

\* $\gamma$ -emission: (intensity per 100 decays in equilibrium); \*\* $\alpha$ -,  $\beta$ -decay: (absolute intensity)  $\Sigma \approx 100\%$

isotope abundance % $Q_\beta, Q_\alpha$ MeV $t_{1/2}$	$\alpha$ -, $\beta$ -decay, sf $E_\alpha, E_\beta^{max}, (\bar{E}_\beta)$ MeV	$\alpha$ -, $\beta$ -, sf <i>branch</i> intens.** %	daughter-nuclide & $E_\gamma$ $\gamma$ -ray transitions (cascade) to final state in keV	E-list in I-order keV	$\gamma$ - intens.* %
$^{234m}_{91}\text{Pa}$	$\rightarrow \beta^-$ : $\rightarrow \text{IT}$ :	99.84 <sub>4</sub> 0.16 <sub>4</sub>	$\rightarrow ^{234}_{92}\text{U}(t_{1/2}=2.455*10^5 \text{ y})$ $\rightarrow \gamma : 73.92^{M1,E2} \rightarrow ^{234}_{91}\text{Pa}(t_{1/2}=6.70 \text{ h})$	1001.03 <sub>3</sub>	0.837 <sub>12</sub>
$^{234m}_{91}\text{Pa}$	$\rightarrow \beta^- : 2.269_2$ $\rightarrow \beta^- : 1.483_8$	98.2 <sub>2</sub> 0.032 <sub>5</sub>	$\rightarrow ^{234}_{92}\text{U} \xrightarrow{\alpha's} ^{226}_{88}\text{Ra}$ $\rightarrow \gamma : 742.81^{int,E1}, 43.49^{E2}$ $\gamma : 786.27^{int,E1}$	766.38 <sub>2</sub> 742.81 <sub>3</sub> 258.19 <sub>7</sub>	0.294 <sub>12</sub> 0.096 <sub>6</sub> 0.075 <sub>3</sub>
$Q_{\beta^-} : 2.195_4$	$\rightarrow \beta^- : 1.459_8$ $\rightarrow \beta^- : 1.224_8$ (0.819)	0.69 <sub>6</sub> 1.007 <sub>14</sub>	$\rightarrow \gamma : 766.38^{E2}, 43.49$ $\rightarrow \gamma : 1001.03^{E2}, 43.49$ $\gamma : 258.19^{E1}, 742.81, 43.49$	786.27 <sub>3</sub> 1732.0 <sub>5</sub> 1831.5 <sub>5</sub>	0.055 <sub>4</sub> 0.0212 <sub>8</sub> 0.0167 <sub>5</sub>
<i>int</i> = $^{214}\text{Pb}(258.87, .524\%), ^{214}\text{Bi}(\text{DE } 742.49), ^{212}\text{Bi}(785.37, 1.10\%), ^{214}\text{Pb}(785.96, 1.07\%), ^{214}\text{Bi}(786.10, .31\%)$					