



Contribution ID: 269

Type: **Oral Presentation**

## Neutron background predictions and measurement at ATF2 beamline.

*Saturday 11 June 2011 11:25 (20 minutes)*

In electron machines, neutrons near the interaction region are dominantly produced by photonuclear processes in electromagnetic showers initiated by lost particles in dense materials. The photonuclear cross-section and the high multiplicity of low-energy photons make the low-energy regime vastly dominating this neutron production. ATF2, operating at 1.3 GeV, offers most of the phase space to assess the widely used Geant4 toolkit with this respect. The experiment beam dump is used to mimic the above mentioned high density region : the flux of neutron is initiated by the electron beam showering in the dump; which then scatters up to exiting the dump. The measurement of the time dependent flux is sensitive to both the neutron production and transport. Measurements of neutron fluxes performed with plastic and CsI scintillator will presented. They will be compared to a Geant4 simulation of the setup. The simulation makes use of rare event simulation techniques to boost the simulated flux exiting the beam dump. Results will be discussed.

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**Session Classification:** Machine Det. Interface and Beam Instr.

**Track Classification:** Machine Detector Interface and Beam Instrumentation