

MAUS: MICE ANALYSIS USER SOFTWARE

- MAUS provides a simulation, reconstruction, and accelerator physics analysis framework for MICE
 - Monte Carlo simulation of the experiment
 - Reconstruction & Particle ID
 - Online reconstruction & monitoring during data-taking
 - Interface to Configurations & Calibrations Database
 - Framework for analysis tools
- Modular framework, flexible API
- Online parallel processing
- Several industry-standard QA practices
 - Code coverage, continuous integration testing

DESIGN

- Design inspired by MapReduce
- Framework built on plug-in modules
- Modules written in C++ or Python
- Data representation: ROOT, JSON
- Multithreaded online reconstruction framework