Steps for the PRad Data Analysis Work
First stage
September 16, 2016

1) Calibrate HyCal with tagger ("snake" runs) :
   a) use the PrimEx cluster definition algorithm(s);
   b) use the PrimEx energy calibration procedure (or other existing methods from literature);
   c) use the PrimEx coordinate reconstruction algorithms;
   d) demonstrate (show) energy and position resolutions in three regions: (1) PbWO4; (2) Pb-glass: and (3) transition regions.
   e) demonstrate linearity of the calorimeter.

2) Calibrate HyCal with physics events (Mott and Moller):
   a) calculate the gain factors for each channel for each "good" production run, show and record it;
   b) identify a list of runs for each energy to be used for the physics calibration;
   c) find the calibration constants for those runs, check with gain-factors, save them;
   d) find the "beam-position" for each run by Moller events in HyCal, save them in data base;
   e) transfer the HyCal coordinates into the "Beam Coordinate" system for each run.

Initial Tasks for the Data Analysis Work (cont.)

3) Trigger detection efficiency:
   a) finalize and demonstrate the HyCal trigger efficiencies for several key regions

4) GEM:
   a) Match coordinate axis of two detectors (done);
   b) Loose matching with the HyCal to extract the final detection efficiencies;
   c) find the “beam position” for each run by Moller events;
   d) transfer the GEM coordinates into the “Beam Coordinate” system for each run.