

PHYSICS DIVISION PROCEDURE

REVIEW AND APPROVAL OF EXPERIMENTS

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 protection of the environment and the safety and health of workers and the public.

2. APPLICABLE STANDARD

- 2.1 ORNL Subject Area: Work Control

3. DEFINITIONS

- 3.1 Equipment Mentor: An individual assigned oversight responsibility for major experimental apparatus. Equipment Mentors or their designees serve as liaison between users of the equipment and the resources and services available in the Physics Division.
- 3.2 Experiment Mentor: An individual assigned oversight responsibility for user experiments. Experiment Mentors or their designees serve as liaison between users of the experimental apparatus and the resources and services available in the Physics Division.
- 3.3 Experiment Spokesperson (or Principal Investigator): The individual who has direct responsibility for an experiment or a class of experiments, including the ability to direct or recommend changes in the parameters of the experiment.
- 3.4 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.

- 3.5 Graded Approach: A process through which the level of evaluation and control necessary to comply with a safety requirement is made commensurate with: (1) the relative risk to safety or security, (2) the magnitude of any hazard involved, (3) the life-cycle stage of an experiment or project, (4) the programmatic mission of the experiment/project, (5) the particular characteristics of the experiment/project; and (6) any other relevant factors.
- 3.6 Line Management: The Division Director and Group Leaders are Line Managers.
- 3.7 Physics Division Facilities: Facilities and areas for which the Physics Division has operational responsibility.
- 3.8 Standard Industrial Hazards/Practices: Hazards similar to those routinely encountered in industry and accepted by the general public that are adequately controlled by OSHA regulations or one or more national consensus standards (e.g., ASME, ANSI, NFPA, NEC).

4. REQUIREMENTS

- 4.1 The Physics Division experiment review and approval process shall be administered by the Division ESH Officer under direction of the Division Operations Manager.
- 4.2 Experimental work conducted in the Physics Division shall be reviewed and approved prior to commencement of the activity.
- 4.3 The Experiment Spokesperson or Principal Investigator is responsible for requesting an experiment review and for determining when changes in the scope of experimental work require a new review.
- 4.4 Line Management is responsible for approving all experimental work in the Physics Division.
- 4.5 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 operations documents of these facilities.
- 4.6 The following requirements shall apply to experimental work conducted in Physics Division facilities other than those noted in Section 4.5 :

- 4.6.1 Reviews and approvals shall be conducted by individuals who are designated by the Division ESH Officer or designee and shall include the appropriate Experiment Spokesperson or Principal Investigator, Line Manager, Lab Space Manager, Equipment Mentor, Experiment Mentor, and ESH Subject Matter Experts, such as the Division Radiological Control Officer, the Division Electrical Safety Officer, and the Division Facility Operations Manager.
- 4.6.2 Ongoing experimental work shall be reviewed when changes occur that could affect the safe operating envelope or when new hazards are introduced and at intervals which do not exceed 12 months.
- 4.6.3 Experimental work shall be approved only after a determination by the designated reviewers that all environmental, safety, and health issues have been adequately addressed and that required training has been successfully completed by appropriate individuals involved in the activity.
- 4.6.4 The Physics Division ESH Officer or designee shall maintain records of experiment reviews and approvals.
- 4.7 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.
- 4.8 The experiment review process shall be periodically assessed as part of the Physics Division Performance Assessment Program.