# Internal jeopardy review for PAC48: Run Group B

June 3, 2020

## General Comments

The table at the beginning listing the proposals in the run group is very helpful. It makes the point that the driver behind the run group is the high-impact neutron DVCS measurement. Whereas it is important to mention all the good science that can be done in the run group, could the document be strengthened by a “bottom line up front” statement along the lines of: nDVCS is a very important measurement (quote from PAC feedback?), and the run group has used 39 out of 90 PAC days, so to optimize the science impact for the lab, allocating the remaining time is vital to realize the potential statistical accuracy…

The PAC request was for 10 pages (or fewer!). The current draft is not far over the limit, but it doesn’t hurt to try to abide by the PAC guidelines! This could be achieved by trimming some of the text, and judicious selection of diagrams (see below for suggestions).

## Specific Issues

1. Table 1: J/y -> J/
2. Page 2, para 1, line 1: on proton -> on a proton
3. Figure 2: This shows the neutron detection efficiency (NDE) for the CND. An NDE is also shown in figure 9. This is confusing, since it is probably referring to different things. Perhaps choose one or the other to make the point about detecting neutrons.
4. Page 4: section III: You could tabulate the numbers in the short paragraphs for each period, and remove the pie charts (which will save you about a page!).
5. Page 7, para 1, line 2: lead to -> leads to
6. Page 7, para 2, line 1: perform, for the first time, a fully… -> perform a fully…
7. Page 7, para 2, line 4: permits to cover -> covers
8. Fig. 10: It is not clear what the bottom right plot is (residuals?), and indeed what the red band represents.
9. Page 7, para 4, line 3: As it can be -> As can be
10. Page 7, para 4, line 4: car vary -> can vary
11. Page 7, para 4, line 5: remove “, also by factors of 2,”
12. Fig 11: Numbers and annotations are too small to read. In fact this figure and page 7 para 4 are possibly not necessary. Yes, it is non-trivial to combine different energy cross sections and BSA’s, but there are ways to do it.
13. Figs 12 and 13: Almost nothing is legible here! If these are multiplicities, then histograms of typical bins may be a better presentation. This is definitely in the “it might annoy the PAC members” category.
14. Page 9, Section D, para 1, line 5: allows to -> allows one to
15. Page 10, line 9: You mention statistics goal: what is this? Can you produce a projection of uncertainties? It is an important point for approving the run group for a further 51 days.
16. Page 10, Section E, line 6: The statistic -> The statistical accuracy
17. Page 11, 1st para after fig 16, line 4: “Pseudoscalar exclusive electroproduction has been found to be particularly sensitive to transversity GPDs.” Is there a reference to support this?
18. Page 11, Section V, line 3: ran -> run; 3 different -> three different