Table 1: Chosen (first box) and derived (second box) parameters detailing X-ray source.

$E_{electron}$(GeV)	1.0	1.0	3.0
B_{turn}(T)	1.5	10.0	10.0
E_{photon} (keV)	0.4	0.4	10.0
$\lambda_{wiggler}$ (mm)	15	15	100
$B_{wiggler}$(T)	2.0	2.0	5.6
K	0.84	0.84	16
$E_{radiated}$(keV)	2.1	2.1	140
Brilliance per electron lifetime $\left(\frac{\text{photons}}{\text{mm}^2\text{mrad}^2\text{sec}}\right)$	3.3×10^{10}	8.7×10^{10}	5.9×10^{10}
Brilliance per spill $\left(\frac{\text{photons}}{\text{mm}^2\text{mrad}^2\text{sec}}\right)$	4.7×10^{15}	78×10^{15}	27×10^{15}
x-ray train duration(μsec)	60	1.1	2.2

Table 1 details the radiation source for various design parameters. For all sets of parameters, a standard length of 2m was chosen for the undulating magnetic field region resulting in the electron pulse emitting x-rays for approximately 6.7nsec pulses before the electron pulse is scraped by the apertures. As can be seen in the table, x-ray energy was designed to either be within the water window (0.4keV) or to be fairly hard (10keV) depending on the energy of the electron pulse. The chosen parameters result in the source being near the wiggler/undulator transition or well within the wiggler regime, respectively, as can be seen by the parameter K. Of the chosen parameter sets, the $1GeV$ electrons with the superconducting bending magnetics (10T) resulted in the largest brightness.