

03.12.2018 EC

Present: Stepan, Maurik, Matt, Tim, Raphael, Nathan, John

Please send comments/corrections to the EC email list.

1. Bump Hunt Issues.

The fact that the reach of Omar's analysis has worsened by x3 since his JLAB presentation was discussed. Omar's presentation at last Wednesday's HPS meeting gives the basic reasons for the change. It is mostly do to very different limits resulting from the fits, which have changed since JLAB because of the worse mass resolution of tweak pass 6, and the accompanying need to narrow the fit regions. Matt and Omar are exploring and testing the fits. The hope is that new fits, perhaps with a better parameterization, will give better results. Right now, however, it's wait and see.

Stepan urged the analysis group to reach out to others for help. Matt said he would make the mass distribution available to others, probably most significantly Sebouh, to see if they can confirm or improve the fit results. Matt said he'd repeat the fits as well.

EC was reminded that they have yet to approve the analysis, having waited for final corrections and results since our last discussion. The first draft of the paper is going forward in parallel. Of course final results, EC, PPC and collaboration approval are needed before the paper is approved.

2. Status of the Positron Trigger Upgrade.

Rafo presented slides. Several schedule items have slipped a little, but the project is still expected to be complete this summer. No money has been allotted for the PMTs yet, but Stepan says he has backups available. Rafo was urged to check if the mu metal shields will saturate in 30 G fields.

3. Status of the SVT Upgrade.

Tim reviewed the status of the major items. The sensor is in fab. The hybrid schematic is complete, but layout hasn't started yet. Tim is working with a designer to transfer his preliminary designs so engineering drawings can be made. The assembly fixture, mounting and cooling, and lever block should be ready for manufacture in about a month. The schedule for these items has slipped slightly, but will not delay the installation since none of them is on the critical path. Installation is still scheduled for Jan '19.

Maurik asked if the new support structure is in the MC. Not yet, and not clear it needs to be, though of course it wouldn't hurt. Tim mentioned the possibility of replacing layer 1 with the layer 0 design, to minimize material. He said MC studies should confirm that the support structure would not create new backgrounds. It's a backup plan for now.

Tim said preparations are underway for testing. The test stand at SLAC is up an running, that at UCSC still needs work (and Omar). This is needed for testing the hybrid. A new crew is getting training for these jobs.

4. Rules on Showing Thesis Results.

Raphael distributed slides: [PublicationRules \(002\).pdf](#). They document that we have been saying that any public presentation of HPS physics results, in particular those in thesis defenses or thesis publications, must be approved by the collaboration. In fact, the exigencies of rushing out the door prevented this rule being followed in the case of the first HPS theses of Omar, Sho, and Holly. Ani's thesis followed the rule by removing the scale on the final reach plots.

We discussed what the policy should be. Maurik advocated that final figures make clear that the results are preliminary and come from 10% of the respective data sets (where applicable). He also noted that it is now quite important for HPS to get these rules straight, as we enter an era of published results. Tim argued that Ani's solution should be generally adopted, and is even more important in the case of future theses presenting 100% of the data. Everyone agreed that a thesis reporting a new result using 100% of the data must be approved by the EC, PPC, and collaboration before being disseminated in a thesis or shown in a defense. Stepan raised an additional question: what HPS review should be required before a student releases his thesis.

Raphael agreed to draft a new policy for HPS theses, and Stepan agreed to incorporate a review process to be employed before a thesis is distributed. These policies will be distributed to EC by email this week, and finalized at next week's meeting.

Finally, John asked that EC review the "rules of the road": [HPS Rules of the Road 02.21.2018 \(002\).ppt](#). They are to fully encapsulate our policies, and could perhaps be added to our bylaws in the future, once agreed upon. Please comment/edit as needed.

Respectfully submitted,

John