

Hall D collaboration mtg
JLab, March 16, 2001

Photon Beam and Tagger Working Group Report

Responsibilities

- University of Glasgow: **J. Kellie, K. Livingston**
 - ▶ **crystals**
 - ▶ **goniometer**
- Catholic University: **H. Crannell, D. Sober**
 - ▶ **tagger magnet**
 - ▶ **fixed focal plane**
- University of Connecticut: **R. Jones**
 - ▶ **collimation**
 - ▶ **tagger microscope**
 - ▶ **integration**
- Florida International: **F. Klein**
 - ▶ **polarimetry**

Tagging spectrometer

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➔ Magnet based on Hall B design

- 1.7T field
- 2cm gap

➔ Steps to construction

- finalize specification
- engineered design
- bidding process
- award contract

➔ Interface with civil design

Crystals and goniometer

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- ➔ Report by Glasgow group

- ➔ R&D required
 - obtain and test 20micron diamond

 - work ongoing in context of Hall B source

 - UConn group will travel to U.K. summer 2001 to participate in diamond diagnostic studies.

- ➔ Interface with civil design

Collimation

➔ R&D required

- design, test prototype SEQ device
- detailed shielding design requires GEANT simulation

- ① 3-stage design
- ② forward 5° has 7-10m of iron: *gun barrel*
- ③ shielding stacked around needs to allow access and flexible alignment procedure

➔ Interface with civil design

Microscope

- ➔ Provides full resolution, rate capability over limited region of focal plane
- ➔ R&D required
 - evaluate worthiness of vertical readout (simulation)
 - design and prototype a few channels
- ➔ Interface with civil design

Polarimetry

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- ➔ Design based on Hall B device
- ➔ R&D required
 - work ongoing in context of Hall B source
- ➔ Interface with civil design