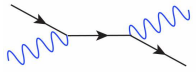


## ISU HRRL Facility

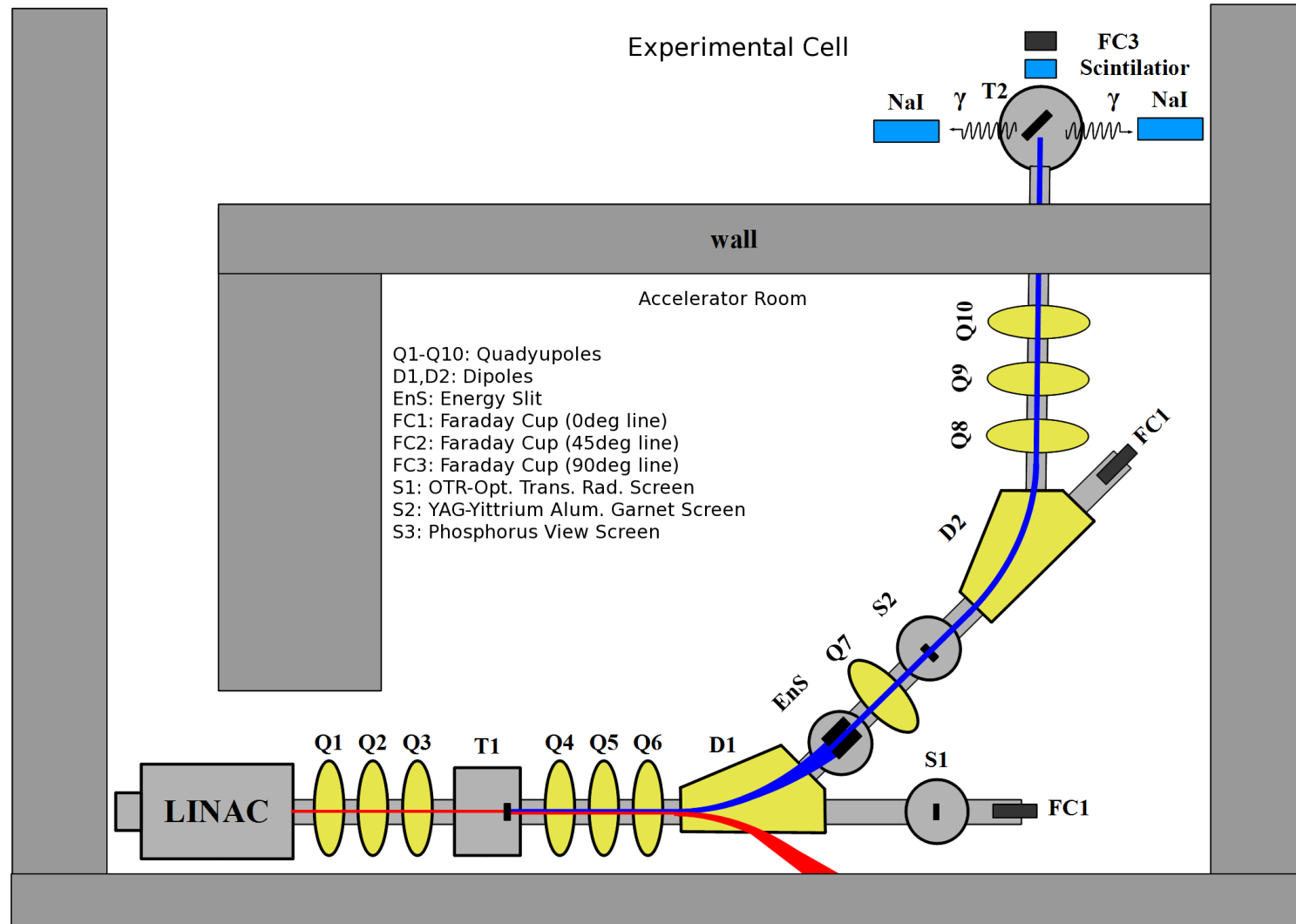
- HRRL: High Repetition Rate Linac (name is just historical)
  - S-band linear electron accelerator with thermionic gun
  - Maximum Energy: 16 MeV
  - Peak Current:  $\leq 100$  mA
  - Repetition Rate:  $\leq 300$  Hz
  - Pulse Width:  $\geq 20$  ns
- Facility has various beam diagnostic capabilities
  - Faraday cups for beam current
  - Optical Transition Radiation Screen for emittance measurements
  - Phosphorus view screen for beam-target alignment

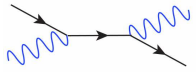


# Compton Polarimeter

Jefferson Lab Hall A

## ISU HRRL Beamline Schematic (not to scale)



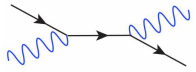


# Compton Polarimeter

Jefferson Lab Hall A

## ISU HRRL Beamline Photo: 0° Beamline



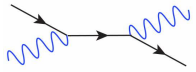


# Compton Polarimeter

Jefferson Lab Hall A

## ISU HRRL Beamline Photo: $0^\circ$ Beamline

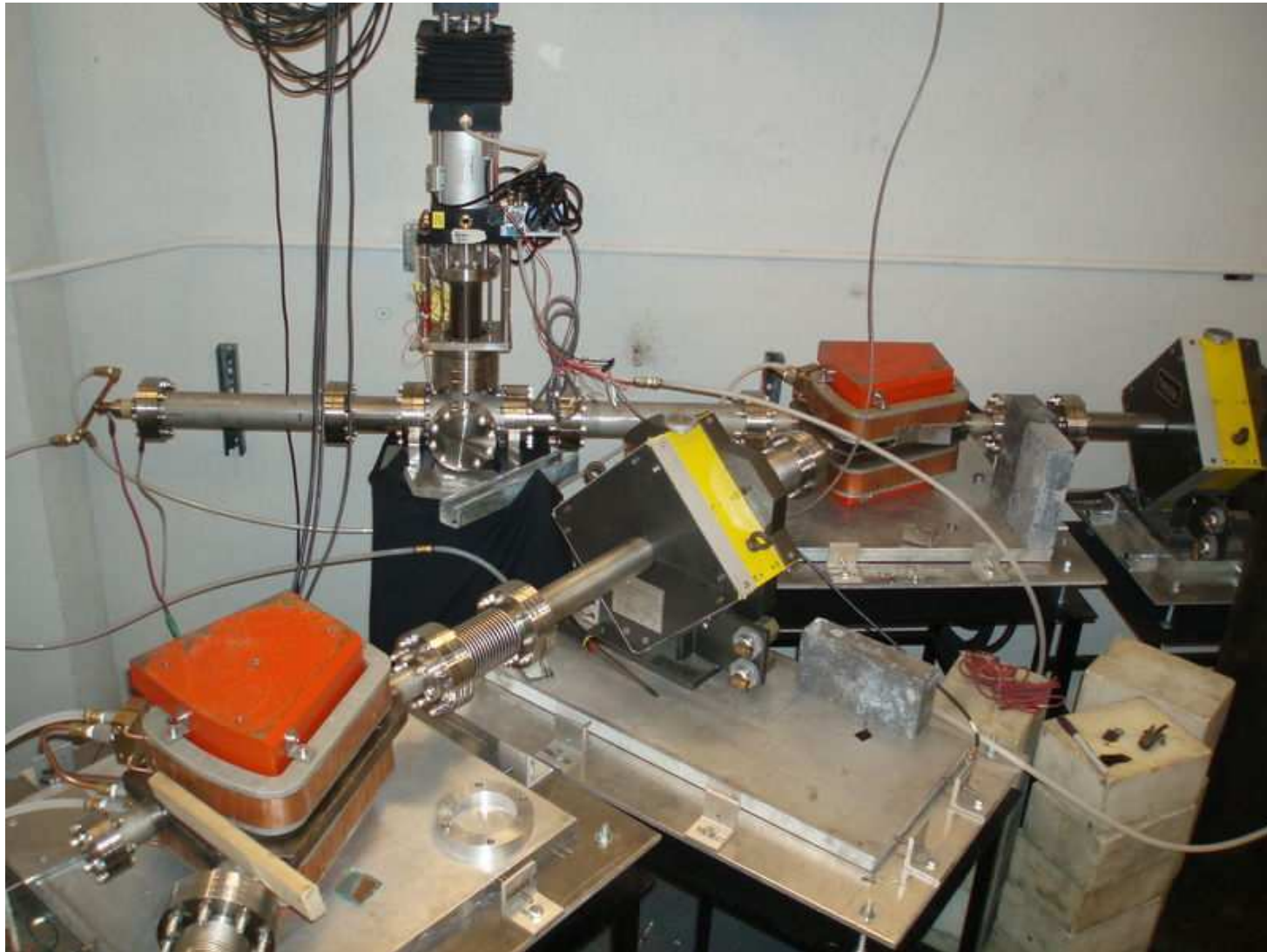


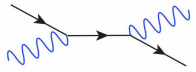


# Compton Polarimeter

Jefferson Lab Hall A

## ISU HRRL Beamline Photo: 45° Beamline



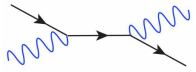


# Compton Polarimeter

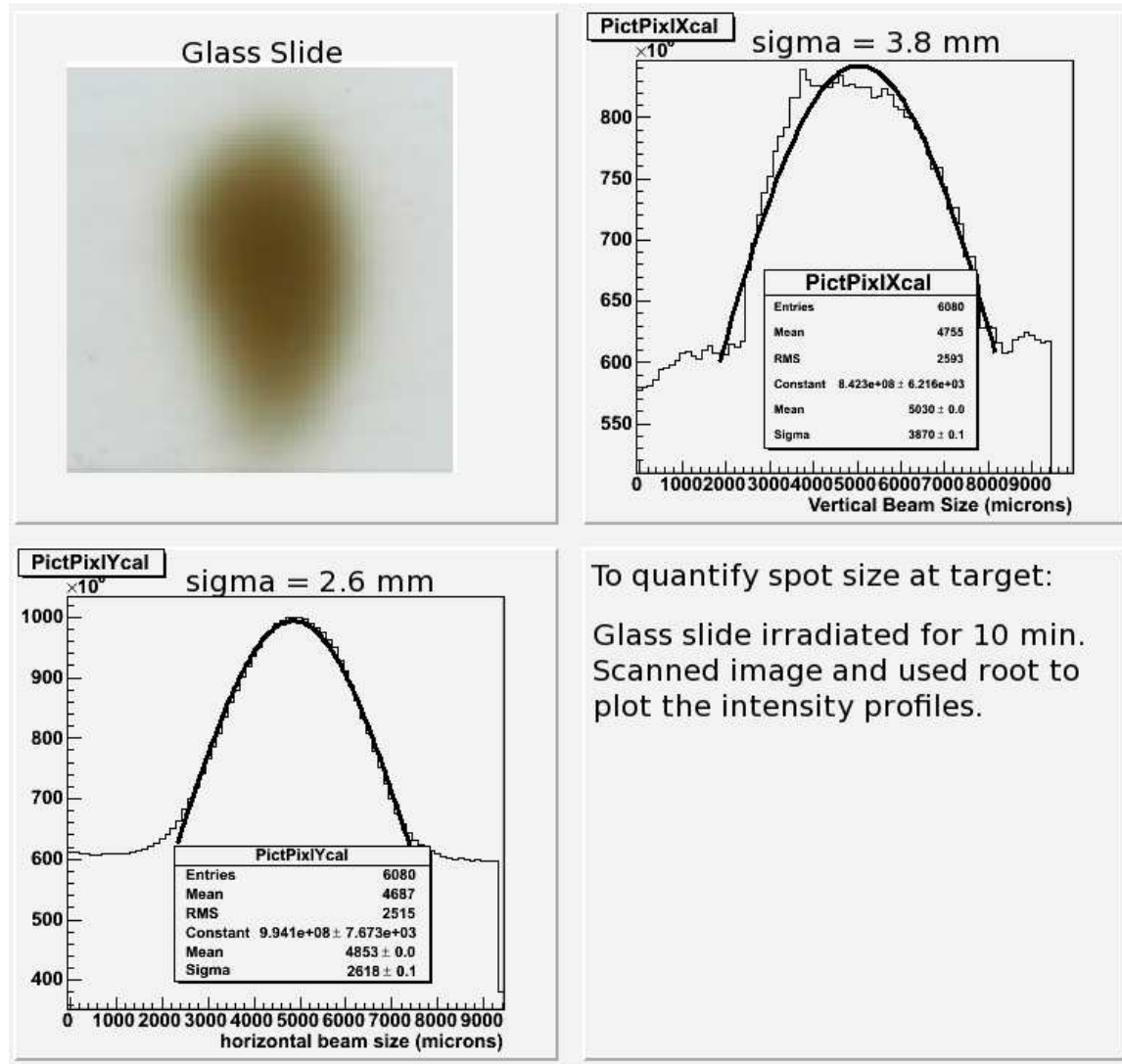
Jefferson Lab Hall A

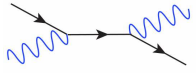
## ISU HRRL Beamline Photo: 90° Beamline





## Beam Spot Size in Experimental Cell





## Issues to consider for eDet tests (**Discussion Needed**)

- Efficiency measurements are difficult
- Pile-up/multiple electrons, photon Bkgds
- Hit timing resolution?
- Low electron energy (stopping in planes?)
- Need to vacuum-couple detector
-