NUCL 402 HMWK 4

1. Xe Reactivity

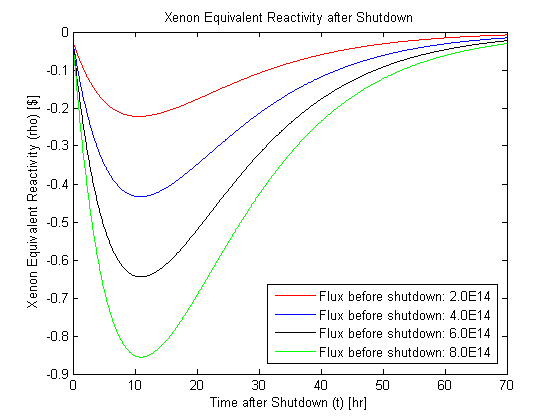


Figure 1 Xenon Equivalent Reactivity after Shutdown

1. Reactor Dead Time
   1. Dead time for fluxes above with max reserve reactivity 0.2

Dead time is distance between zeroes of:

Table 1 Selected Deadtimes with flux before shutdown

|  |  |
| --- | --- |
|  |  |
| 2E14 | 16.1 |
| 4E14 | 26.1 |
| 6E14 | 31.3 |
| 8E14 | 34.9 |

* 1. Dead Time vs. Flux Before Shutdown

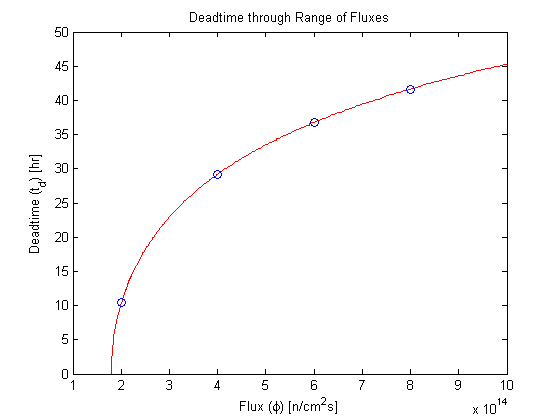


Figure 2 Deadtime vs Flux before Shutdown

1. Dose Rates
   1. Gamma Dose Rate

assuming person absorbs dose in all 4pi surrounding source

* 1. Dose rate as function of distance

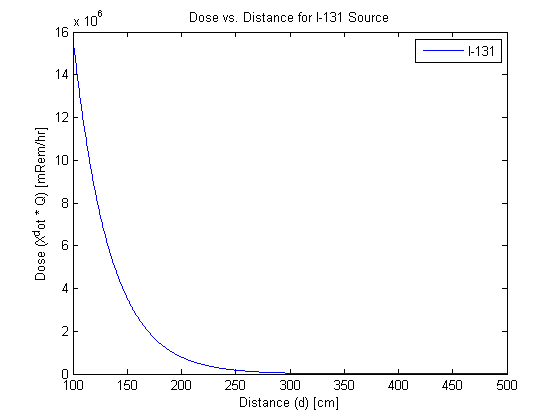


Figure 3 DoSe Rate over Distances from I-131