Dear Doug,

I have come across some difficulties when I tried to analyze
Tiefenbach data and I would like to discuss them with you.

For each kinematics I have extracted Tiefenbach data from all
runs and tried to determine how Tiefenbach energy changes
during each run (Each runs includes approx. 200 EPICS entires)
I have plotted the energy distributions of the Tiefenbach energy for
all runs and compared them with each other (For each kinematic
setting seperately). Histograms are shown in the attached figures.
It can be clearly seen that in some kinematics the beam energy changes
dramatically - not only between different runs but also during single runs
(ie. Ta- run in Tiefenbach_HRSR_283.png) Differences between various
energy peak are not negligible (from 0.17 MeV to 0.7 MeV). This implies
that I need to correct my data for these differences (Shift my peaks)
before
I can use my fitting procedure. Am I right?

This brings me to another question. You have mentioned that
Tiefenbach is a good *relative* monitor for the beam energy. What do you
mean exactly by the "relative"?

Does "relative" mean that the energy scale of the Tiefenbach monitor
is correct and that the only difference between the Tiefenbach energy and
the true beam energy is a constant shift (i.e. - > Example "b" in the
attached
image (TiefenbachVsBeam.png)):

E_beam = E_Tiefenbach + conts.

If this interpretation of the "relative" is correct, than we can use the
Tiefenbach data(differences between various peaks) to correct my measurements
and to determine the ratios between central momenta of the spectrometer. This
brings us very close to our final results - they should not differ much from my
last results that I have shown you:

http://www.jlab.org/~miham/ledex/MeetingNo10/MeetingNo10.html

In this case we can also use the fluctuations in Tiefenbach energy to
determine the beam energy for those runs that I haven't analyzed.

Another explanation of the "relative" is that the scale of the
Tiefenbach energy is not correct and needs to be determined: E_beam =
A*E_Tiefenbach + b
(i.e. - > Example "b" in the attached image (TiefenbachVsBeam.png)).
This brings many complications to my calculation and also limits the use
of my final results. We know that the beam energy fluctuates up and down.
With my analysis I am going to determine the beam energy only for few runs. If
the scale of the Tiefenbach monitor is not correct, than we have no lever to
determine the beam energy for the rest of the runs.

Best regards,
Miha