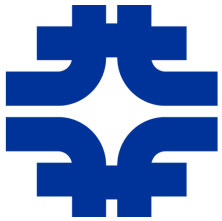


# MTA Update



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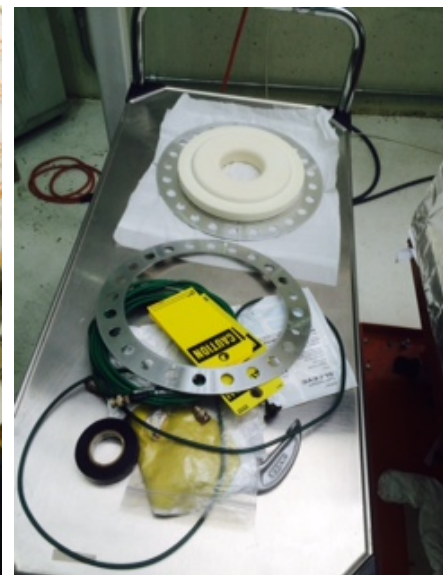


*MAP Weekly Meeting*  
*FNAL – Sep 18, 2015*

- Infrastructure
  - more power outages
  - oscilloscope repairs complete
  - 805-MHz klystron removed today for replacement
  - DAQ software and front-end hardware improvements for reliable collection of breakdown data
  - DAQ PC upgrade in progress
- HPRF cavity
  - 1<sup>st</sup> high-power test run with dielectric loading finished last night
- Modular Cavity
  - (2<sup>nd</sup> half of) 1<sup>st</sup> B=0 run completed Sep 9
- MICE cavity
  - on standby

- Ran for >400 hours over 24 days (Aug 17-Sep 9)
  - up 24 x 7 except during outages, equipment problems and detector reconfiguration
  - with 98% shift coverage: Michael Backfish, Daniel Bowring, Ben Freemire, Terry Hart, Alexey Kochemirovskiy, Al Moretti, Dave Neuffer, Mark Palmer, YT, Katsuya Yonehara
- Safe operating gradient and breakdown rate vs gradient established in B=0 for Cu plates
- X-ray rates and spectra saved
- Data analysis in progress
- Disassembly/inspection when resources available

- Prepared in parallel with Modular Cavity run
  - successful pressure test Sep 1
  - mechanical setup in hall complete Sep 1
  - relief valve swapped Sep 9
  - instrumentation setup complete Sep 9
- Shakedown with RF Sep 10
- Ran with 1<sup>st</sup> donut (99.5% alumina) Sep 11-14
- Swapped in 2<sup>nd</sup> donut (98.5%) Sep 14-15
- Ran with 2<sup>nd</sup> donut Sep 15-18
- Total run time >40 hours
- 100% shift coverage:
  - Ben Freemire, Al Moretti
  - YT, Katsuya Yonehara
- N2 data at 4 pressures
  - and with O2 doping
- Disassembly/inspection next
  - next donut requires new seals
  - and new klystron



- Infrastructure
  - need to retrain solenoid
  - klystron replacement in progress
- HPRF
  - new seals to be fabricated
  - run with the other alumina donut(s) when ready
- Modular Cavity
  - interior inspection
- MICE
  - vacuum system service before next run
  - explore dark current with new detector configuration
- Contingent on availability of RF sources, tech labor
- Fermilab accelerator complex shutdown (Jul-Oct)
  - limited access to resources
  - power outages and other interruptions
- Analysis/documentation effort continuing
  - detector calibration
  - X-ray spectrum data
  - HPRF PRST-AB

- MTA personnel well represented on the podium at the Fermilab Exceptional Performance Awards, Sep 15
- Congratulations to Daniel Bowring, Al Moretti, Dave Peterson

