

Minutes: SBS Meeting January 30, 2013

Attendees: Bogdan Wojtsekhowski, Nilanga Liyanage, Adam Sarty, Charles Perdrisat, John LeRose, Brian Quinn, Alexandre Camsonne, John Annand, Carlos Ayerbe Gayoso, Gordon Cates, Jessica Campbell, Lubomir Pentchev, Mahbub Khandaker

- 1) Adam Sarty gives talk on Multi-anode Photomultiplier Tube Performance Assessment Tests
  - a) See [link](#)
  - b) Tests of PMT's obtained from CDF
  - c) Two types
    - i) "Type I" (186)
    - ii) "Type II" (416 number on slide 2 is incorrect, also the arrows are incorrect)
  - d) Has graphs for each pixel (602 x 16 = 9632 pixels)
  - e) Explains algorithm (picked out signal from noise in all cases)
  - f) Ran all tubes at the same voltage (no effort to gain match)
  - g) "Type I" looks better
  - h) Bad pixels discussed. Brian Quinn suggests testing a few bad tubes (low gain and bad pixels) at higher voltage to see if things improve.
  - i) Number of photo-electrons? Adam says he doesn't know. Bogdan suggests using the combination of pulse height location and spread to determine number of pe's
  - j) Cross-talk not tested. Discussion indicates that manufacturer's spec is too optimistic. Adam says he'll look into the cross talk question.
- 2) Lubomir Pentchev gives talk on Coordinate Detector Prototype Design
  - a) See [link](#)
  - b) General description of the prototype
    - i) Charles Perdrisat is concerned that the size is too small
    - ii) Bogdan objects to the "no light sealing" spec. Lubomir agrees.
  - c) General view with various parts described (scintillators in blue)
  - d) Detailed drawings shown
    - i) Concern expressed re the need for dowel pins to align things. Is it overdesigned? Lubomir will look into accuracy required for placing optical fibers on photo-tubes.
  - e) Outlook describes what we hope to learn/develop from the prototype
- 3) Bogdan Wojtsekhowski
  - a) Shows slides provided by Robin Wines on SBS design status. See [link](#)
  - b) Shows slide re his TOSCA calculations of the magnet (see [link](#))
    - i) Concerned that field clamp extends too far out and will add to backgrounds
    - ii) Suggests two configuration approach
      - (1) With field clamp for GEn (lower luminosity and need low field at target)
      - (2) Without field clamp for GEp (higher luminosity and no field requirement at the target)

-JJL