03.19.2018 EC

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

1. Update on the 2015 Bump Hunt Reach

Omar and Matt have concluded that the fit lost sensitivity because a much narrower fit region was chosen than had been chosen for the JLAB presentation. The smaller region means the background fit parameters are less well determined, and so contribute significantly to the signal uncertainty in the fit. The change was made because tweak Pass 6 has poorer mass resolution than the Pass 4 results used for JLAB. With worse mass resolution, a smaller window was needed to keep the pulls reasonable. So a 20% change in mass resolution ended up resulting in a limit x2.5 worse.

Omar has verified that the old fit delivers the results claimed at the JLAB presentation.

To move forward, Omar will choose a window size based on minimizing the signal limit, but accounting for the contribution to it from the systematic error arising from the pulls. He'll concentrate on fits in the most impactful range of masses, and try a new background parameterization as well. Omar hopes to have new results in time for approval for their presentation at the APS meeting.

The paper will be held up until these new results are approved and incorporated. Comments have been received and the present text will be edited, awaiting the new results before being released to the collaboration as draft #2.

2. Author list for paper

We considered Matt Solt and Luca Marsicano as additions to the Bump Hunt 2015 paper author list.

Matt Solt has been an HPS member since just after the 2015 run and has contributed to physics, tracking and Monte Carlo studies of the 2015 data. EC unanimously agreed to add him to the author list.

Luca Marsicano became an HPS member in April 2017 and has learned the Ecal calibration procedures and helped with the 2016 calibration. Since he has not contributed directly to taking or analyzing the 2015 data, he has not been added to the present author list. He should be considered again when publications based on the 2016 data are being prepared.

3. Showing HPS results in Theses

Raphael reviewed the proposal he and Stepan put together for a thesis policy, shown here:

a) For all thesis, the results, showing performances of HPS or physics quantities, must be circulated/presented to HPS for comments in advance before using them in the thesis.

b) The thesis student and his/her advisor can decide if the final physics results (cross sections or physics quantities, e.g. \epsilon) will be presented in measured units or in an arbitrary units. Note, when results are shown in a figure together with other known/published results, arbitrary units will not be valid.

c) If the material presented in the thesis is based on the blinded sample of data set (i.e. 10% or less), the EC should approve the HPS key performances presented in measured units, no approval is necessary if arbitrary units are used.

d) If the material presented in the thesis is based on the full unblinded data set, the key results need to be already approved and published by the collaboration.

With one exception, replacing "already published" with "already submitted for publication", EC unanimously agreed to accept the new policy.

4. Editing "Rules of the Road"

As time allowed, we started discussion of the HPS Rules of the Road 02.21.2018 (002).ppt

Nathan noted that the unblinding procedure should require the analysis note be disseminated to the whole collaboration and be suitably archived.

Stepan agreed to define "suitably archived" with a definite proposal.

Raphael thought that there was unnecessary overlap between the separate procedures for unblinding, approving results for public presentation, and publishing new results. He agreed to propose a new organization for discussion at our next meeting.

Respectfully submitted,

John