Contribution ID: **37** Type: **not specified**

# Comparison between PHITS and LISE++/COSY Calculations in Support of FRIB Dipole Magnet Design

*Monday, 28 April 2014 17:54 (9 minutes)*

The Facility for Rare Isotope Beams (FRIB), a project supported by the US DOE Office of Science, is under construction at Michigan State University. The production of rare isotope beams during FRIB operations creates a high radiation environment for the fragment preseparator superconducting magnets. Therefore, detailed studies of the proposed magnet designs and shielding by beam and radiation transport are necessary.

We study the radiation power deposition into the 30 degree bending dipole magnet located in the FRIB fragment preseparator using both the radiation transport code PHITS and the beam physics codes LISE++ and COSY. Preliminary results from these approaches are in reasonable agreement. The results of our calculations are being used by engineers to optimize the magnet design.

This material is based on work supported by the U.S. Department of Energy Office of Science under Cooperative Agreement DE-SC0000661

**Primary author:** GEORGOBIANI, Dali (Facility for Rare Isotope Beams (FRIB), Michigan State University, East Lansing, MI 48824 USA)

**Co-authors:** HAUSMANN, Marc (Facility for Rare Isotope Beams (FRIB), Michigan State University, East Lansing, MI 48824 USA); PORTILLO, Mauricio (Facility for Rare Isotope Beams (FRIB), Michigan State University, East Lansing, MI 48824 USA); RONNINGEN, Reginald (Facility for Rare Isotope Beams (FRIB), Michigan State University, East Lansing, MI 48824 USA)

**Presenter:** GEORGOBIANI, Dali (Facility for Rare Isotope Beams (FRIB), Michigan State University, East Lansing, MI 48824 USA)

**Session Classification:** Poster Session and Reception