

**RULES AND REGULATIONS FOR THE ACCELERATOR LABORATORY OF THE
LOUISIANA ACCELERATOR CENTER**

A. INTRODUCTION

The Louisiana Accelerator Center supports the operation of a Pelletron® tandem accelerator with a maximum terminal voltage of 1.7 million volts capable of producing singly charged ions of up to 3.4 MeV. No high radiation fields are produced by the machine as it is configured. Residual nuclear radiation is essentially precluded by the low energy of the ions produced by the accelerator. No radiation precautions are required when the machine is off and secured.

B. GENERAL CONSIDERATIONS

1. Under the current registration of the accelerators, the acceleration of either a) electrons or b) deuterons is prohibited. This cannot happen accidentally since in a) a tube is required or in b) deuterium gas must be purchased and installed in the terminal of the Pelletron - a major operation.
2. Only those persons whose names appear on the qualified operators list approved by the LAC director and established by the RS Committee shall be allowed to operate an accelerator. A copy of this list is to be posted in the accelerator control room.
3. Thermoluminescent Dosimeter Badges (TLDS) will be worn by all persons in the accelerator facility of LAC. Any person working regularly in the building will have a personal badge assigned to them. Visitors badges will be used by all others. These badges will be exchanged and read by an outside firm each month.
4. The Operating Manuals for the accelerators will be kept at the Control Desk of the machine.
5. A Logbook will be kept at the control desks in which all operations of the accelerator will be recorded. The name of the authorized operator will be noted in every case.
6. All interlocks and warning devices will be checked regularly to ensure their proper operation.
7. A portable, calibrated Geiger-Mueller survey meter will be available in the control room area at all times.
8. All radioactive sources at LAC- Room 116 will be stored in the Source Room at the back of the Target Area which will be kept locked. This procedure is not only for radiation safety, but to minimize low-level background contributions to our counting experiments

C. INTERLOCKS AND SAFETY WARNINGS

1. The entrance gate to the accelerator target room is equipped with an interlock which can shut down the Pelletron accelerator if entry is attempted while the accelerator is operating with proton energies greater than 4 MeV. Continued operation will be possible only if the gate is closed and the accelerator restarted from the control desk.
2. In an emergency the accelerator may be turned off from within the target room using the "scram button" shown on the diagram.
4. The Pelletron accelerator, when not in operation, shall be locked to prevent unauthorized use.
5. All safety and warning devices, including interlocks, shall be checked for proper operation at intervals not to exceed three months. These checks shall be noted in the Logbook.

6. Although normal operation of the Pelletron accelerator does not require that the safety interlocks be engaged, if for any reason, it is necessary to intentionally bypass a safety interlock that has been engaged such action shall be:
 - a. Authorized by the RSO;
 - b. Recorded in the Logbook and a notice posted at the control desk; and
 - c. Terminated as soon as possible.