

1. Some parameter sets may not have infinite variation within in their range. In other words, if sample results indicate parameter values of 100, 1000, and 5000, the differences being due truly to spacial variations in the sampled media, using a range of 100-5000 may be inappropriate, depending on how the LHC/Monte Carlo routines select parameters for any given run. It may be more appropriate to allow the codes to use only the values 100, 1000, or 5000 for that parameter; and not allow the code to use any value within the range, such as a value of 2292.
2. The peak dose for each parameter set used in any LHC or Monte Carlo run should be evaluated independently, if it exceeds some threshold value. For example, if any of the peak doses exceeds some upper limit, perhaps 100 mrem/y, that specific parameter set should be saved, printed, and evaluated to understand the probability of the critical group receiving that dose. This would be done even if the most probable dose reported was <25 mrem/y
3. NRC guidance suggests that dose be evaluated over a 1000y time interval; and that either the peak of the mean, or mean of the peak method be used for this evaluation. Differences of about a factor of two(2) have been observed in the reported peak of the mean, and mean of the peak doses. However, if the evaluation period (currently 1000y) were to approach zero (0), the value of the peak of the mean dose would approach the value of the mean of the peak dose. Therefore, instead of evaluating the peak of the mean dose, and the mean of the peak dose over a 1000y time interval, it may be more practical to evaluate the dose over a humane life span (*e.g.*, 70y for farmer, 30y for building occupant). This may reduce the reported difference in the peak of the mean, and mean of the peak doses. The evaluation would likely have to be an iterative process, say from 0-70, 1-71, 2-72y, etc.
4. The codes currently report the mean and the median dose. Would the mode of the peak dose over a life span be the most probable dose? Output of the LHC or Monte Carlo runs would likely have to be rounded, or segregated into 1-2 mrem/y groups to determine a mode dose.