Detector Operations Support: MicroBooNE

Peter Wilson

PPD Engineering Dept Heads

January 7, 2014

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Agenda

- Operations Support Model
- FY 14 MicroBooNE Detector Operations Budget – FTE plan
- IF&TB group and ELO Responsibilities – Aria and Bill
- Online Support group role in MicroBooNE - Peter S
- MicroBooNE Operations Support Needs (15min) – Bonnie, Bruce and Sam
  - Technician Tasks
  - DAQ Support
  - Engineering needs
- Discussion

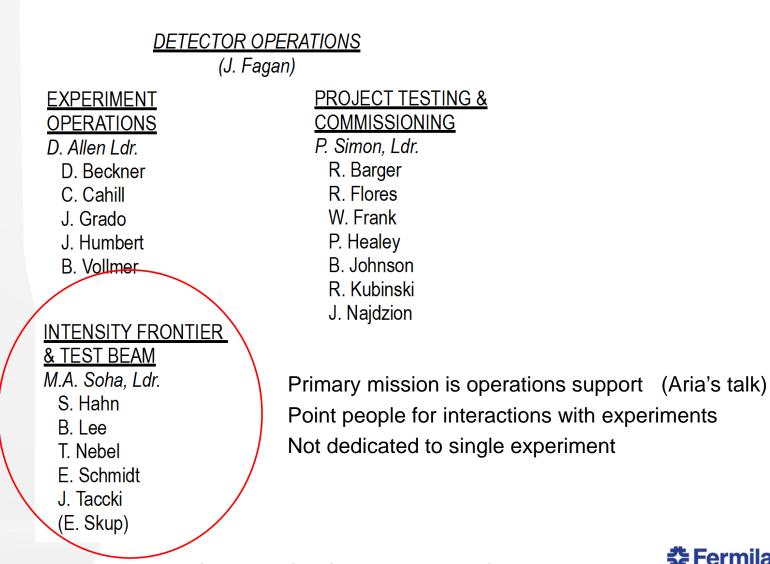**Peter Wilson - Engineering Dept Heads Meeting, January 7, 2014**

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Operations Support

- One critical part of 2011-12 reorganization of engineering depts was aligning elements of the departments for support of operating experiments

- Goal: provide better operations support to Neutrino experiments without the large dedicated groups of CDF and D0

- Cover all aspects of technical support:
  - Mechanical technicians from DDOD
  - Engineering Physicist/Application Physicists in DDOD
  - Electrical and electronics support from EED
  - Software support from EED
  - Mechanical engineering and process controls from MED
  - Alignment from AMD

- First 1+ year was shutdown… now refocus on operations

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DDOD Operations Groups

DETECTOR OPERATIONS
(J. Fagan)

EXPERIMENT OPERATIONS
D. Allen Ldr.
- D. Beckner
- C. Cahill
- J. Grado
- J. Humbert
- B. Vollmer

INTENSITY FRONTIER & TEST BEAM
M.A. Soha, Ldr.
- S. Hahn
- B. Lee
- T. Nebel
- E. Schmidt
- J. Taccki
- (E. Skup)

PROJECT TESTING & COMMISSIONING
P. Simon, Ldr.
- R. Barger
- R. Flores
- W. Frank
- P. Healey
- B. Johnson
- R. Kubinski
- J. Najdzion

Primary mission is operations support   (Aria's talk)

Point people for interactions with experiments

Not dedicated to single experiment

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EED Support Groups

INFRASTRUCTURE & SUPPORT
M. Matulik, Ldr.

S. Chappa
  J. Bell
  R. Davila
  D. Featherston
  W. Jaskierny

C. Danner
  P. Lippert
  V. Martinez

D. Huffman
  M. Cherry
  T. Cunneen

Experience in CDF and D0 support carrying into Intensity Frontier experiments

ONLINE SUPPORT
(P. Shanahan, Ldr.)

  W. Badgett
  G. Savage
  A. L. Soha
  D. Torretta

Created in 2012, Experience in CDF and D0 support
Focus on support of DAQ and slow controls, small project
Development
Not dedicated to single experiment (except Aron Soha – CMS)

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Online Support Group

- The PPD/EED/Online Support group provides support for online software and hardware systems.
- The group's stakeholders include:
  - HEP projects
  - Operating experiments
  - Hardware engineers in SCD/ESE and PPD/EED
  - CD/RSI group
  - Software engineers in SCD
  - SCD/FEF/Scientific Linux & Architecture Management group
  - PPD/DDO/Intensity Frontier & Test Beam group
  - ROC management
  - XOC management
  - PPD/EED management
  - PPD management
- In the development phase of projects and experiments, the group provides input to hardware and software engineers in the development of requirements and specifications of new systems.
- In the operational phase of experiments, the group provides support for maintenance and improvements of online software systems, including user interfaces, control-and-monitoring software, data acquisition software, database utilities, and control room systems. The group also provides support for maintenance and improvements of detector readout and control-and-monitoring hardware.
- In each of these phases, as well as for detector R&D, the group supports development, deployment, and maintenance of hardware and software for test stand systems, in collaboration and coordination with the stakeholders.

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MED Support Group

PROCESS CONTROLS

D. Markley, Ldr.

M. Sarychev, Dep. Ldr.

  M. Knapp

  J. Loskot

  T. Martin

  W. Noe

Experience in CDF and D0 support
Develop process control (PLC) solutions
and provide operational support

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FY14 Budgeted Effort – MicroBooNE Ops

- Plan: PPD Division Budget presented in early October.
  - Mechanical Designer – 1.10 FTE-yr
  - Electrical Engineer – 0.26 FTE-yr
  - Electrical Technician – 0.44 FTE-yr
  - Mechanical Engineer – 0.50 FTE-yr
  - Mechanical Technician – 1.30 FTE-yr
  - IT Professional – 0.25 FTE-yr
  - Engineering Physicist – 0.13 FTE-yr
  - Scientist – 0.25 FTE-yr
  - Total – 4.8 FTE-yr

- Notes:
  - ELO effort not fully allocated out to experiments – expect reporting to be higher in EP and Sci category
  - Effort for general Underground Area support is accounted separately

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Improving Operations Support

- Need good coordination between IF&TB Operations group and rest of PPD technical staff
  - They are the prime interface from the operating experiments
  - See more in Aria's talks
- Look for opportunities for technical staff to help with operations
  - Eg EED Infrastructure group handling MINERvA PMTs
- Identify primary contacts for engineering help
  - MED
  - EED
- Plan meetings in Eng Dept Head meeting with each experiment over coming weeks

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