



# MAUS Status

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MICE CM 39

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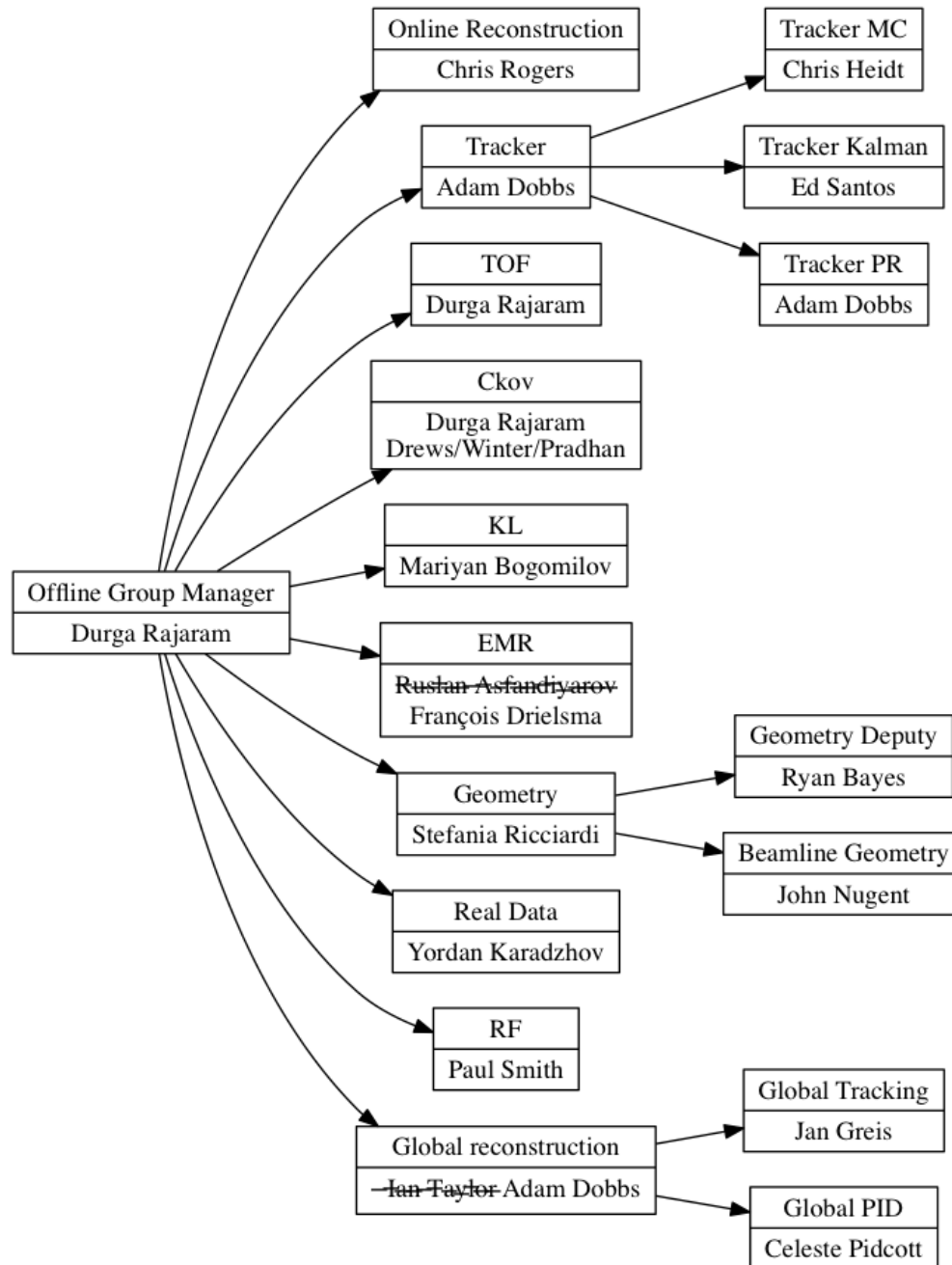


# OVERVIEW

- Personnel changes
- Status
- Issues
- Test Coverage
- Schedule
- Summary



# ORGANIZATION



## Changes since CM38

- EMR
  - Drielsma
- Ckov
  - New Undergraduate students at IIT and UMiss
- Global
  - Jan Greis replaced Peter Lane
  - Adam Dobbs replaced Ian Taylor as head



# AT THIS CM

- Tracker (Dobbs) + Tutorial (Dobbs)
- TOF (Rajaram)
- Ckov (Rajaram)
- EMR (Drielsma)
- Global
  - Tracking (Greis)
  - PID (Pidcott)
- KL MC (Bogomilov/Nugent)
- MAUS Online
- Grid & CDB (Martyniak)
- MC Beam (Nugent)
- Geometry (Bayes)
- Joint Analysis/Software parallel
  - Readiness for MC production
  - Software-analysis interface



# STATUS & ISSUES

- Since CM 38
  - KL Digitizer has been added
  - EMR geometry finalized & true hits added
  - G4BL added as an third party option to generate MC beam
  - Major API changes for data type conversions
  - Tracker updates & improvements
  - Progress on Global PID framework
  - Geometry updates & improvements
  - Progress on EMR reconstruction
  - Progress on Ckov reconstruction
- Issues
  - Memory leak
    - Holding up GRID reconstruction, also likely affects online reconstruction



# Test Coverage (Python)

Module	Coverage
CallG4BL	6%
MapPyBeamLineSimulation	5%
MapPyScalersDump	45%
ReducePyCkovPlot	61%
ReducePyKLPlot	54%
ReducePyTOFPlot	2%
ReducePyTofCalib	54%
docstore.DocumentStore	69%
framework.input_transform	36%
framework.merge_output	65%
geometry.GDMLtoMAUSModule	16%

- Overall line coverage: 68%
- need to get this up



# Test Coverage (C++)

Module	Coverage
common_cpp/API	33%
common_cpp/DataStructure	27%
common_cpp/DetModel/EMR	2%
common_cpp/DetModel/SciFi	62%
common_cpp/JsonCppStreamer	57%
common_cpp/Recon/Bayes	52%
common_cpp/Utils	67%
input/InputCppDAQData	52%
input/InputCppDAQOfflineData	69%
input/InputCppDAQOnlineData	2%
map/MapCppTrackerDigits	48%
map/MapCppGlobalReconImport	43%
map/MapCppKLMCDigitizer	2%
reduce/ReduceCppPatternRecognition	67%













# SUMMARY OF CAPABILITIES

- Detector reconstruction
  - have: TOF, SciFi, KL, Ckov, EMR (hit)
- Global
  - Don't have: Global Tracking
  - Have: Global PID framework
- MC
  - have: digitizers for TOF, KL, SciFi
  - Don't have: digitizers for Ckov, EMR