UITF to-do list 1/16/2018

Procedural:

1. Figure out how to QE scan without opening valve to prep chamber
2. OSP buncher
3. OSP RF on cold QCM, no beam (photo of QCM in location, with u-tubes stabbed, photo of waveguide penetration, photo of klystron rack, photo of chimney vent stack,
4. PSS BCM progress
5. Design the section from output QCM through dif pump can station, BCM and Fcup
6. Design the MeV waist-height beamline with new spectrometer
7. Metrics to decide QCM is good (Arne, Reza)
8. Model today’s keV beamline with GPT? Compare measurement vs prediction (Alicia)
9. Wrap up design of the 200kV wien magnet
10. Use the zimbra UITF calendar to schedule work
11. Quick reference schematic keV beamline (Eric)

Install Group

1. Re-install the chimney at penetration with rf coax line and He warm return
2. Fill the waveguide penetration with sand

Cryo-related

1. LN2 temp test, pressure and flow test
2. Weld some section of pipe to transfer line, re-install the aluminum chimney vent
3. Formal ODH assessment approval
4. LHe test
5. Controls and epics page

RF

1. Klystrons
2. Choppers at 200W per channel
3. Buncher
4. Water skids
5. Interlocks, water and vacuum (Kortze)
6. MO screen? Controls screens

EES

1. BPMs
2. Install position sensors on MDC valves when available

SSG/EES

1. MPS/FSD system: window comparators, masking tool, destinations
2. Valve box, Kortze
3. BLM at keV region

Wien

1. Make new Wien magnets
2. HV power supplies for Wien

keV beamline

1. Plumb in the krypton in professional manner, a permanent attachment to table (tanks and regulators ordered and will be in-house soon)
2. Add GN2 manifolds, clean polyflo with covers
3. MDC valves don’t seem to open properly, forcefully. Position sensors
4. Rigid and fixed air pressure applied to the QCM valves, forced closed (we know the old VAT valves slowly work themselves OPEN). Input side complete, do the same on the output side?
5. Plexiglass cover over the chopper stepper motor
6. BNC patchpanels? From cave to top of cave?
7. Means to perform QE scans (John’s idea)
8. Make a photocathode with 5mm mask
9. Measure lifetime
10. Laser ccd on the other side of power meter?
11. Add ditherer to utilities page
12. Fix the leak in the prep chamber, new electrical feedthrough, and replace the ion pump with damaged connector (don’t attach ion pump cables to pumps during bakeout)

MeV beamline

1. Design the waist-height beamline
2. Add a spectrometer line
3. Finish the UHV ion pump supplies
4. Parts list, what do we have, what do we need to make or purchase, estimate to complete
5. PSS BCM
6. Construct the dif pump can section, clean room? Attach it to the QCM (it will restrict access to the QCM, will this interfere with Cryo work?)

All the things we discover running beam:

1. QE tool won’t abort
2. Beam comes out of gun low
3. MDC valves seem sketchy, shitty. Sufficient air pressure? Position readback
4. Chopper solenoid shorted out? Ouch
5. Beam on chopper YAG screen lost in brilliant glare of camera LED
6. Easy to read beamline schematic
7. Can we devise a simple nomenclature for steering, that is not in conflict with actual songsheet names? Viewer 1, lens 1, corrector 1, etc.,
8. Orientation of the songsheet opposite to flow of beam from control room
9. Magnet peculiarities: hysteresis, model vs real performance, type of trim card
10. Clicking buttons twice?
11. Can video change automatically when viewers are inserted, can one viewer go in and automatically retract another?

Note from Curt Hovater:

Chopper:
Power amp tested and ready to go. FCC is ready. The cavities need to be vacuum processed. Water skid does not have full control yet from the FCC. Before this happens the cavity RF power vs detuning with LCW needs to be measured, so we can set up the water skid. A vacuum interlock will also need to be made up through the FCC. Needs 4-5 days to complete with vault open.

Buncher:
Similar situation as the choppers, but with a more involved vacuum processing. In addition this water skid has valve control so that has to be taken into account and will require a more detailed control algorithm. A week to vacuum process and test the cavity to understand the detuning with RF power. A week to finalize control and get the screens ready for operation. The vault needs to be open for these tests. Note same people work on Chopper and buncher, so very little can be done in parallel.

1/4 Cryo:
LCW manifold and feeds to be installed. This is on Neil's radar but do not know the priority.
HPA Controls: Chad is working on this and believes he will be done in 2-3 weeks.
Power: Electricians should install the 208 and 480 by the end of the week. RF Blank plates will need to be installed to test the HPA. TBD: Wave-guide air, PSS, and how much time SRF wants to check out the
cavities.

I would be very surprised if this is ready by 2/9/18...sounds more like
3/1/18.