

NC LCLS Wire Scanner Detectors - Injector

Detectors for Wire Scanners in the LCLS Injection Area

Contents:

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Meeting Minutes

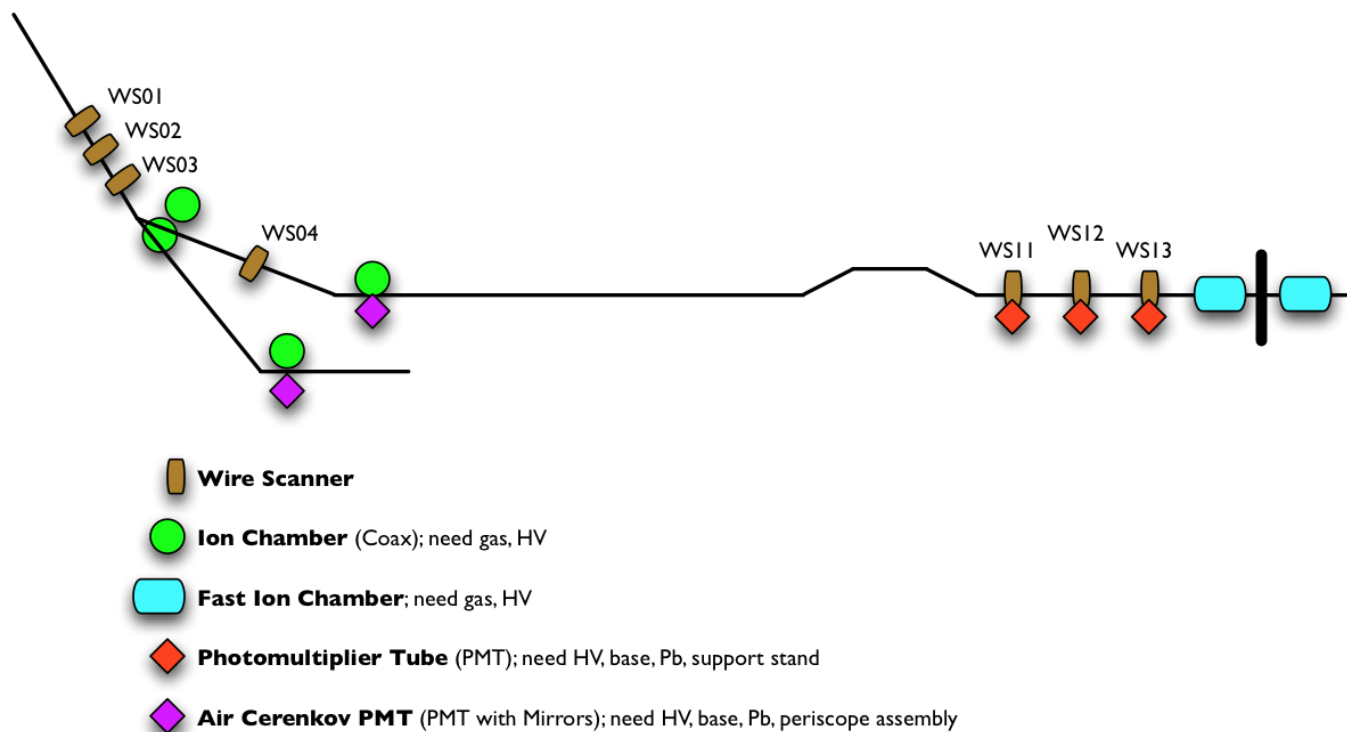
Minutes from [April 4, 2006](#)

Detector Placement

We currently plan to use 11 detectors to instrument the first 7 wire scanners in the LCLS injection area, as shown below. This includes:

- **Ion Chambers:** 4 in total
- **Fast Ion Chambers:** 2 in total
- **PMTs:** 3 in total
- **PMTs with Periscope** (Air Cerenkov): 2 in total

Injection Wire Scanners and Detectors



Detector Instrumentation Requirements

- **Ion Chambers** require:
 - Gas (such as Argon)
 - High Voltage, typically less than 1.5 kV, but adjustable
 - Charge Integrating ADC
 - Possibly a programmable gate generator
 - All associated cabling
- **Photomultiplier Tubes (PMTs)** require:
 - High Voltage, typically less than 1.5 kV, but adjustable
 - Bases for electrical connectivity

- Charge Integrating ADC
 - Possibly a programmable gate generator
- Shielding from external radiation sources, usually lead bricks
- In at least one case, a periscope assembly
- In several cases, support stands which can accommodate the tubes, their bases and the lead shielding.
- All associated cabling

Test Plan

A test plan for non-beamline testing is forthcoming.

Schedule

The detector schedule will be an integral part of the [wire scanner schedule](#).