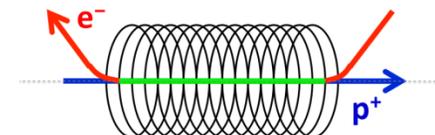
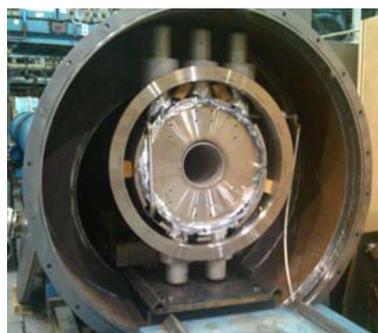


Electron Lens

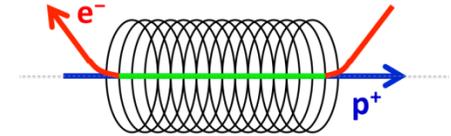


Electron Lens Superconducting Solenoid Status



Michael Anerella
October 2, 2012

eLens - Assembly

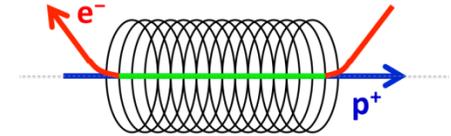


Magnet #1 - Cold Mass Assembly

- end plate mods complete (FT/TVW)
- End plate, tube closure welding complete
- Heat shield installation complete
- Pressure / leak check underway:
 - Leak #1 in heat shield, mfg error
 - Leak #2 in He vessel, design error
 - Leak #3 in Test Dewar, fixing



eLens - Assembly

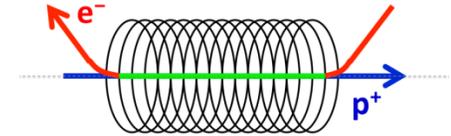


Magnet #2 - Cold Test Assembly:

- Testing complete
- Cold mass removed from dewar, unwired
- end plate mods complete in preparation for cold mass assembly

Note: Don Gosline started today to expedite remaining wiring on both magnets (w/R. Meier)

E-Lens Magnet Drawings, Parts

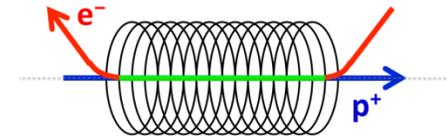


Magnet

- Design work continues - (SP/SS/FC)
 - insertion assy (38010200) - check print complete - **released?**
 - cryostatted assy (38060200) - check print **in review (SRP)**
 - electro-mechanical assy (38060406) - in checking
 - e-lens top assy (38060001) - in checking
 - Insertion fixture additions - complete, parts order in CS (SS)
- Cryostats to be leak checked when port covers arrive
- **last 2 heat shields sent to CS for final end cutouts, flanges, fittings**
- (some) Cryostat parts in CS, supporting schedule

note: Lou Russo started last week (p/t) to expedite completion of drawings (w/ SS, FC)

Magnet #1 schedule



| ID | Task Name | Duration | Baseline Start | Baseline Finish | Actual Start | Actual Finish | % Complete | Predecessors | 2013 | | | | | | |
|-----|--|--------------------|-----------------|-----------------|--------------|---------------|------------|--------------|------|-----|-----|-----|-----|-----|--|
| | | | | | | | | | Oct | Nov | Dec | Jan | Feb | Mar | |
| 1 | electron lens solenoid | 742.5 days | 4/5/10 | 5/22/12 | 4/6/10 | NA | 71% | | | | | | | | |
| 2 | ✓ Preliminary Design | 80 days | 4/5/10 | 7/27/10 | 4/5/10 | 7/27/10 | 100% | | | | | | | | |
| 3 | Final Design | 143.75 days | 7/28/10 | 3/4/11 | 7/28/10 | NA | 74% | 2 | | | | | | | |
| 7 | Fabrication / Procurement | 276 days | 7/28/10 | 8/31/11 | 7/28/10 | NA | 28% | 2 | | | | | | | |
| 11 | Magnet #1 | 529 days | 1/21/11 | 2/10/12 | 1/24/11 | NA | 84% | | | | | | | | |
| 12 | Solenoid Coil Assembly | 142 days | 2/7/11 | 5/2/11 | 2/21/11 | NA | 88% | 7, 88, 131 | | | | | | | |
| 49 | Fringe Field Solenoid Coils | 199 days | 2/7/11 | 5/18/11 | 3/14/11 | NA | 88% | | | | | | | | |
| 90 | Block Corrector Coils | 152 days | 1/21/11 | 4/7/11 | 1/24/11 | NA | 88% | 7, 88, 120 | | | | | | | |
| 107 | Yoke Assembly | 100 days | 5/19/11 | 7/8/11 | 10/14/11 | NA | 88% | 12, 80 | | | | | | | |
| 123 | Vertical Cold Test | 80.5 days | 7/11/11 | 9/2/11 | 3/14/12 | NA | 88% | 12, 107 | | | | | | | |
| 137 | ✓ LE FF coil repair / retest | 34.5 days | NA | NA | 7/10/12 | 8/27/12 | 100% | | | | | | | | |
| 146 | Cold Mass Assembly | 22 days | 9/2/11 | 9/19/11 | 8/8/12 | NA | 80% | 7, 123, 137 | | | | | | | |
| 147 | ✓ install / weld end volumes | 5 days | 9/2/11 | 9/8/11 | 9/6/12 | 9/12/12 | 100% | | | | | | | | |
| 148 | ✓ install / weld port closures | 4 days | 9/8/11 | 9/13/11 | 9/13/12 | 9/18/12 | 100% | 147 | | | | | | | |
| 149 | ✓ install CM insulating blankets | 2 days | NA | NA | 9/19/12 | 9/20/12 | 100% | 148 | | | | | | | |
| 150 | ✓ install outer heat shield | 3 days | NA | NA | 9/21/12 | 9/25/12 | 100% | 149 | | | | | | | |
| 151 | pressure / leak check | 7 days | 9/13/11 | 9/16/11 | 9/26/12 | NA | 50% | 150 | | | | | | | |
| 152 | cut test port closures | 1 day | 9/16/11 | 9/19/11 | NA | NA | 0% | 151 | | | | | | | |
| 153 | Magnet Assembly | 35 days | 9/19/11 | 11/14/11 | NA | NA | 0% | 148 | | | | | | | |
| 154 | install magnet insulating blankets | 2 days | 9/26/11 | 9/28/11 | NA | NA | 0% | 154 | | | | | | | |
| 155 | install LE vacuum vessel sleeve, tower, He | 2 days | 9/28/11 | 9/30/11 | NA | NA | 0% | 155 | | | | | | | |
| 156 | connect gas cooled leads (10) | 3 days | 9/30/11 | 10/5/11 | NA | NA | 0% | 156 | | | | | | | |
| 157 | connect copper corrector leads (24) | 3 days | 10/5/11 | 10/10/11 | NA | NA | 0% | 157 | | | | | | | |
| 158 | connect instrumentation wires | 4 days | 10/10/11 | 10/14/11 | NA | NA | 0% | 158 | | | | | | | |
| 159 | electrical tests | 2 days | 10/14/11 | 10/18/11 | NA | NA | 0% | 159 | | | | | | | |
| 160 | install cold mass into vacuum vessel | 2 days | 10/18/11 | 10/20/11 | NA | NA | 0% | 160 | | | | | | | |
| 161 | install posts | 1 day | 10/20/11 | 10/21/11 | NA | NA | 0% | 161 | | | | | | | |
| 162 | install inner heat shield | 1 day | 10/21/11 | 10/24/11 | NA | NA | 0% | 162 | | | | | | | |
| 163 | install inner vacuum vessel | 1 day | 10/24/11 | 10/25/11 | NA | NA | 0% | 163 | | | | | | | |
| 164 | install vacuum vessel end plates | 2 days | 10/25/11 | 10/27/11 | NA | NA | 0% | 164 | | | | | | | |
| 165 | install cryovalve, helium lines | 5 days | 10/27/11 | 11/3/11 | NA | NA | 0% | 165 | | | | | | | |
| 166 | connect NLE instrumentation wires | 2 days | 11/3/11 | 11/7/11 | NA | NA | 0% | 166 | | | | | | | |
| 167 | electrical tests | 2 days | 11/7/11 | 11/9/11 | NA | NA | 0% | 167 | | | | | | | |
| 168 | vacuum leak check testing | 3 days | 11/9/11 | 11/14/11 | NA | NA | 0% | 168 | | | | | | | |
| 169 | Final Magnet Test | 64 days | 11/14/11 | 2/10/12 | NA | NA | 0% | 169 | | | | | | | |

#1 Assembly complete
11/28/12

Magnet #2 schedule

