Minutes: SBS Meeting April 15, 2015

Agenda: Nilanga - Update on UVa GEM chamber production

Attendees: Alexandre, Andrew, Evaristo, Mitra, Gregg, Kondo, Albert, Nilanga, Seamus, Vladimir, Brian

Nilanga - Update on UVa GEM chamber production

To reduce effect of humidity, considering change from kapton to mylar windows. Bogdan says aluminized mylar is 10 times less permeable than ordinary mylar, suggests aluminized kapton should also be resistant to humidity. Kondo points out this is is consistent with first module built. It avoids problems with mylar windows which are difficult to glue down.

Some instability of windows may be caused by accumulation of charge on top of cathode foils which then electrostatically attracts entrance window. Nilanga considering use of two-sided kapton foil so entrance side is also conductive, but with copper removed to leave only underlying thin nickle layer. There is concern the nickel may also be sputtered on and show same tendency to flake that was feared for aluminized mylar. Also, if entrance side of cathode foil is held at HV rather than ground, it is not clear the attraction would be reduced.

Charge ratio for chambers is now found to be good (near 1) even for X-ray rates simulating twice ionization expected in SBS running.