

Radiation Safety Assessment of the CLS Beamlines Using FLUKA Monte-Carlo Code

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Abstract

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The characteristics of the prompt radiation field associated with gas bremsstrahlung and synchrotron sources of radiation during the operation of the Canadian Light Source (CLS) beamlines have been investigated using the FLUKA Monte-Carlo code. As an example the synchrotron radiation photon spectrum of CLS bending magnet beamline is used as a source term for FLUKA simulation to predict dose rate and for comparison with STAC8 analytic code. The FLUKA geometry, input file, source file and the results of the analysis will be presented.