

FTPC MDC4 Summary

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- did not take part in pp chain
FTPC simulators can not handle pile-up
- first large scale experience
with slow simulator and cluster finder
- identified and corrected software bugs
- updated QA for FTPC

Reconstruction

- Done

- Input: ~ 14500 AuAu 200 GeV MEVSIM events
- STAR software release: May 05, 2001
- FTPC chain:
 - * slow simulator
 - * cluster finder
 - * tracker (requires ≥ 5 hits)
- Global tracks - fit without vertex constraint
 ~ 738 global FTPC tracks/event
- Primary tracks - fit with vertex constraint ($dca < 1.0$ cm)
 ~ 541 primary FTPC tracks/event

- To Do

- implement StAssociationMaker
(tracking acceptance and efficiency)
- add pile-up to fast/slow simulators (pp runs)

Analysis

FTPC Characteristics:

- The east and west FTPCs are identical
- Each have 10 cylindrical padrows
- Each padrow has 6 azimuthal sectors
- Each sector has 160 1.9x20mm pads
- Both FTPCs are installed and are 99% live
- The noise is below 1 ADC count

• Technical Results

- The expected loss at the sector boundaries is less than 5 (see [GtrkXfYfFW.ps](#))
- Maximum number of hits a track could have (see [GtrkNPntMaxFW.ps](#))
- Actual number of hits fitted (see [GtrkNPntFitFW.ps](#))
- Number of fitted points vs Track length
number of potential points increases with traversed length
clustering near diagonal shows tracking picks up most reconstructed space points
(see [GtrkFitPntLengthFW.ps](#))

- Physics Results

- Acceptance (see [PtrkPtVsEtaFW.ps](#))
- Transverse momentum distribution integrated over rapidity (see [PtrkPtFW.ps](#))
- Momentum Distribution (see [PtrkPFW.ps](#))
- Flow analysis is possible (see [Flow.ps](#))
- Directed flow from MEVSIM events (see [FlowEta1.ps](#))
- Elliptic flow from MEVSIM events (see [FlowEta2.ps](#))