Dear Patrick,

Here is the schedule for the checkout, calibrations and empty target runs (mostly based on our previous PRad run experience):

PRad-II:  Calibration:

1. We will start the run with **0.7 GeV** energy, therefore HyCal checkout, equalizing,  and calibration will be performed with this energy and using the Tagger, activated
2. in three energy ranges only (we had discussed this option for several times).
3. For the purpose of maximum energy resolution, we will set the 0.7 GeV to the upper channels of fADCs. During this process, we will also take data (fADC channel # vs. tagger available energies) for each crystal channel. This will be used to set up the calibration voltages for the other 2 beam energies.
4. We will use **5 days** (out of 7) for this calibration and checkout with
5. **Ie ~ 1nA, ~10-4 r.l** Tagger radiator (Eugene may correct these numbers).
6. **Calibration for the 2.1 GeV** run: Using the accumulated data (described above), we will lower voltages for each crystal detector to match the fADC upper limit.
7. Then, we will insert the 12C target installed on the PRad target ladder (there is one for this purpose) and take data for the "pi\_zero calibration".
8. We will nun ~ **1 day** with the **Ie ~ 20 nA**(will be corrected during the experiment)
9. **Calibration for the 3.5 GeV** run will be performed repeating the steps as for the 2.1 GeV run.
10. Days needed: **1 day with the Ie ~ 20 nA.**

PRad-II Empty target runs:

1. 0.7 GeV: **Ie =50+ nA, for 2 days**
2. 2.1 GeV: **Ie =150 nA , for 3 days** (limited by the beam dump)
3. 3.5 Gev: **Ie = 150 nA, for 3 days** (the same)

X17 Calibration:

1. Will be used the voltage data (or the same values) as for the PRad-II for 2.1 and 3.5 GeV cases. For the final calibration checkout, the data from elastic scatted events will be used.
2. Time for the calibration: **1 day for 2.1 and 1 day for 3.5 GeV run**
3. Total calibration time for the X17 run:  **2 days**(out of 4) with **Ie ~ 50 nA.**

X17 Empty target runs:

1. for the **2.1 GeV: 2.5 days with Ie = 150 nA**(limited by the beam dump)
2. for the **3.5 GeV: 3 days with Ie =150 nA**

These are the initial numbers to start the planning process, please let me know if you have any questions or comments.

Thanks,

Ashot