Plans of US ATLAS

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On behalf of US ATLAS

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FE Electronics (1)

❖ **Preamp/Shaper ASIC**

- BNL – complete (with French collaborators) ALFE design and produce and test 50% of the PA/Shaper ASICs

❖ **ADC ASIC**

- UT Austin and Columbia – complete COLUTA design and produce ADC ASICs
- UT Austin - test 50% of the ADC ASICs (assuming other 50% done in France)

❖ **Optical links**

- SMU – complete the designs of FEB2 data and control links and follow up on issues encountered in FEB2's production and testing
- SMU - test production lpGBT ASICs (if needed) and VTRx+

❖ **Layer Sum Boards**

- Pittsburgh – complete (with Saclay) LSB design and produce and test 50% of the LSBs

Note: We are going through the US ATLAS process to get this scope approved.

FE Electronics (2)

❖ **FEB2**

- Columbia – complete FEB2 design

- Columbia – produce all and perform functional testing/debugging on all FEB2 boards

- BNL – perform final testing and analog calibration of 50% of FEB2 boards (assuming other 50% done in France)

Note: need to consider where/how to organize testing of HEC FEB2 boards, which require a different setup (at least for the CALIB pulse injection).

❖ **FE System Integration**

- BNL – host lab for FE system crate test, integrating FEB2, CALIB, LTDB, LVPS and power distribution, …

BE Electronics

❖ SRTM

- Stony Brook U – complete SRTM design and produce and test all SRTM boards
- U Arizona – complete design and commissioning of SRTM firmware, as well as LASP firmware for LASP-SRTM interface
- NYU – contribute to LASP-SRTM system integration as well as SRTM firmware

Note: the NYU effort is currently funded for 2 years but we hope to get the US ATLAS funding extended beyond that timeframe.

- SMU – the group joined and has been contributing to Phase I firmware. The intention is to transition this effort to HL-LHC firmware, once Phase I is complete, and assuming a suitable contribution is identified.

Note: At the appropriate time (as Phase I is winding down and the HL-LHC contribution is better defined), we will need to go through the US ATLAS process to get this scope approved.

❖ BE System Integration

- BNL – host lab for BE system crate test, integrating LASP+SRTM, LDPS, FELIX, …