Status of the Hadronic Calorimeter

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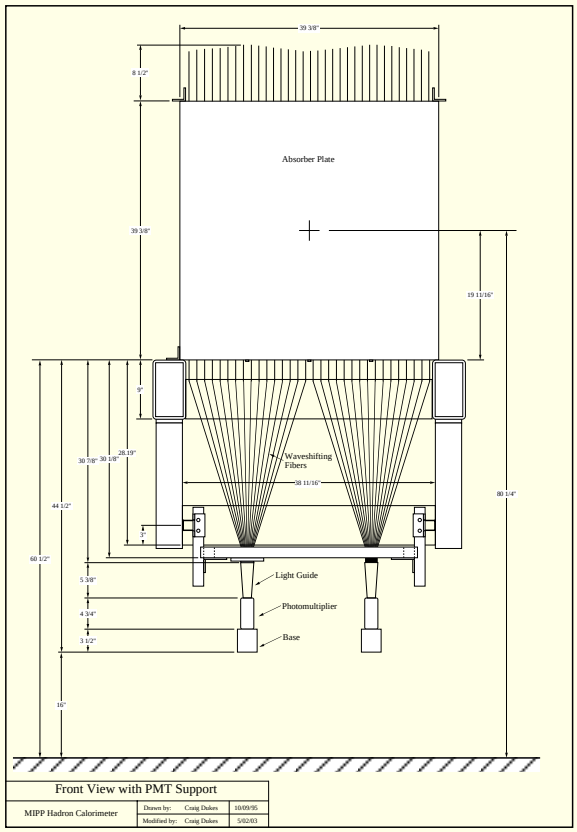
Getting the Calorimeter Working Again

- Lanchun Lu: Project Manager.
- Note: calorimeter is fragile — please be careful!
- Stand:
  - Problem: beam is lower than in $HyperCP$ — not enough room to reinstall PMTs, etc.
  - Solution: simple redesign suggest by Leon Beverly should work.



- Reinstalling readout:
  - PMTs and other equipment has been moved back to Fermilab.
  - Need to have light guides repolished and silicon cookies made.
  - Light tight box is gone: we will design a new one. It should be quite simple to fabricate.
- Electronics:
  - Our plan is not to reinstall laser pulser system, which doesn't exist anymore, and which was never used for any physics.
  - We hope to to the cell-to-cell calibration as was done in $HyperCP$: using muons.
    * Need to have muon counter made for rear of calorimeter.
    * Question: will there be enough muons? Don't need many so the answer is probably yes.
    * This means that we need a fairly large dynamic range in the readout, although somewhat less than with $HyperCP$.
    * In $HyperCP$ we had a custom 14-bit ADC. We wish to eschew it and replace it with a pair of LeCroy 10-bit ADCs.
    * Need to set up a muon trigger for calibration runs.
  - Absolute calibration will be done with beam particles.
    * Where do the beam particles go?
    * What is the rate at the calorimeter?
  - Note: need cable(s) which go out to the a 'safe' area.

- Software:
  - Gabriel Niculescu will be in charge of slow control for calorimeter, which right now only needs to control a gate generator for the ADCs and the HV.
- Timetable:
  - Driven to some extent by the calorimeter stand.
  - We should be finished with our end by mid-April.