



Contribution ID: 52

Type: **not specified**

## Activation Calculations in Accelerator Environments – An Overview

*Thursday, June 3, 2010 8:30 AM (30 minutes)*

Accelerator activation analyses involve radionuclide production terms from two different branches of analyses, directly from event generators, indirectly by folding fluxes with activation cross sections, for particle types and energy ranges where activation cross sections exist. Advances have been made in the predictive power of event generators, and also in activation cross section data bases.

Nowadays two approaches of performing activation analyses exist, firstly, the traditional way of sampling fluxes and radionuclides in transport analyses and feeding this information into external activation codes; and secondly, plugging in activation modules into transport codes solving for the radionuclide buildup and decay online on a per-event basis. Both methodologies will be discussed.

All the tools and data bases need verification. Benchmarking is an instrumental process for verification. An overview of benchmarking efforts will be given and the need of further benchmark experiments discussed.

**Primary author:** Dr GALLMEIER, Franz (ORNL)

**Presenter:** Dr GALLMEIER, Franz (ORNL)

**Session Classification:** Session 2 - Induced radioactivity

**Track Classification:** Induced radioactivity