Status and Schedule
Electron Beam Dump Line
Muon Spoiler Magnets
Photon Collimator C-37
Comitometer

Photon Beam Overview
E-159, E-160, E-162

Real Photon Collaboration Meeting

DR Waiz 1-11-02
- Motor and cable checkout in progress

- New collimating SEM design well underway, to be completed in January
  - Fabrication to follow

- Parts to be fabricated soon
  - Connect centerline to Be-bar complete

- Target holder design modification to increase distance from e-Beam

- Vacuum flange design modification to change from Indium quick disconnect coupling to conflat flanges complete

- Fabrication to commence in 1 to 2 weeks

- Fabrication to bring UV light to the diamond targets

- Goniometer

  - Housing design modification to view the targets complete
Photon Collimator C-37

- Collimator installed in Beam Switchyard
  - Has remote adjustment capability, but needs stepper motors
- Photon beam pin cushion monitor can be installed to front (x) jaws but downbeam (y) jaws are not readily accessible
  - If this concept is used, would have to mount y-monitor to x-jaws at one fixed gap
- Other possibility is to either find E-78 4 Quadrant pin cushion monitor or build a new one to existing design
Close-up view of internal pantograph module assemblies of the Hi-Z Collimator. Downstream head is welded in place. Jaws are open to about the mid-position in both the upbeam and the downbeam assemblies. This view is a good picture of the collimating affect of this device.
Possible Photon Collimator for E-159, E-160, E-161

Device: High-Z Collimator C-0
Built in 1965 for BSY

Length: 32 X₀, Copper

Power Absorption Capacity: 40kW for Ø > 3mm
20kW for Ø < 3mm

Aperture: Adjustable to 15cm total

Water Flow Rate: 10 gpm
Muon Spoiler Magnet(s)

- Magnet(s) to be installed downbeam of Photon Collimator C-37
- Have identified two dipoles to do the job
  - A 4D60 (was B-42) with 2.92 inch gap
  - A 10D90 (was B-42) with 2.92 inch gap
- Desired /Bdl~5 T-m
- /Bdl~2.36 T-m at I_ex = 700 A
- /Bdl~1.97 T-m at I_ex = 500 A
- /Bdl~3.4 T-m at I_ex = 2800 A
- /Bdl~2.8 T-m at I_ex = 2000 A

Gap would need to be increased to 2 inch
- Longitudinal space tight
MM 8/11/72 10D90 Modified (Shimmed Poles)

Magnet has been named EROS

$B_{d90} \propto I$

$W/M$

$S_{B_{d90}}$

$I$

$0 500 1000 1500 2000 2500 3000$ Am.$

$0 0.5 1.0 1.5 2.0 2.5 3.0 3.5 4.0$
For installation by the end of summer 2002:

- If green light is given soon, magnets with 3 coils per pole can be ready.
- Existing coils and spares will wind as many coils as are required, allowing for acceptable coil winding fixture being readied.
- New Magnet Conductor on order, due at SLAC in the next week.
- Work order for these tasks was written, needs signature.
- Coils to be checked for radiation damage and soundness.
- All are in Heavy Assembly Building ready for disassembly.
- 4 Dipole were removed from Beam Switchyard.

Electron Beam Dump Line
• Need support frame design and fabrication
  • Beam Dump exists (60 to 100 kW capacity)
  • (B.T. 27) or may have to build two using existing design
  • May have two in storage (tape-wound cores) from old beamline
  • Need two toroidal current monitors in front of beam dump
  • Design not yet started
    • Magnet supports will need to be modified
  • Design just getting underway
    • Accommodate reduced deflection angle
    • Magnet vacuum chambers will need to be modified (at least 2 or 4)

Electron Beam Dump Line (continued)
Funding

Disassembly/assembly

Shop manpower also o.k for magnet coil work and magnet

Shop manpower looks o.k for gonimeter modifications

One electrical/electronics technician working on gonimeter

One mechanical designer working on gonimeter

Dump line

One mechanical enginer and two designers working on electron

Funding

Schedule at least for RF/01/02 driven by availability of manpower and

Current Status as outlined above

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