SBS Meeting 6-January-2020

1. GEM High Speed DAQ Work – Danning Di (link)
    1.1. FPGA based digitizer
    1.2. 15 APVs to MPD; Bandwidth too high for higher backgrounds
    1.3. MPD to SSP for data reduction (backgrounds, etc.)
    1.4. With SSP reduction methods, rates 40 kB per event down from ~0.9 MB/event
    1.5. GEP is ~4x more volume of data; VME is bottle neck
    1.6. Replace SSP with VTP; up to 80 MPDs
    1.7. 2 VTPs and 2 DAQ PC gives rate more than 5 kHz
    1.8. Testing of code performed on 2016 Hall A data
    1.9. Small scale setup with cosmic data; recent work on large scale SSP setup
    1.10. Testing the new setup schedule
    1.11. VTP needed for GEp and GEn-RP?
    1.12. High trigger rate tests in x-ray machine limited to 3 modules; will it scale
    1.13. Concerns on GEp GEM DAQ; 325ns*area*Rate = avg. hits
    1.14. Front tracker occupancy; 60 – 75%
    1.15. No available data at high occupancy for GEp testing
    1.16. Questions
        1.16.1. Could simulate data for higher rates and occupancy data?
            1.16.1.1. Can't reproduced all effects
        1.16.2. Why VTPs on GEn-RP? Why now?
            1.16.2.1. Question on rates not clear
            1.16.2.2. Take discussion offline
2. APS April Meeting
    2.1. No messages received by Andrew – Due Friday
3. Weekly Meeting Change as GEn-SBS installation moves forward
    3.1. All sub-systems will provide brief updates weekly
    3.2. Provide up-to-date issues, solutions, status
    3.3. Contact persons will be expected to provide a document on readiness
4. Around the table
    4.1. Run Plan Document: List of the contact persons
    4.2. Weekly updates; brief
    4.3. Andrew Puckett – Has successfully tested data reconstruction with analysis code
        4.3.1. Cosmic data from INFN, ready for Test Lab UVA 5 layer cosmic data
    4.4. A. Camsome
        4.4.1. DAQ is working and in good position
    4.5. Arun – Big Bite shower
        4.5.1. Cosmic testing of channels, debugged, integrating with DAQ; gain matching PMTs
    4.6. B. Michaels – LHRS and HV Controls
    4.7. B. Sawatzky – GEn-RP detectors
        4.7.1. Active analyzer on site, needs tested, gain matched
        4.7.2. Left/right hodoscopes are destacked and testing/repair now (CNU)
        4.7.3. Frame work is proceeding and procurement is in progress
        4.7.4. ERR response still is in the works

4.7.5. Fringe field mitigation is being look into

4.7.6. GEM detectors -- > Deferment to UVA group

5. Adjourned – 12 noon

Recorded by Will Tireman