March 25, 2020

Group meeting, remote via Blue Jeans (week 1 Covid-19 isolation)

Everyone in attendance except for Phil (he has no network connection at home)

We touched base and talked about how we are dealing with work-from-home. Below, find brief descriptions of work people are pursuing.

Riad: two papers (Yan’s photocathode paper and the magnetized beam paper), AI proposal (working with Anna and Chris Tennant and Kelly Webster, with Andrei leading this effort), and he is reviewing a paper for a journal

Yan: he his adding references to his photocathode paper, expected to send out to authors in coming days, Figures could be refined, but this can happen later

Scott: finishing a project for Omar, working on documentation – converting John’s stuff to Docushare, and he is working on STAC5 stepper motor control

Marcy: continuing to model the CEBAF photogun vacuum using MolFLo, revisiting her “ultimate pressure” paper, reviewing aspects of the CEBAF injector rebuild

Joe: continues to plan for the SAD injector rebuild, whenever it happens, working with CKS making corrections to the 5 MeV Mott paper and he will then put it in format dictated by Phys. Rev. C, helping Luca prepare a proposal for photocathode studies, working on his contribution to Geoff Krafft’s 12 GeV CEBAF paper. Although USPAS is cancelled, he will continue to flesh out his class notes

Bubba: ordering things

Shukui: writing a tech note on gain-switched MO + fiber amplifier laser system used at GTS and now at LERF, Although USPAS is cancelled, he will continue to flesh out his class notes

Carlos: working with Gabriel and Bubba to prepare 200 keV Wien filter for CEBAF

Mamun: magnetized beam paper, Yan photocathode paper, LIGO vacuum test stand results AISI 1020 low carbon steel pipe.

Josh: two main projects todays: a) biased anode at CEBAF, b) modeling ion bombardment to explain Joe’s lifetime studies at high average current versus laser spot size

Gabriel: 200 keV Wien modeling, Wien filter with penning cells to provide distributed pumping, writing thesis

Sajini: modeling and building a modified 300 kV photogun for beam delivery at nC bunch charge

Other topics:

CST Microwave Studio will get renewed to support student R&D projects

Carlos and Bubba, consider how to put 300 kV photogun into use again, list the steps and improvements, based on what we know now. What is required to use this gun at CEBAF?

Now is the time to work on papers, here they are, the ones with data in hand:

1. 5 MeV Mott, Joe and CKS to address referee comments, publication PRC to happen soon
2. Yan photocathode studies, PRAB or Jour. Applied Physics. Paper written, references need updating, figures OK?, authors to provide edits, submit in two weeks.
3. Riad, Mamun and Sajini, magnetized beam studies. When do we get a readable draft?
4. Marcy, ultimate pressure paper, referee comments in hand, big or small revision?
5. Joe: working on G. Krafft CEBAF paper. Matt supposed to be working on this too
6. Josh, working with others, explain the observed trends, lifetime at mA current versus laser spot size
7. Gabriel and Carlos: design of 200 keV Wien filter
8. Shukui: gain switched MO and fiber amplifier, green laser paper