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# Injector Commissioning & Optimization

QWeak Collaboration Meeting  
February 1, 2010

# Team

- **Coordinator: Suleiman**
- **Members: Poelker, Grames, Hansknecht, King, Carlini, Paschke, Ramsay**
- **Plan:**
  - **Higher Voltage:**
    - I. **Gun: Feb 2010, Test Cave**
    - II. **CEBAF Beamline: May 2010**
  - **Electron Polarization Reversal: Commission at 100 kV during PREx, >100 kV in May 2010**
  - **New Helicity Board: Commission during PREx**
    - I. **QWeak Pattern: May 2010**
    - II. **QWeak Reversal Rate: May 2010 (need target & Lumi)**
  - **New IA (Charge Feedback): May 2010 (need analysis support)**

# Higher Voltage (May 2010)

- I. Inverted Gun to  $> 100$  kV
- II. Injector to  $> 100$  keV
- III. Commission Wien Flipper at  $> 100$  keV
- IV. Injector Matching & Adiabatic Damping (Yves Roblin)
  - **3 days are needed**

# Parity Quality Setup (May 2010)

## I. Laser Alignment of Pockels Cell:

- Initially, we will do our quick setup with a spinning WP + LP

## II. Electron beam optimization (PQB):

- RHW Angle
  - **1 shift is needed**

## III. IA Charge Feedback

- **1 shift is needed**

# Helicity Board Settings (May 2010)

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I. Helicity pattern

II. Helicity reversal rate: need target

III. Pockels Cell T\_Settle

➤ **3 shifts are needed**

# Issues

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- **Need a student and a postdoc**
- **32 MHz beam for background studies: work is underway**