

# Computing plan and milestones

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- goals
- milestone dates
- major milestone = MDC2
  - begins March 8
  - lasts 2 weeks
  - Coordinator = Tim Thomas (UNM)
  - goals:
    - sustained PHENIX operation in ~2/3 of RCF
    - exercise Central Analysis Server
    - connect to data base

Simulations

Core Offline

Central Reconstruction

Muon Reconstruction

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# Simulations Plans

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- for MDC2
  - Freeze PISA geometry & generate events
    - <100K events central, min bias, p-p
  - Automate event generation process
  - Generate events on CC-J
  - Mix in signals as required by PWG
- for Day-1
  - 3-d magnetic field (*first try made already*)
  - Fast Monte Carlo
    - specify, implement, test
  - Merge at hits level
  - Read geometry from database
  - Implement cocktail event generator*
  - Commission real PHENIX simulation factory
  - Single, pair track efficiency studies, corrections

# Core Offline

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- for MDC2
  - reconstruct from pre-generated PRDF
  - use databases in reconstruction
  - move data from counting house
  - test uDST, analysis, DST data carousel
  - prototype event display
- for engineering run
  - use database in counting house+ RCF
  - automate reconstruction
  - real CAS scheme
  - independent PWG access to DSTs
  - improved event display
- for Day-1
  - automatic reconstruction w/error handling
  - Robust production database
  - Calibration data base tools ready
  - CAS scheme in place
  - disk management by subsystem, PWG

# Central Reconstruction

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- for MDC2
  - begin to use track model
  - perform global tracking studies
    - after code freeze (March 1)
  - subsystem, global PID code usable
  - integrate calibration, geometry database
    - use 1 subsystem as example
- for Day-1
  - fully implement track model*
  - Q/A, benchmarking, document. standards*
  - migration to messaging, histogram factory
  - fully integrate calibration parameters
  - complete alignment software
  - complete calibration software
  - complete online monitoring software

# Muon Reconstruction

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- for MDC2
  - mutr/muID performance w/new pat. recog.
  - use new muID software  
(remove dependence on GEANT/use C++)
  - Online monitoring
  - Event display
- for Day-1
  - update geometry to as-built
  - determine & use alignment constants
  - software to determine calibrations
  - alternative methods for muon ID
  - 2nd pass pattern recog: muTr and muID
  - update algorithms
  - include inefficiencies & hot/dead channels
  - full database use
  - optimize online monitoring & event display

# Issues and Concerns

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- We still have to back away from goals  
e.g. full use of database in MDC2, 3d  
magnetic field in PISA, implement cocktail  
due to manpower limitations!
- Framework change important; close to MDC2  
confusion on how to do analysis  
takes priority over efficiency improvements
- Coupling to PWG still weak  
distribute sample DST,uDST analysis?  
PHENIX daily meetings during MDC2?  
special postmortem session on analyses?
- Performance optimization costs manpower!