

PHYSICS DIVISION PROCEDURE

SAFETY AND HEALTH REQUIREMENTS FOR EXPERIMENTAL WORK IN THE PHYSICS DIVISION

1. APPLICABILITY

- 1.1 This procedure provides requirements for the review and approval of all Physics Division experimental work to ensure that such activities have adequate provisions for the safety and health of workers and the public and for the protection of the environment.

2. APPLICABLE STANDARD

- 2.1 ORNL Subject Area: Work Control

3. DEFINITIONS

- 3.1 **Experimental Work:** A class of activities whose principal purposes include: 1) the measurement of quantities or properties which were previously unknown, or measurement to an accuracy which exceeds that which was previously available, 2) processes which are essentially unique or experimental in nature, and 3) construction and testing of apparatus and equipment for the conduct of experiments. This procedure applies even if the experiment for which equipment is being (or has been) constructed will be conducted in facilities other than Physics Division facilities. In the context of this procedure, an experiment may include a group of experiments, if there is a well-defined risk envelope which includes all the experiments within the group. In general, an activity which would be considered standard industrial practice is not considered to be experimental work. Experimental work includes (1) both beam related and non-beam related activities, (2) theoretical work, and (3) off-site work.

- 3.2 **Physics Division facilities:** Facilities and areas for which the Physics Division has operational responsibility.

4. REQUIREMENTS

- 4.1 The Physics Division experimental work review and approval process shall be administered by the Division ESH Officer under direction of the Division Operations Manager. Group Leaders and the Division Director are responsible for approving all experimental work reviewed under this procedure.

- 4.2 Experimental work conducted in the Multicharged Ion Research Facility (MIRF), the Oak Ridge Electron Linear Accelerator (ORELA) facility, and the Holifield Radioactive Ion Beam Research Facility (HRIBF) shall be reviewed and approved in accordance with the requirements of the operation documents of these facilities.
- 4.3 Experimental work conducted in Physics Division facilities other than those noted in Section 4.2 shall be reviewed and approved prior to commencement of the activity. The Principal Investigator is responsible for requesting a review. The following requirements shall apply to such reviews and approvals:
 - 4.3.1 Reviews and approvals shall be conducted by individuals who are designated by the Division ESH Officer or designee and shall include appropriate Subject Matter Experts, such as the Division Radiological Control Officer, the Division Electrical Safety Officer, and the appropriate Building Operations Manager.
 - 4.3.2 Ongoing experimental work shall be reviewed when changes occur that could affect the safety envelope or when new hazards are introduced and at intervals which do not exceed 12 months. Authorization for these activities that have not been reviewed and approved within 12 months after the last approval date shall be void until reinstated with reapproval based on review.
 - 4.3.3 Experimental work shall be approved only after a determination by the designated reviewer that all environmental, safety, and health issues have been adequately addressed and that required training has been or will be successfully completed by appropriate individuals involved in the activity. With the exception noted below, required training shall be successfully completed prior to the commencement of activities for which the training is required. Exceptions to this training requirement may be granted, in exceptional circumstances, by the Physics Division Training Manager.
 - 4.3.4 The Physics Division ESH Officer or designee shall maintain records of experimental work reviews and approvals while they are in progress and for at least one year after termination of work on each activity.

- 4.4 In the implementation of this procedure, the ESH Officer or designee and designated reviewers shall employ a graded approach to assure that the effort and rigor associated with the review, documentation, and approval processes are consistent with the hazards associated with the experimental work in question.