MUON IDENTIFIER

FINAL DESIGN REVIEW

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Overview

- Specifications
- Personnel
- PDR Action Items
- Simulation Status

MuID Specifications

- Trigger Decision in < 106 ns
- Pointing to tracker to within multiple scattering limit
- Overall π/μ rejection $\approx 2.5 \times 10^{-4}$
- Simulations indicate tubes with 8 ganged wires provide sufficient granularity.

MuID Personnel

- Muon System Manager (DC Member): W. Kinnison
- MuID Subsystem Manager: K. Read
- MuID Mechanical Coordinating Physicist: K. Read
- MuID Electronics Coordinating Physicist: V. Cianciolo
- MuID Chief Mechanical Engineer: J. Johnson
- MuID Production Factory Manager at BNL: K. Kurita
- MuID Production Factory Manager in Japan: H. En'yo
- MuID Production Japan-US Liaison: N. Saito
- MuID Chief Electrical Engineer: J. Halliwell
- Muon Computing Liaison: K. Read
- 38 Participants: Faculty/Staff (25), PostDocs (4), Engineers (2), Students (7)
- 7 Institutions: CIAE, Kyoto U., Lousiana State, ORNL, RIKEN, U. Tennessee, Vanderbilt U.

MuID PDR Action Items

- The unistrut/roller support scheme proposed for installation of the panels needs further evaluation. Non-uniform distribution of the load must be taken into consideration during all installation steps as well as in the final position.

* This is addressed in the following Mechanical Design talk, the results of recent load tests at ORNL, and the video.

- If possible, a different temporary crane that does not trap existing crane should be designed. Also the entire process of transfer from the transport frame to final position needs to be better defined.

* This is addressed in the following Installation Scenario talk.

- A plot should be made quantifying the ability to differentiate pions and muons as a function of how many planes contain panels. This plot will be used to evaluate the need for panels in gap 6.

* This is shown in the following Simulation Status talk.

- An estimate is needed for the manpower necessary for the factory for next summer.

MuID PDR Action Items

* This is given in the Panel Production Factory talk.

- Requirements for the crane hook and roll-up door height for the factory need to be defined so that appropriate space can be found. Alternatives (A-frame?) requiring less head room should also be evaluated.

* This is discussed in the Production Factory talk.

- The mechanical prototype should be completed so that mechanical testing can begin.

* It is fully loaded with tubes. Many tubes have been operated. It has been flipped over once.

- Provisions for gas monitoring must be made.

* This is certainly planned for and the status will be described in the Gas R&D talk.

Simulation Status

- Code
- Trigger
- Offline Performance
- Gap 6

Simulation Status