Group Updates Fall 2018

Todays update starts on slide 2

Radon Emanation

- Harvested radon from the first compressor today
- Will likely harvest again next week
- Still have the thoriated welded rod. Sounds like there are a few people available to study it further
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Cable Production

- Solder usage:
  - Currently using 0.083 g per board solder
  - Have about 1200 wires left to solder so need about 100 g for just cold ends
  - Have 36 LED pigtails to make needs about 10 g
  - Other usage is HV warm ends which is high but not measured directly
  - Have 350 g ESOLD solder from Alfredo, just needs to be cleaned
  - We might be ok on solder usage

Cable Production

- Production rate:
  - There are about 175 cables needed for PMT and LED cables
- Bundling:
  - Have 110 done (9 were done twice)
  - Takes 1 hr 9 min on average for two people (30 min for 1st wipe 40 min for 2nd wipe)
  - Requires 128 man hours to complete
- Labeling
  - Have 37 complete
  - Takes 40 min for one person
  - Requires 92 man hours to complete
- Similar for other steps see table on next slide

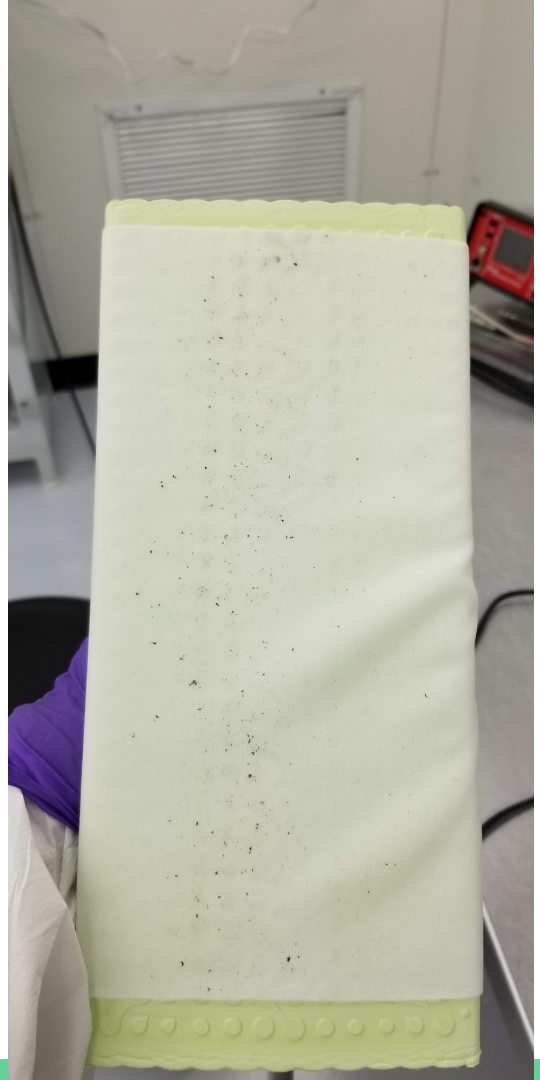
Cable Production Times

- Total Man hours required to finish: 769
- Will have 2 people working 3 days per week on connectorizing and 2 people ~4 days per week on bundling
- Assuming everyone has 5 hours of constant productive time per day this will take 12 weeks (end of Nov)

Step	Total Complete	Average Time	Man Hours Remain
Bundling	110	1 hr 9 min	128
Labeling	37	40 min	92
Cold End Prep	35	1 hr 11 min	165
Warm End Prep	12	1 hr 10 min	192
QA	12	21 min	57
Bagging	12	50 min	135

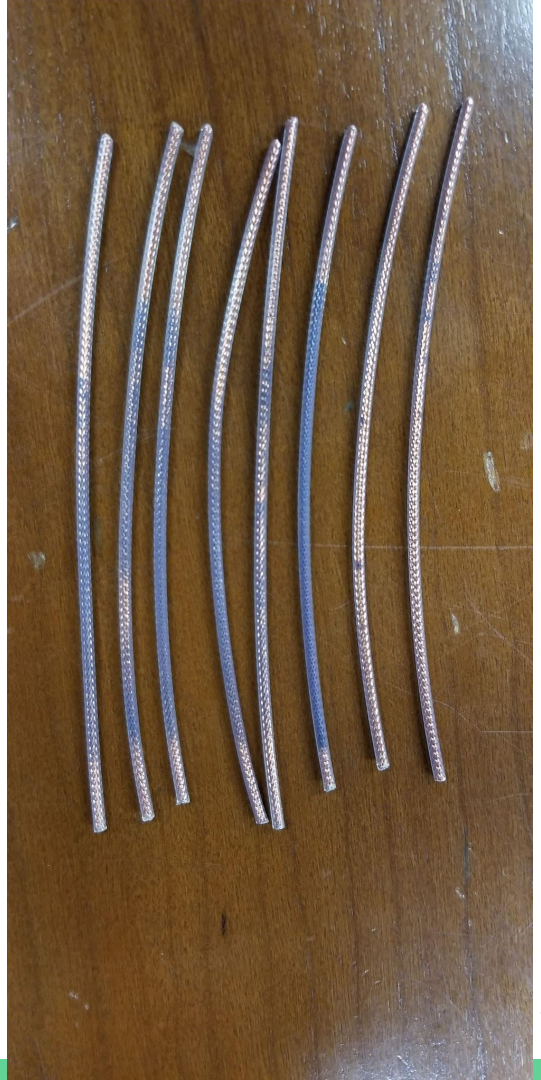
Cleanliness

- Cleaned all floors thoroughly
- Found 58 pieces of heatshrink on the floor in the cable bundling room
- Saw flecks of the leather chairs in the cable cleanroom (right picture)



Wire discoloration

- These wires are the ones left in the acetone? to test the cryohug tape
- All wires were in the same location, similar wires still in beaker did not show discoloration
- Any ideas?



Wire Tester Physics Problem (if we have time)

- Have a wire tester with a 5V supply and a logical circuit
- When a wire is connected 8 LEDs lights up
- When a short wire is connected behaves normally
- When a long wire is connected the circuit turns off WHY?
- Hints:
  - Resistors only lower the brightness of the LEDs
  - The long wire has a resistance of ~6 Ohms when disconnected
  - The long wire can light up 3 LEDs but not 4
  - The long wire can light up 8 LEDs for a very short time
  - The logical circuit can only supply 500 mA