

Minutes: SBS Meeting August 22, 2012

Attendees: Todd Averett, Alexandre Camsonne, Carlos Ayerbe Gayoso, Huan Yao, Scott Burkiss, Austin Milby, Bogdan Wojtsekhowski, Nilanga Liyanage, Brian Quinn, Vincenzo Bellini, Thia Keppel, Seamus Riordan

- 1) Todd Averett gives talk on “Update on the Gas Ring Imaging Cherenkov (GRINCH) Detector for A1n using BigBite”
 - a) For his slides see [pdf link](#) or [pptx link](#)
 - b) General elements of the talk:
 - i) Motivation (high rates, various spec’s and what drives them)
 - ii) Observed d2n background (higher on the beam line side)
 - iii) Rate estimates relative to d2n
 - iv) Prototype detector:
 - (1) Tests (setup and problems)
 - (2) Results
 - v) Simulation and design
 - (1) Path length 70(65) cm
 - (2) Single reflection from cylindrical mirrors. No focusing on specific PMT’s, not sensitive to precise geometry
 - (3) Events look good
 - vi) Details of conceptual design
 - (1) Starting real design
 - (2) Shows some preliminary drawings
 - vii) Expected π^-/e^-
 - viii) π rejection vs. momentum (stay tuned for electron efficiencies, they’re working on them)
 - ix) Magnetic shielding issues.
 - (1) TOSCA simulation shows plan that works critical component of B <0.1 gauss
 - x) Plans:
 - (1) Finish simulation to optimize geometry, gas pressure, efficiency, pion rejection.
 - (2) Focus on design work with Jlab Design Group.
 - (3) NC A&T University to build and test PMT array iron box and magnetic shielding. Samuel Danagoulian, Abdellah Amidouch
 - (4) Begin mirror design studies.

-JJL