The second round of comments to g12 note.

Many of the concerns from the first round were addressed in updated note and response. However there are several issues remain to be resolved.

- Monte Carlo simulation and efficiency.
  - Drift chamber wire efficiency map. It is not a good idea to keep data in private directory particularly if the owner is not around any longer. Please move it to some appropriate place, preferably under clasg12 account and also would be good idea to back them up to the silo.
  - The smearing parameters fro drift chambers seem to reproduce residuals. Show how simulated resolution matches resolution from the data. Compare simulated and experimental invariant mass and width of K_s. ϕ-meson is not a god choice because its mass is very close to sum of masses of 2 kaons.
  - Dead area removal and efficiency. Fig. 2 of the response shows that there are differences between the simulation and the data. Compare 2D angular distributions $\theta - \varphi$ for $\gamma p \to p\pi^+\pi^-$ from the simulation and the data of all three particles. Compare occupancies of DC and TOF as well.
- Normalization.
  - Flux. At the end of the flux section include final numbers for systematics associated with differences of tagging ratio and with the normalized yield stability. This number should be considered as the lower limit for normalization systematic uncertainty of any g12 analysis. We don't understand the first paragraph of 4.3 what is 0.5% and what is 10%
  - Table 26 shows Normalization uncertainty of 1.8%. Where is this number came from?? It is too good to be true.
  - Target. You did not answer question about target length and thermal contraction. You only discuss density. In addition to the target density you also need the target length. You still list it as 40 cm. 40 cm is the length measured at room temp. When it is filled with liquid hydrogen it contracts by something around 0.6%. You must account for this contraction unless you apply cuts smaller than the actual length. Take a look at eg2 note:
    https://userweb.jlab.org/~xiaochao/eg2/main_072503.ps
    Also, if your vertex cut is larger than the size of the cell do you subtract a background from the target cell walls?
  - ω cross sections. Show angular distributions in log scale. Also show comparison between g12 and g11 as a ratio of cross sections.
- Lepton ID. We can approve the procedure applicable only to lepton pairs. For single lepton the ID cuts should be more strict.

- Momentum correction. The section is still somewhat ambiguous. Needs clarification.