

**DRAFT**

US LHC Accelerator Research Program  
FY 2005 Task Sheet

**Task Name:** Phase I Collimator Studies

**Date:** 29 June 2004

**Responsible Person(s)** (overall lead, lead at other labs): A. Drees (BNL)

**Budget** (specified for each lab): \$75k (BNL)

**FY05 Milestones**

- 1) Sep 04. Define code bench marking tests
- 2) Feb 05. Report on bench-marking of collimation codes with RHIC beam data loss
- 3) Apr 05. Test LHC collimator set-up procedures with RHIC collimation system
- 4) Sep 05. Report on accuracy of “cleaning efficiency” simulations, and lessons for LHC

**Statement of work for FY2005** (include description of year’s “deliverable” and one or a few intermediate milestones):

Work for this year will include:

- Travel/support for CERN post-doc to BNL to work with BNL personnel on RHIC collimator system – software and setup
- Software support for ROOT and collimation simulation connection
- Travel of BNL personnel to CERN for SPS collimation tests
- Travel/support for CERN post-doc to BNL to analyze RHIC loss patterns and benchmark simulation software
- Install and test motion control concepts, algorithms, and software with existing RHIC collimators

FY05 0.4 FTE (BNL) (A.Drees, N.Malitzky)

**Statement of expected follow-on work in subsequent years** (include “ultimate” goal and time scale for this sub-program, as well as plans for specific work and rough budget need for next 2 years):

During FY06 a new post-doc will be hired at BNL to assist with continuing work on Phase I collimator systems and benchmarking against RHIC system and computer simulations.

FY06 1.0 FTE (BNL) (A. Drees, N. Malitzky, post-doc)