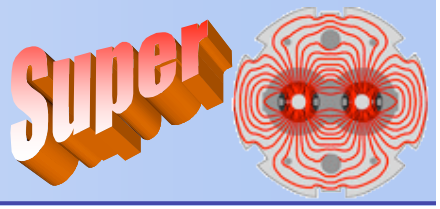
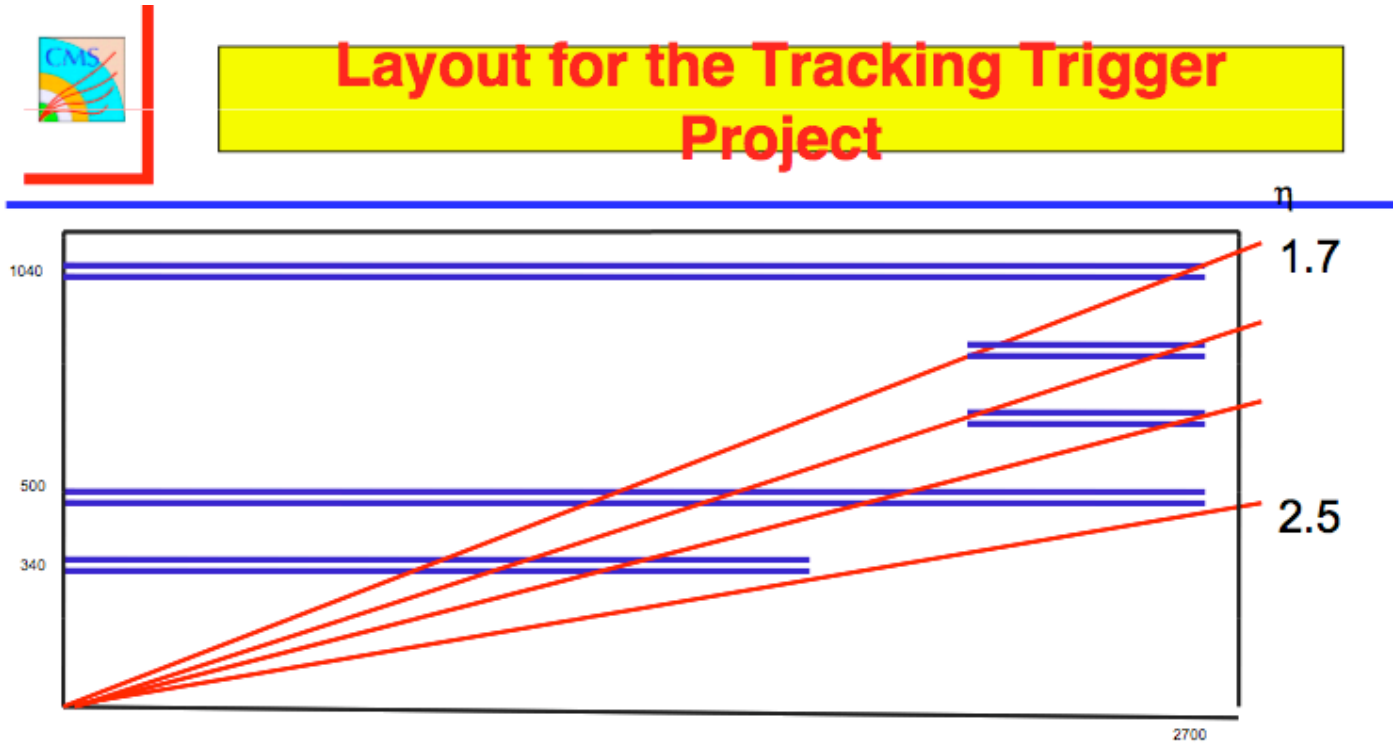
Simulation WG Summary



- There was no actual separate Simulation Working Group/sessions
  - No time to create summary of all simulation related talks or results presented at this working group - but there were a lot of them! And spread over all the different working groups.
    - Simulation tools (e.g. tracking framework, general and ECAL trigger framework, layout tool, tools to handle pileup at SLHC, general data and HCAL overlap tools)
    - Simulation results for tracking, ECAL, HCAL, track triggering
  - Instead present the plan for upgrade simulations (comments/points biased towards tracking and tracking trigger)

Baseline Strawman Layout

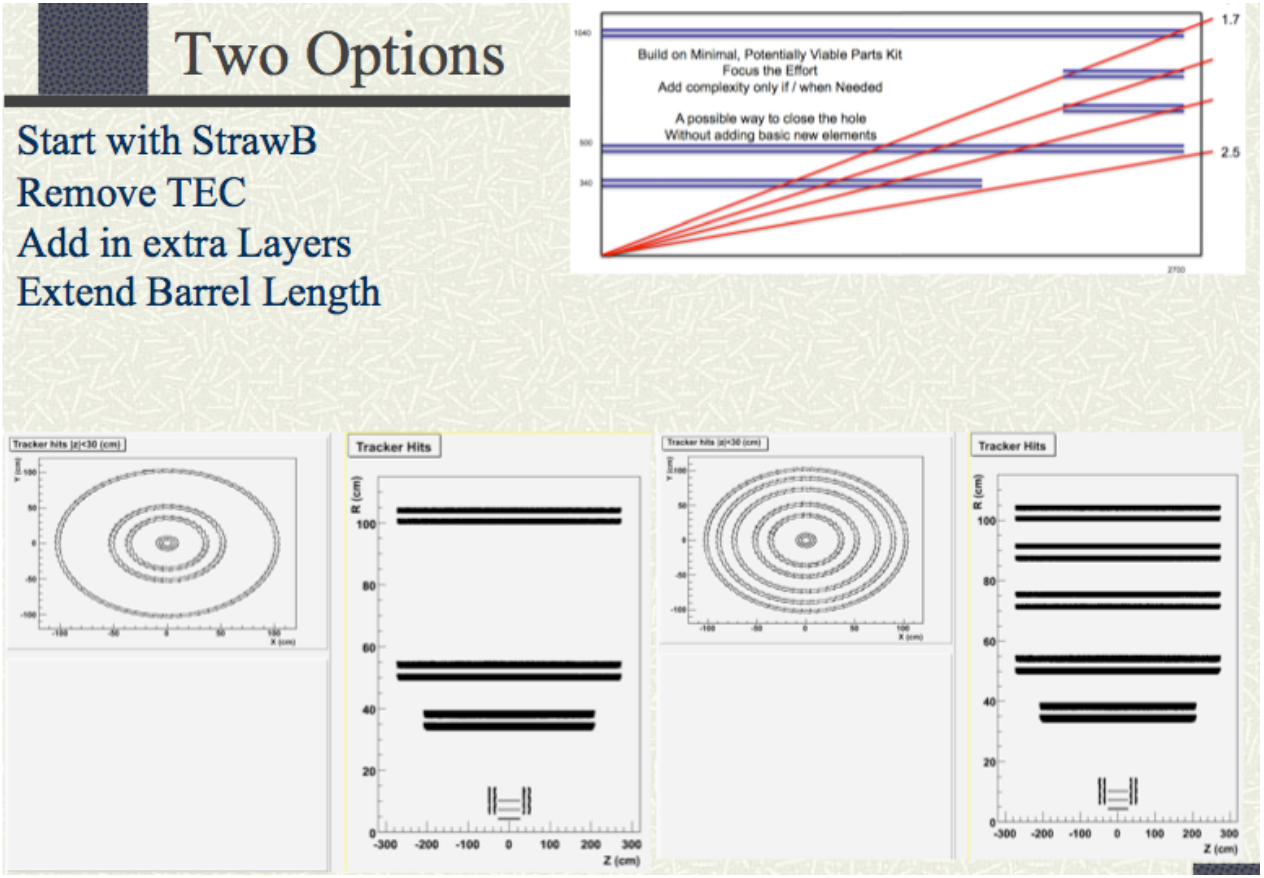
- We have decided on a baseline strawman layout to study
  - A strawman for which we can learn about all the issues



A Quick look!

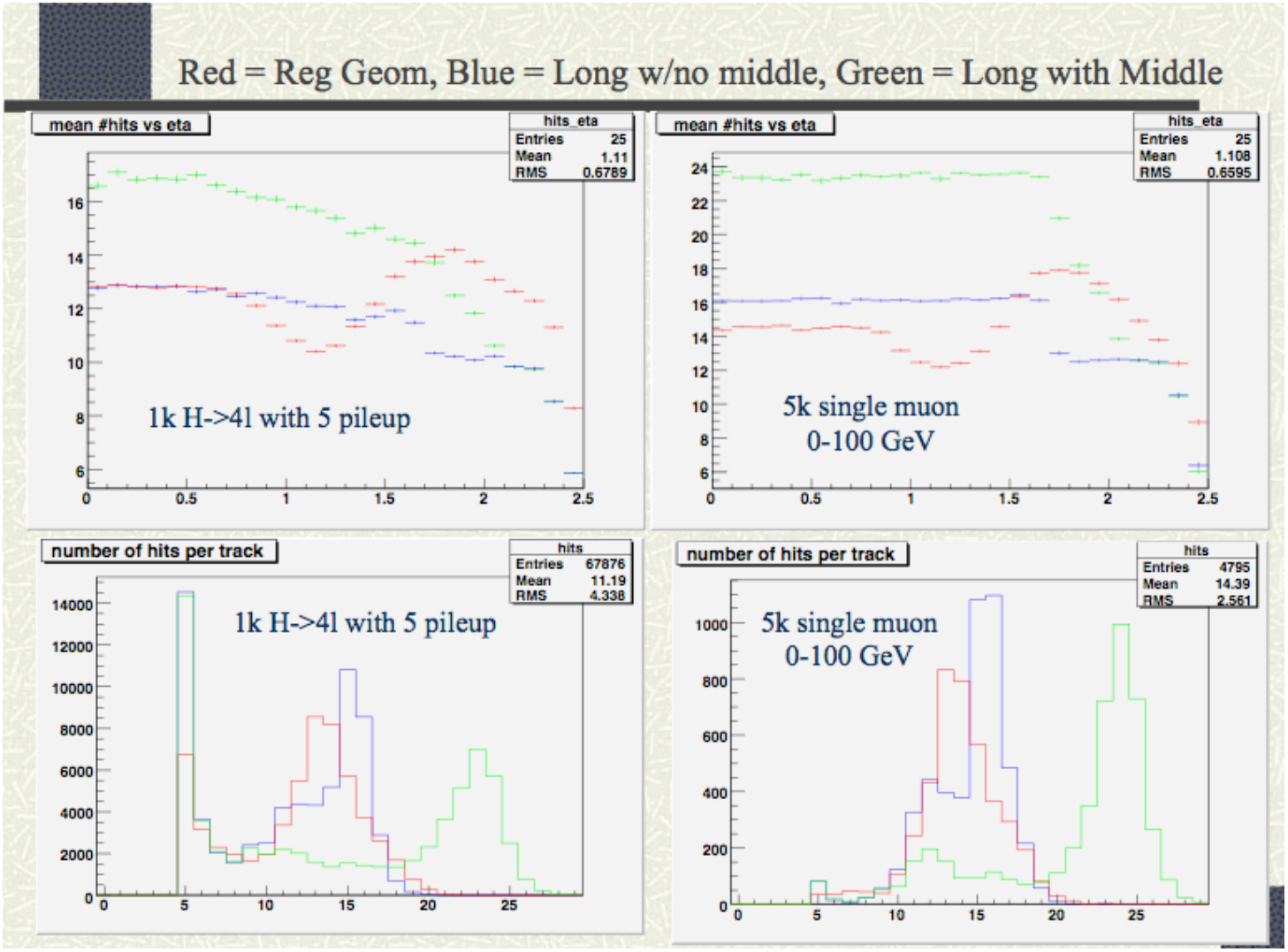
- Tools (and capable person) in place to actually have a quick look at the baseline strawman (based only on strawman B so not the baseline rods, etc.)
  - Mike Weinberger setup the (almost) the strawman baseline after dinner and ran some simulations to get some results (fresh of the press…so…still checking)

Very preliminary



Plots from Mike Weinberger

Very preliminary



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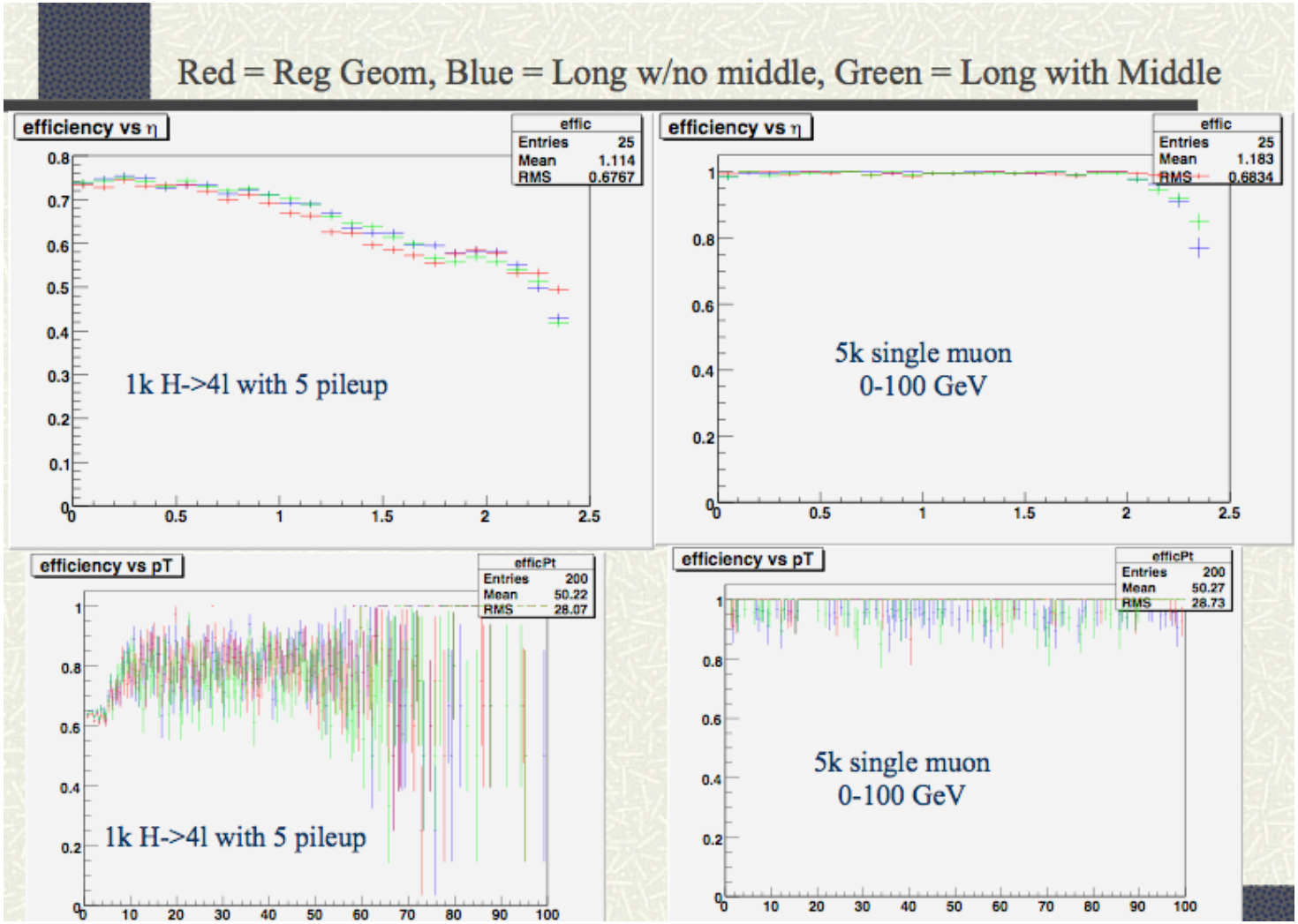

Plan for 2009

- Setup the baseline strawman geometry
  - Before mid-2009, studies in parallel
- Study and learn from the baseline layout
  - Geometry layout tool will be very useful to quickly compare variations and get layout statistics (including surface, channels, occupancy, power, cost, bandwidth)
  - Tracker Layout Task Force will help us converge on module structures; realistic material budgets and cooling layout; possible channel counts; etc.
  - Work with other upgrade WGs to define requirements
  - Many simulatiom studies to do!
- Continue to setup and improve software tools
  - Work with all WG to have common set of software tools
  - Make simulations more realistic
  - Improve software for SLHC pileup
- Study the Phase 1 pixel upgrade/replacement layout

Summary

- We have a 2009 focused plan
  - On studying the baseline strawman
  - On the Phase 1 pixel layout
    - Need input from tracker group
- Work with all upgrade WGs
  - To converge on realistic structures/materials
  - To work out the requirements for triggering
  - Need a forum, etc. for WGs to work together
    - We have the tracker layout task force
- Plan to use real data to feedback to simulations