

SBS Project and Workforce Summary

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Reached out to about 20 institutions

Carnegie Mellon	North Carolina A&T
Christopher Newport	North Carolina Central
Glasgow	Ohio
Hampton	Saint Mary's
Idaho State	Stony Brook
INFN	Connecticut
James Madison	Virginia
Jefferson Lab	William and Mary
Mississippi State	Yerevan
Norfolk State	

Norfolk State University Contribution

Vina Punjabi – Professor

S. Malace – Research Assistant Professor

Chris Banks – undergraduate student, worked for 2 semesters - Fall 2015 and Spring 2016

One other student – Fall 2016

Contribution:

- Inventory and test of the front-end electronics for ECAL
- Inventory and test of the PMT bases for ECAL
- Help with setting up a test of the ECAL timing

Carnegie Mellon Univ. Projects and Contributions

Projects in next year:

- Complete construction of HCal modules
(&ship to JLab)

- Simulations of HCal response & GMn

- Finalize GMn layout & field

- Finalize design of HCal electronics

- Design, begin construction HCal pulser distribution

Available workforce:

- Gregg Franklin 25%

- Brian Quinn 25%

- Juan Carlos Cornejo 75%

- Eric Day (technician/machinist) 50%

- Undergrads 0.5 person-year

NINO Card Production

- GRINCH: 550 chan W&M have 8 cards, further 27 dispatched
- BB Hodo: 180 chan, have 15 cards, some require debugging
- Coordinate Detector: 28 cards in Jlab. Await test results before start full production (at ZOT electronics)
- HCAL: await information of optimum board configuration

BB Timing Hodoscope

- Scintillator and light guide in Jlab
- 200 ET-9142 PMT purchased
- PMT bases under construction
- Cosmic ray testing $\sigma \sim 150$ ps

Prototype Polarimeter Analyser 4 x 8 Array

- Under construction
- Cosmic ray testing Glasgow start August 2016

Gen/Gmn recoil polarimetry

- G4 description of polarimetry under investigation
- Expect new proposal 2017 PAC

Monte Carlo RTPC characterisation

- Electromagnetic and hadronic background rates
- Drift times
- GEM pad occupancies
- Prototype device to verify MC ?

Personnel 2016 - 2017

J.R.M. Annand	0.50 FTE
R. Montgomery	0.75 FTE
D.J. Hamilton	0.10 FTE
K. Hamilton	1.00 FTE
P.S. Lumsden (tech)	0.10 FTE
A. Clarkson (tech)	0.10 FTE
C. Neilan (tech)	0.50 FTE

Mississippi State Projects and Personnel

A. Projects for next year

1. Refurbishing the Large Angle Calorimeter (LAC)
2. rTPC simulations

B. Personnel

1. Abishek Karki (Grad. student) — 25%
2. Pubuduni Ekanayaka (Grad. student) — 25%
3. Krishna Adhikari (Post-doc) — 15%
4. D. Dutta (Faculty) — 10%

CNU SBS Contributions

- Projects
 - Coordinate Detector - final assembly and commissioning

- Available Manpower
 - Myself, Faculty member – 40%
 - Ed Brash, Faculty member – 25% (fall only)
 - Ralph Marinaro, undergraduate – $\leq 50\%$
 - Mike McClellan, masters student – $\leq 50\%$

SBU Projects and Contributions

- Projects in Next Year
 - Collaboration Chair
 - Coordinating Simulations and Analysis Software
 - Thermal Annealing Prototype (C200)
 - GEM MPD Decoder in Analyzer
- Available Workforce
 - Myself, Research Professor - 33%
 - Tao Ye, Graduate Student - 10%
 - Charlie Shugert, Graduate Student - 30%



JMU Projects and Contributions



2016-2017 projects:

- + ECAL PMT characterization***
- + Grinch visualization***

Personnel:

- + I. Niculescu, professor, 10%***
- + G. Niculescu, professor, 10%***
- + 2 JMU undergraduates, 20% each***



Gabriel Niculescu – SBS Collab. Meeting, July 2016

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INFN/RM+BA+GE Projects and Contributions

- Project in 2017 (Front Tracker/FT):
 - coordinating
 - complete delivery of GEM chambers to JLab, tests
 - production and test SiD
 - consolidate MPD electronics readout and support integration in CODA
 - Development of the tracking algorithm for the FT
- Available workforce
 - E. Cisbani, senior researcher – 40%
 - G.M. Urciuoli, senior researcher – 30%
 - F. De Persio, PhD – 70%
 - A. Del Dotto, PostDoc – 20%
 - R. Perrino/Bari, senior researcher – 20%
 - P. Musico/Genova, electronic engineer – 20%
 - 3 technicians (60% total)

UConn Projects and Contributions— 2016-2017

- Projects:
 - RICH detector preparation
 - Software development:
 - Monte Carlo simulation—development, code maintenance, user support
 - Reconstruction software—development
- Workforce:
 - Andrew Puckett (faculty): ~70% FTE
 - Freddy Obrecht (graduate student): 50% FTE (other 50% thesis work)
 - Nilesh Deokar (graduate student): 25% FTE (coursework and exams)
 - Eric Fuchey (postdoc): 100% FTE (starting late August, anticipated 3-year position)

- Adam Sarty - ~20%
- 2 full-time undergraduate students for 4months (May-August) each year
- Have focussed on Coordinate Detector development over past few years

Best effort sum from previous slides

	FTE
Professors/Senior Researchers	5.5
Postdoc/Research Scientists	6.8
Technical Staff	3.0
Graduate Students	5.5
Undergraduates	3.4

- Core hardware projects are well covered
- ECal has ramped up significantly - new collaborators to help
- Coordinate detector has become very active
- Call for software resources did not go unanswered
 - Still lots to do!
 - **Offline Analysis is now a big issue**
 - Simulation → simulated analysis DOE review goal
- Some physics/simulation projects still open
 - Kinematics and systematics re-evaluated
 - Recoil polarimetry, charge exchange for G_E^p
 - Coordinate Detector inclusion
 - Event Displays
- Need to assign tasks for starting offline analysis - start in CC?
- GEp Cryotarget timeline?