Lamination and HV update

Argoncube fortnight meeting

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on behalf of SLAC

Overview

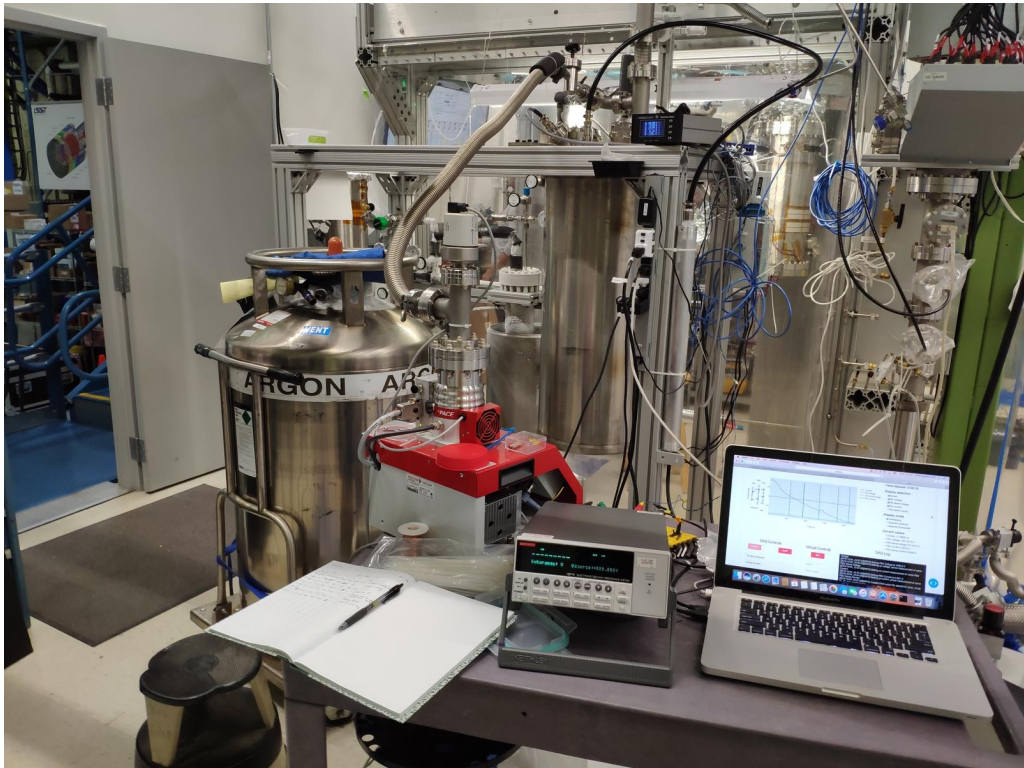
- Lamination update
- HV tests update
- Schedule

Lamination update

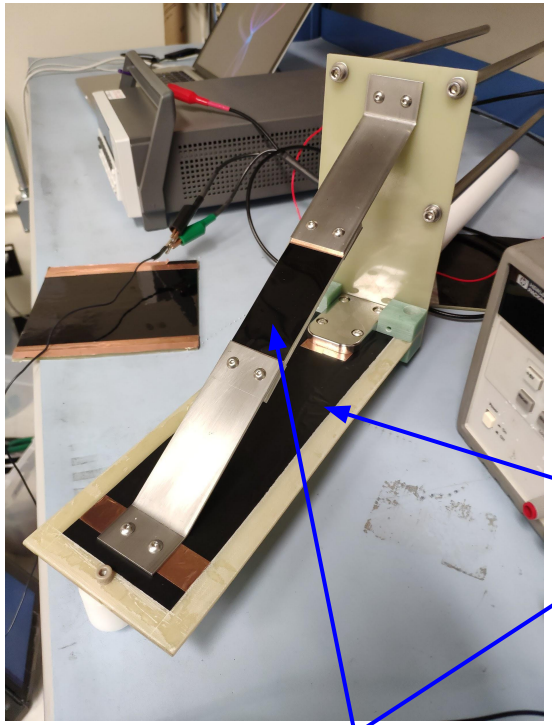
- Module 0 Field Cage production/delivery schedule (on track):
  - Copper-clad G10 panels (6 single-clad, 4 double-clad), Kapton DR8 at SLAC
  - Company contacted to etch/water jet G10 panels
    - Should be done in 4-6 weeks (Optimistically end of March)
  - Laminator design close to completion (end of the week)
    - Need to procure laminator elements (in progress)
    - Need to assemble the device (1 or 2 weeks)
    - Should be done by the end of March
  - G10 board lamination
    - Two weeks from beginning of March
  - Put the panels together, check that everything is sound
    - Ship at the end of April

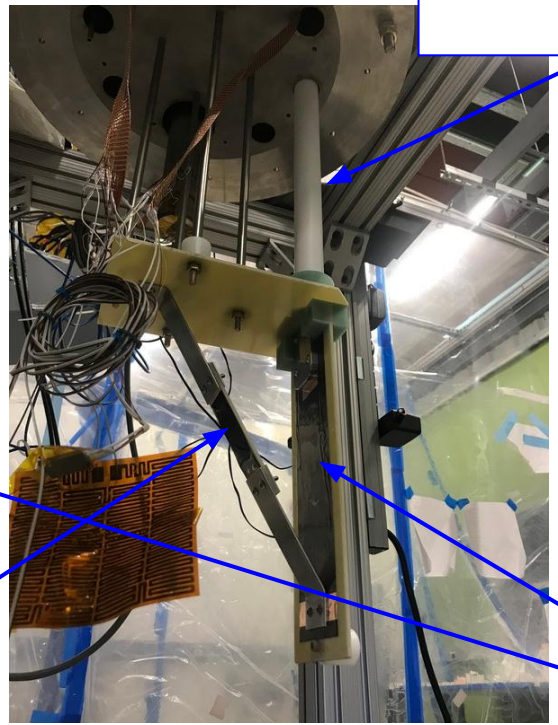
HV test update

- Local LAr Setup
    - 40cm diameter, 85 cm height
    - ~100 L
    - Realistic mockup
        - XC cathode
        - HV connection
        - DR8 resistor



The System





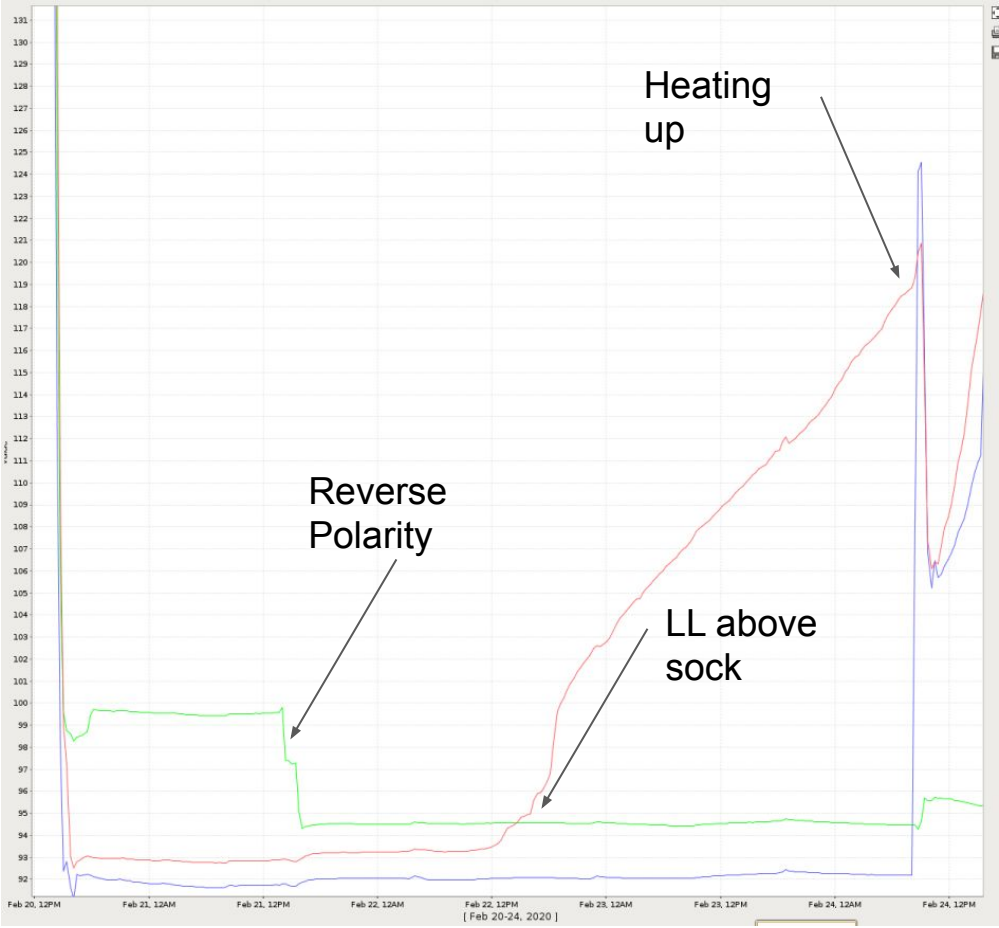
XC HV cable

DR8

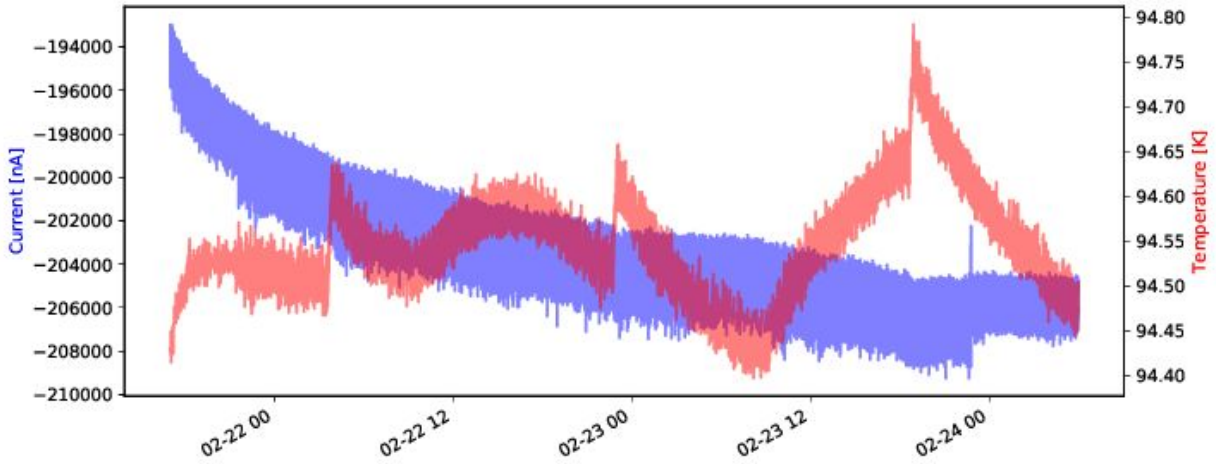
XC -cathode

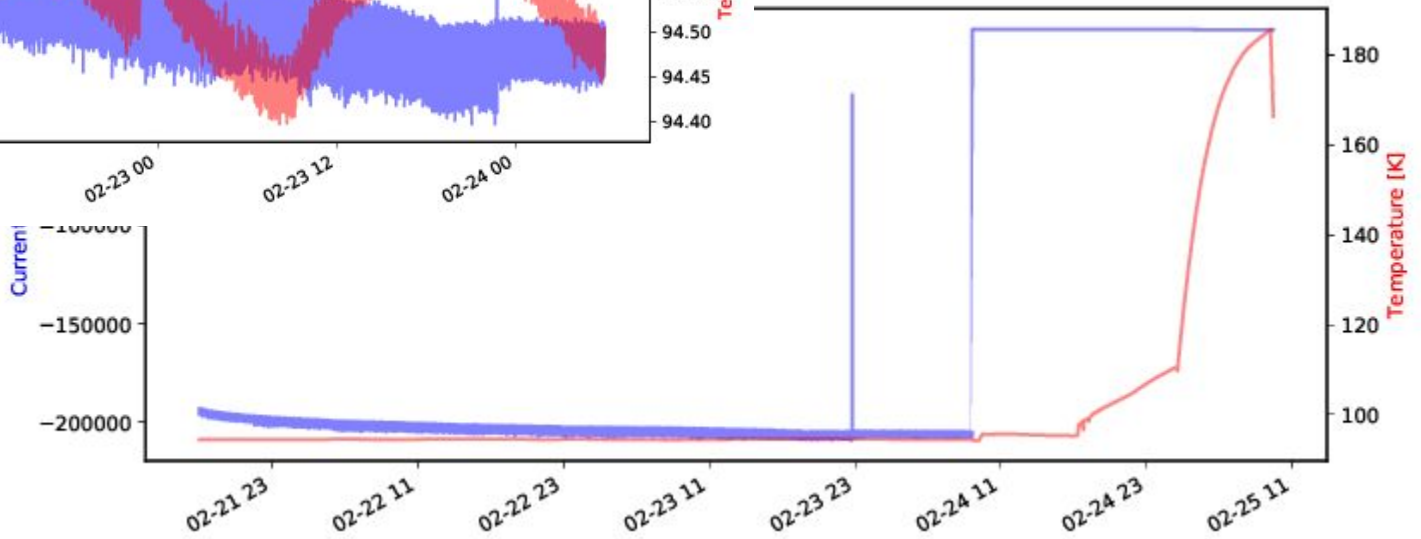
HV test update

- Test run - **5 days, 40 KV**
- Polarity changed -> No trips
  (Can be explained by geometry)
- Cable works also with LL above sock
- System is not well insulated from top, although top flange is not cold and no sweat on the dewar
- Strange pt-100 depandance



HV test update

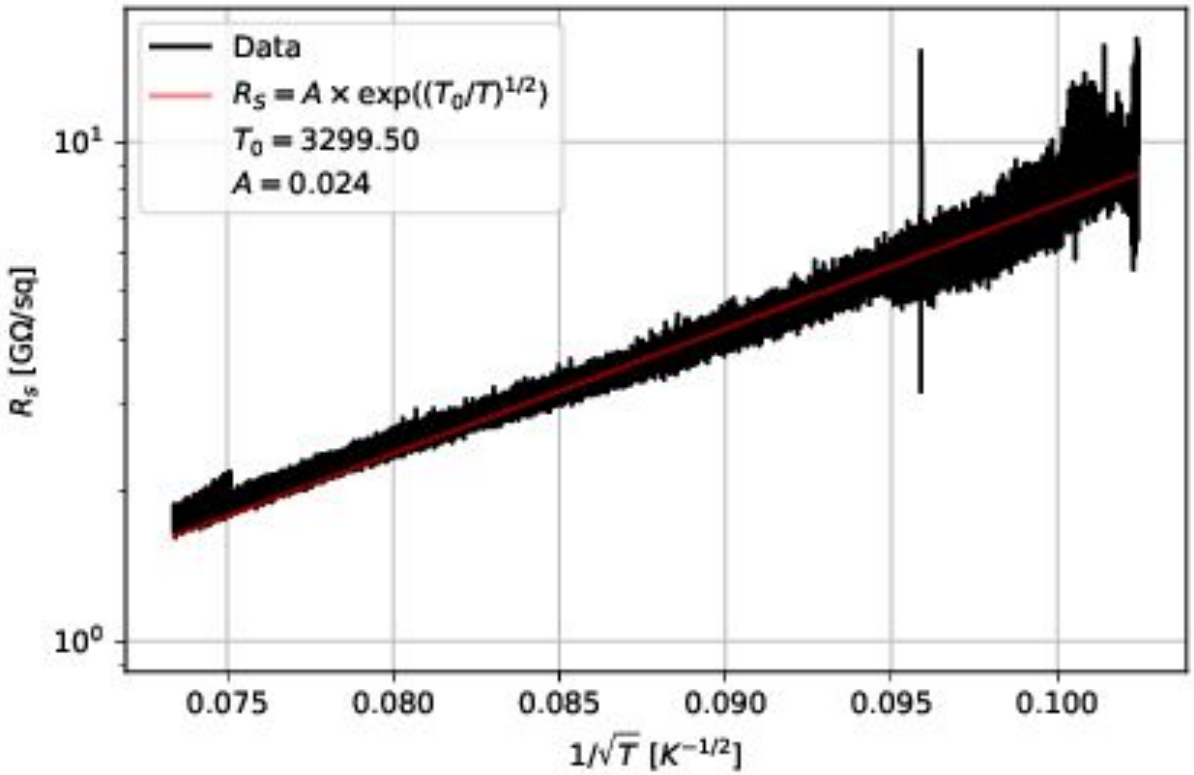




- ~5% drift, seems to reach a plateau. Need to check in a longer run.
- No correlation to temperature

HV test update

- 40KV DC
- Data taking during heating the LAr
- Behaviour compatible with previous tests
  And hopping transportation model



HV cable delivery

- 1 cable already at Bern
- 2 more cables will be shipped to CSU and UCSB next week
- Producing a cable -> 1-2 days
- Full test -> 4-5 days

Summary

- Lamination of field cage is ongoing, expect deliver by end of April
- 2 more HV cable will be sent by next week
- Polarity issue solved tripping problems
- Plan for longer ~7-10 days run to further investigate DR8 behaviour