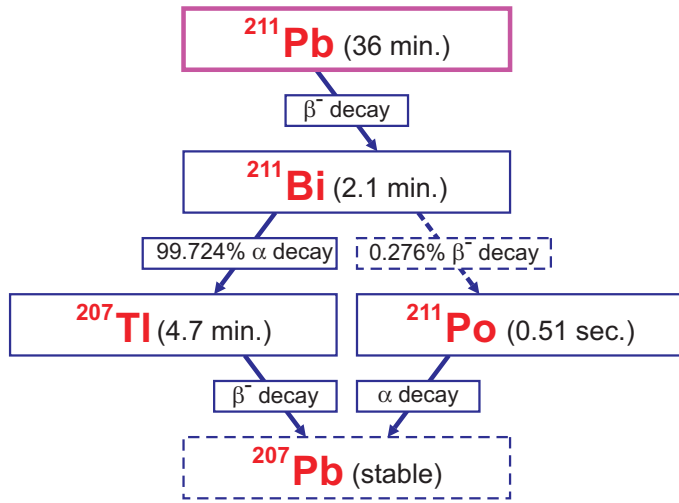
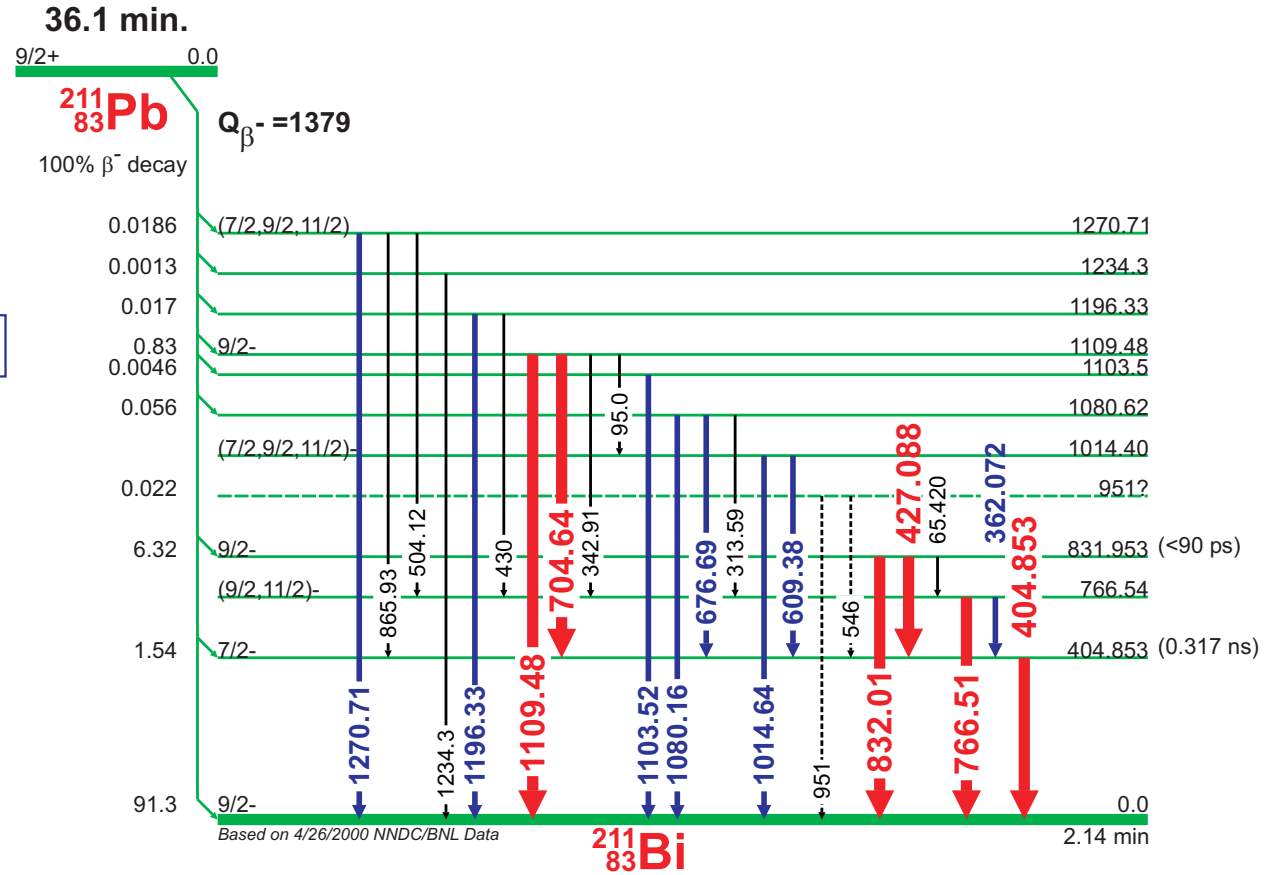


## <sup>211</sup>Pb Decay Chain



## <sup>211</sup>Pb (36.1 min.) Decay Scheme



## GAMMA-RAY ENERGIES AND INTENSITIES

Nuclide:  **$^{211}\text{Pb}$**  $E_\gamma$ ,  $\sigma E_\gamma$ ,  $I_\gamma$ ,  $\sigma I_\gamma$  Levels- from ENSDF Database as of April 26, 2000

Half Life: 36.1(2) min

$E_\gamma$ (keV)	$\sigma E_\gamma$	$I_\gamma$	$\sigma I_\gamma$	Level	
65.420	0.014	0.077	0.005	831.953	$\beta^-$
81.0	0.2	0.045	0.012		$\beta^-$
83.8	0.1	0.058	0.009		$\beta^-$
88.2	0.2	0.017	0.004		$\beta^-$
94.3	0.3	0.012	0.003		$\beta^-$
95.0	0.2	0.018	0.003	1,109.48	$\beta^-$
97.3	0.2	0.012	0.001		$\beta^-$
244		0.04	0.01		$\beta^-$
313.59	0.09	0.031	0.004	1,080.62	$\beta^-$
342.91	0.04	0.035	0.005	1,109.48	$\beta^-$
362.072	0.017	0.043	0.003	766.54	$\beta^-$
404.853	0.010	3.78	0.05	404.853	$\beta^-$
427.088	0.010	1.76	0.04	831.953	$\beta^-$
430	1	0.006	0.003	1,196.33	$\beta^-$
478.0	0.4	0.013	0.003		$\beta^-$
479.6	0.2	0.005	0.001		$\beta^-$
481.1	0.4	0.026	0.005		$\beta^-$
481.92	0.12	0.010	0.001		$\beta^-$
491.82	0.12	0.0041	0.0008		$\beta^-$
494.2	0.3	0.0017	0.0006		$\beta^-$

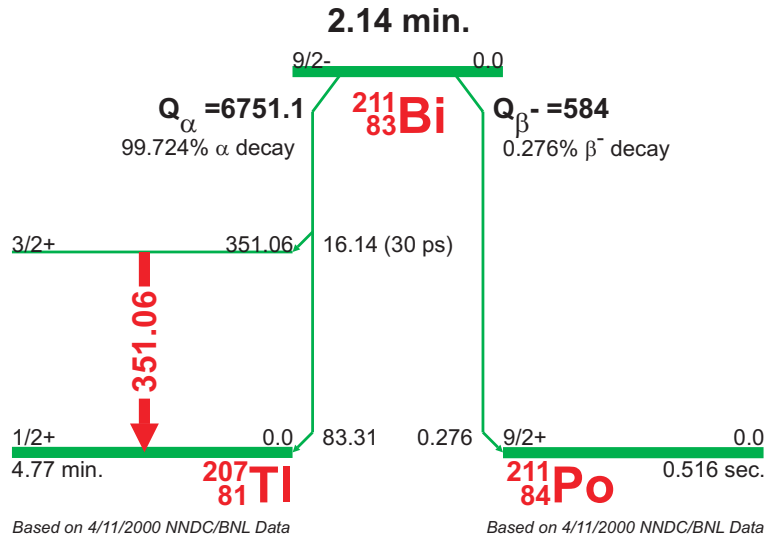
$E_\gamma$ (keV)	$\sigma E_\gamma$	$I_\gamma$	$\sigma I_\gamma$	Level	
500.4	0.5	0.012	0.003		$\beta^-$
502.0	0.2	0.0036	0.0008		$\beta^-$
504.12	0.12	0.0058	0.0008	1,270.71	$\beta^-$
546				951	$\beta^-$
609.38	0.04	0.043	0.006	1,014.40	$\beta^-$
676.69	0.07	0.013	0.004	1,080.62	$\beta^-$
704.64	0.03	0.462	0.010	1,109.48	$\beta^-$
766.51	0.03	0.617	0.015	766.54	$\beta^-$
832.01	0.03	3.52	0.05	831.953	$\beta^-$
865.93	0.14	0.0059	0.0004	1,270.71	$\beta^-$
951		0.022	0.013	951	$\beta^-$
1,014.64	0.05	0.0173	0.0005	1,014.40	$\beta^-$
1,080.16	0.06	0.0123	0.0006	1,080.62	$\beta^-$
1,090.5	0.5	0.0026	0.0006		$\beta^-$
1,103.52	0.20	0.0046	0.0006	1,103.5	$\beta^-$
1,109.48	0.05	0.115	0.004	1,109.48	$\beta^-$
1,196.33	0.05	0.0102	0.0004	1,196.33	$\beta^-$
1,234.3	0.4	0.0013	0.0003	1,234.3	$\beta^-$
1,270.71	0.08	0.0068	0.0005	1,270.71	$\beta^-$

① These  $I_\gamma$  are per 100 Decays of  $^{211}\text{Pb}$ .

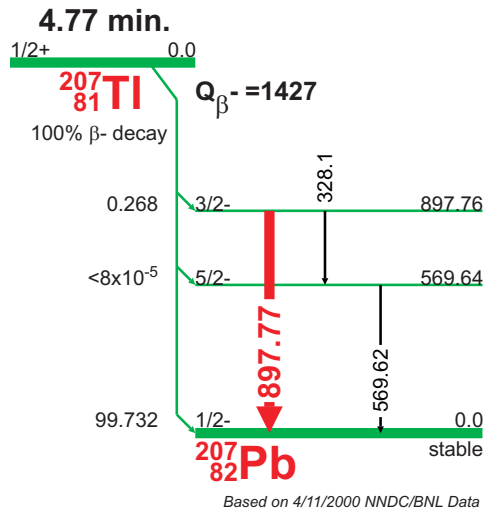
② For total uncertainty add systematic component of 0.85% in quadrature, based on the normalization factor 0.1291(11)



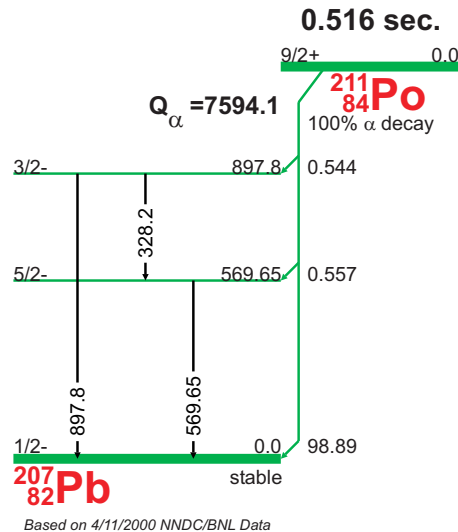
## <sup>211</sup>Bi (2.14 min.) Decay Scheme



## <sup>207</sup>Tl (4.77 min.) Decay Scheme



## <sup>211</sup>Po (0.516 sec.) Decay Scheme



## GAMMA-RAY ENERGIES AND INTENSITIES

Nuclide: <sup>211</sup>Bi

Half Life: 2.14(2) min.

$E_{\gamma}$ (keV)	$\sigma E_{\gamma}$	$I_{\gamma}$	$\sigma I_{\gamma}$	Level	
351.06	0.04	12.91	0.11	351.06	$\alpha$

$E_{\gamma}$ ,  $\sigma E_{\gamma}$ ,  $I_{\gamma}$ ,  $\sigma I_{\gamma}$  Levels from ENSDF Database as of April 26, 2000

① These  $I_{\gamma}$  are per 100 Decays of <sup>211</sup>Bi.

② For total uncertainty add 0.004% systematic component in quadrature, based on the normalization factor 0.99724(4)

## GAMMA-RAY ENERGIES AND INTENSITIES

Nuclide: <sup>207</sup>Tl

Half Life: 4.77(2) min.

$E_{\gamma}$ (keV)	$\sigma E_{\gamma}$	$I_{\gamma}$	$\sigma I_{\gamma}$	Level	
328.1	0.12	0.001 4	0.001 4	897.76	$\beta^{-}$
569.62	0.12	0.001 59	0.000 20	569.64	$\beta^{-}$
897.77	0.12	0.260	0.009	897.76	$\beta^{-}$

$E_{\gamma}$ ,  $\sigma E_{\gamma}$ ,  $I_{\gamma}$ ,  $\sigma I_{\gamma}$  Levels from ENSDF Database as of April 26, 2000

① These  $I_{\gamma}$  are per 100 Decays of <sup>207</sup>Tl.

For <sup>211</sup>Bi parent, multiply these values by 99.726%

② Normalization factor is 1.0, and its uncertainty is taken to be 0.0.

## GAMMA-RAY ENERGIES AND INTENSITIES

Nuclide: <sup>211</sup>Po

Half Life: 0.516(3) sec

$E_{\gamma}$ (keV)	$\sigma E_{\gamma}$	$I_{\gamma}$	$\sigma I_{\gamma}$	Level	
328.2	0.2	0.003 3	0.001 1	897.8	$\alpha$
569.65	0.10	0.545		569.65	$\alpha$
897.8	0.1	0.561	0.011	897.8	$\alpha$

$E_{\gamma}$ ,  $\sigma E_{\gamma}$ ,  $I_{\gamma}$ ,  $\sigma I_{\gamma}$  Levels from ENSDF Database as of April 26, 2000

① These  $I_{\gamma}$  are per 100 Decays of <sup>211</sup>Po.

For <sup>211</sup>Bi parent, multiply these values by 0.276%

② For total uncertainty add 3.8% systematic component in quadrature, based on the normalization factor 0.00545(21)