Status of HCal project

Scope:
Production of 12 X 24 module hadron calorimeter array
with
Supports
Pulser system
Electronics/DAQ
Cables
Software
Light-collection, relative QE, gain vs. HV, calibrated for each module, ready to install
Completed:

Design/production of 288 (+4 spare) modules
Design, construction, loading of subassemblies
Design, development, installation of pulser system
Tasks to complete
Modification of 100 bases for XP 2282 PMT’s (200 for XP 2262 ready
Measurement of relative QE of all tubes
Calibration of light-yield of all fibers
Installation of tubes/bases on modules (orientation, optical grease?)
Replacement of one module?
Calibration of gain vs. HV for all PMTs
Characterization of yield/light-collection of each module
Final design/construction of gantry
Design/construction of HCal support/positioning system
PMT-patch panel cables sorted/tested/labeled
Electronics installed in racks/cabled
Long signal cables tested/labeled
Tasks to complete (cont.)
Construction of all long/short HV cables & boxes
Procure/install all DAQ modules
Readout/decoding (done?)
Event display / signal monitoring software
Pulser-based calibration/monitoring system
Cluster-finding
Cosmic testing
Timeline/workforce
Modification of 100 bases for XP 2282 PMT’s
   < 2 weeks / Eric Day (CMU machinist)
Measurement of relative QE of all tubes
   September-October / Juan Carlos
Calibration of light-yield of all fibers
   Finish first measurements September / Juan Carlos
   Final measurements Summer ‘19 / Brian, student
Installation of tubes/bases on modules (orientation, optical grease?)
   September-October / Juan Carlos, Eric Day
Replacement of one module ?
   Test module performance / CMU postdoc spring ‘19
   Replace (if necessary & practical) Summer ‘19 / Brian, Eric
Calibration of gain vs. HV for all PMTs  
   Summer ‘19 / Brian, CMU postdoc, students
Characterization of yield/light-collection of each module  
   Summer ‘19 / Brian, CMU postdoc, students
Final design/construction of gantry  
   2019? / JLab
Design/construction of HCal support/positioning system  
   2019? / JLab
PMT-patch panel cables sorted/tested/labeled  
   January ‘19 ? / students?
Electronics installed in racks/cabeled  
   Fall ‘18? / John Matter
Long signal cables tested/labeled
   January ’19? / students?
Construction of all long/short HV cables & boxes
   Fall ‘18? / Chuck Long
Procure/install all DAQ modules
   Spring ‘19? / Alexandre
Readout/decoding (done?)
   September / Juan Carlos
Event display / signal monitoring software
   Fall / Juan Carlos
Pulser-based calibration/monitoring system
   Summer ‘19 / Brian, CMU postdoc
Cluster-finding
  Fall ‘18 / Juan Carlos
Cosmic testing
  Fall ‘18 ? Spring&Fall ‘19/ Brian, CMU postdoc,
    Catania?, others?