**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