Laser Work Update & Schedule

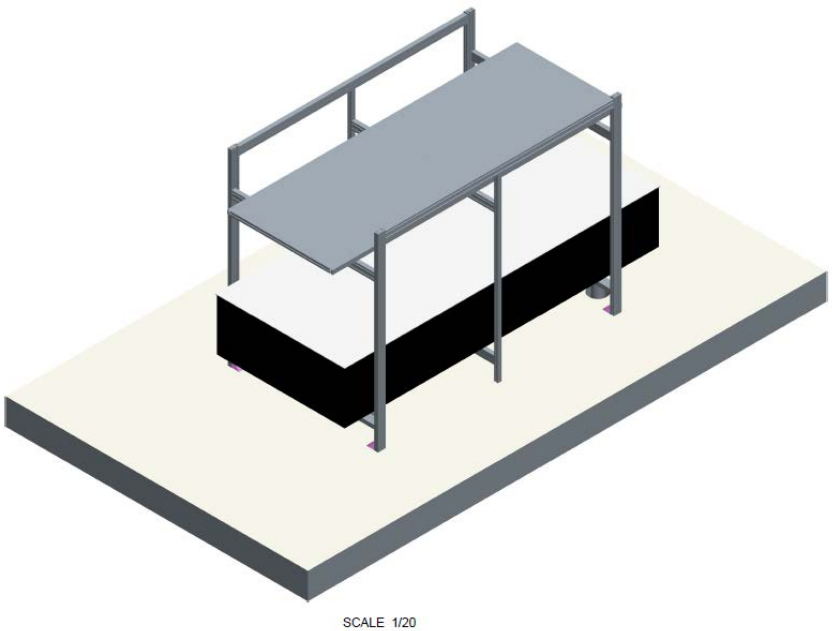
Zhi Zhao

Jan. 5, 2017

Laser Trailer (I)

- AC unit is done;
- Power outlet for chiller is done;
- All the chillers are working;
- Vibration measurement;

Laser Trailer (II): Shelf for Optical Table



PO for material: submitted;

Structural expected Delivery date 1/5;

Fabricate week of 1/9;

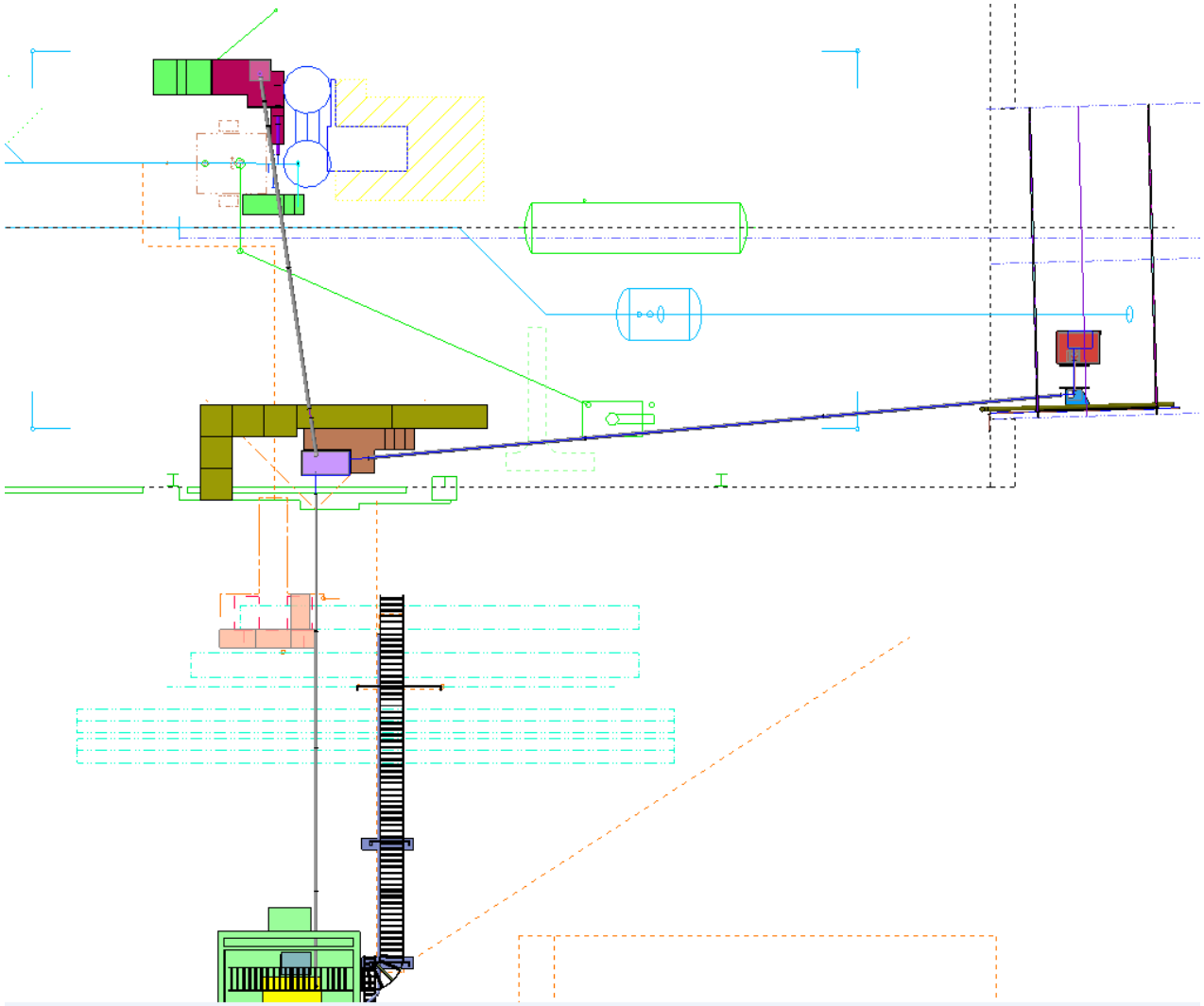
Assemble week of 1/16 – 1/23;

Electrical assembly week of 1/23;

Hopefully done by week of 1/30;

Brian Streckenbach

Laser Transport: Final Design

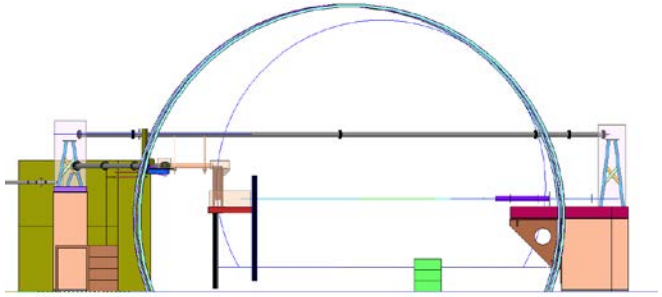


Steven B., & Bob M.

Transport: Laser Trailer to Relay Table

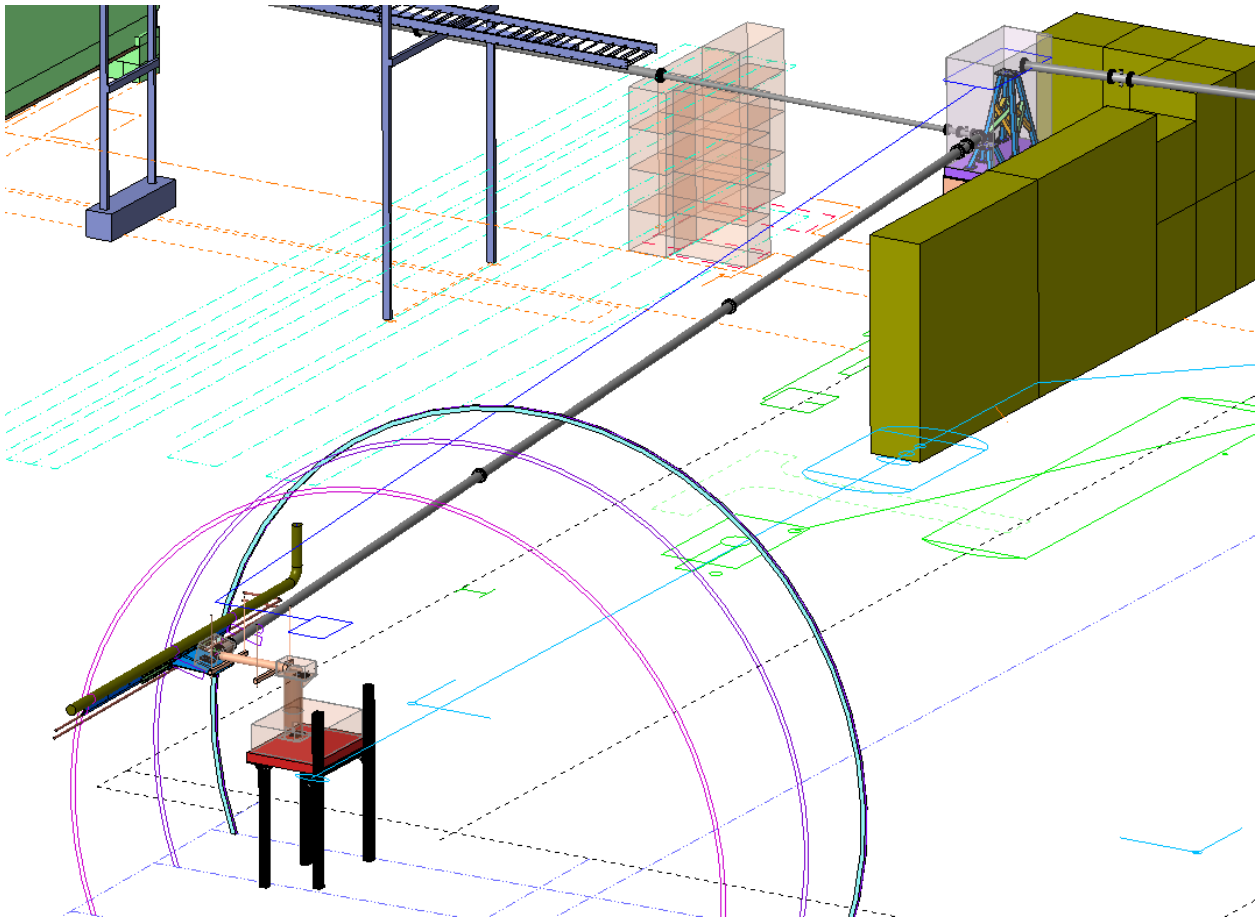
- Pipe, support, vacuum, hole sealing, view windows
- Stands for laser transport: laser room & relay table
- Cable feedthroughs

Transport: Relay to DC Gun Tables

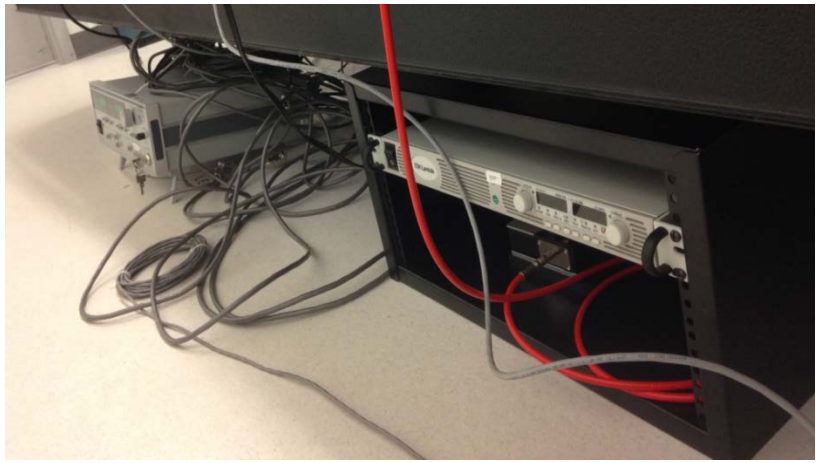


- Setup for gun table
- Stands for lowering the beam
- Wall for the table
- Cable feedthroughs

Transport: Relay to SRF Gun Tables



Laser Moving & Construction



All the pump diodes are working.

Interlock wires are labeled.

Fiber tie on the table

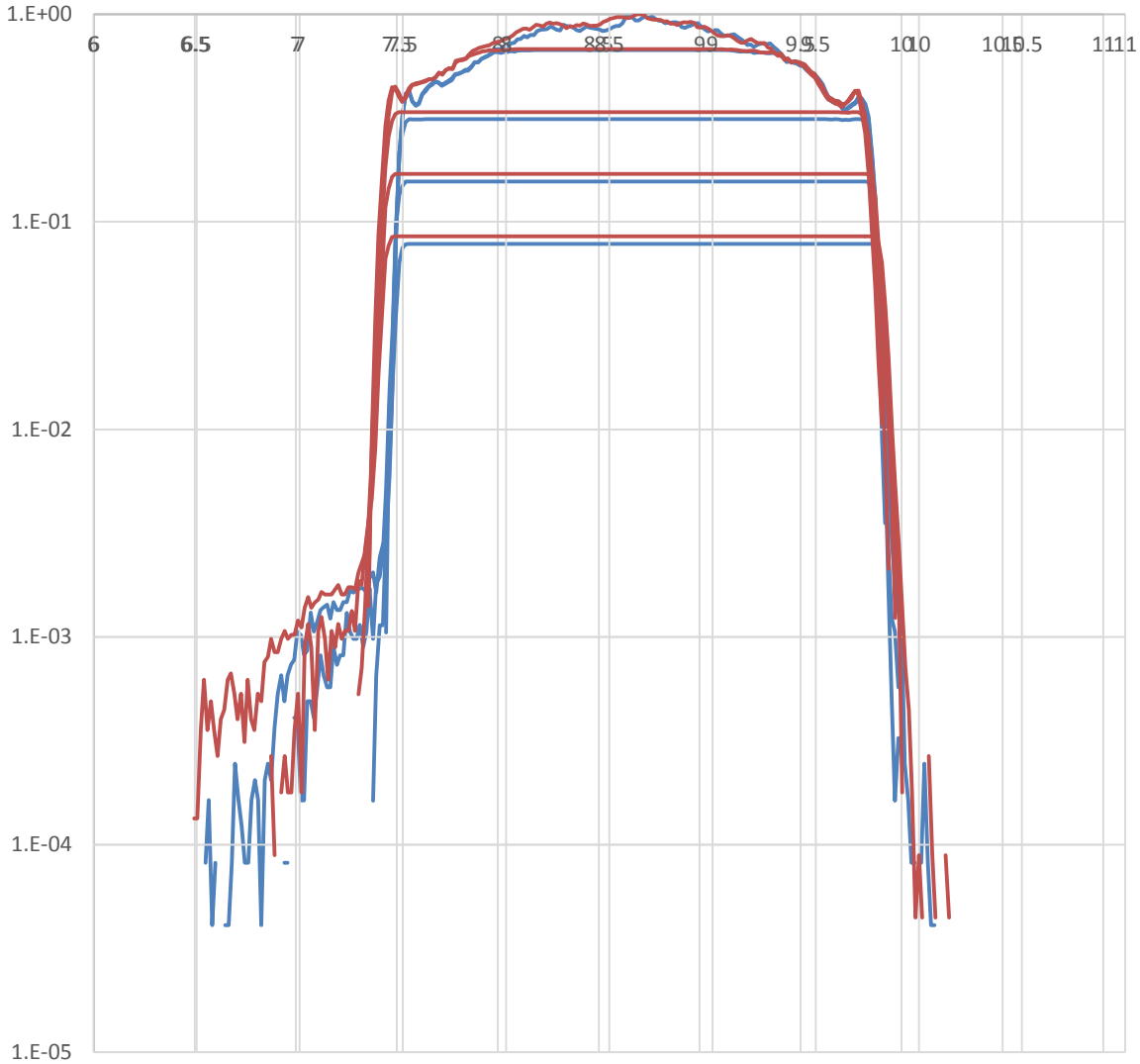
Power supply for detectors

LEReC Laser Work Schedule: 2-3 weeks

- Laser system
- Two pulse pickers
- Free-space laser transport
- Optical setup for relay and gun table
- Laser control & diagnostics for relay and gun table

- HV PC control: pulse structure & remote control
- Test of laser transport & position stabilization
- Cable for position stabilization: relay & gun tables
- Boxes for relay and gun tables
- Vacuum mirrors: halo measurement

Dielectric Mirror (X) vs Steel Mirror (X)

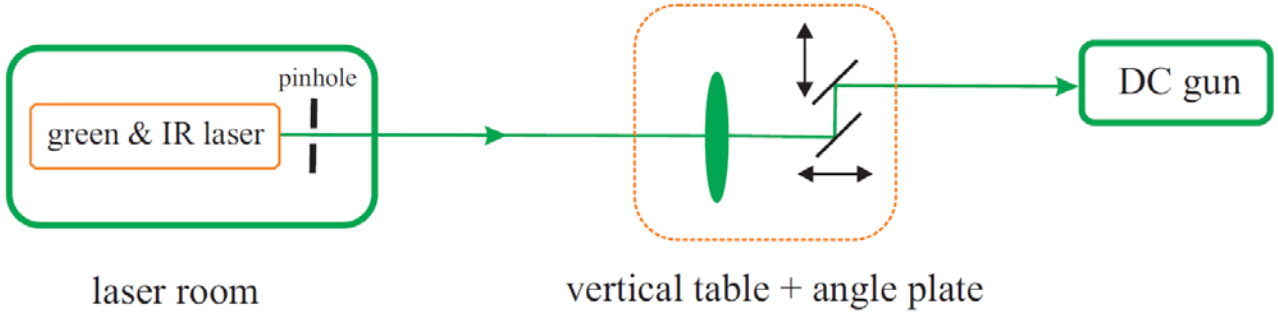


- **Test without baking: Patrick**

Laser Work for CeC

- Optical table is in
- Two more legs for supporting the CeC table: Steven and Dan
- Transport design from wall to CeC table: Steven, Bob, and Dave
- Motorized iris: Zhi

- Transport installation for CeC: Travis, Dan
- Installation of the CeC table early Jan.: Dave and Dan
- Wall for the CeC optical table: Dan & Patrick
- Motorized rotator for laser intensity control: Lenny
- 2D motion control for QE scanning: Lenny
- Motorized iris: Peggy Harvey
- CCD and power meter for laser diagnostics: Toby & Jim
- Cathode imaging with lump light: Patrick
- Optical setup: Patrick
- Cables: Tony
- RF signals: RF group

Laser Work for Gatling Gun

- Moving the green laser into the laser room
- Laser transport and control for green light
- Laser spatial shaping and 1:1 imaging
- 2-D motion control
- Angle plate for the vertical table
- Parts shipping to Stony Brook: Patrick
- Transport for green light: ready in Jan
- Preparation for replacing parts with IR components: Feb