Silicon Standalone Studies

Florencia Canelli
UCLA
March 24, 2004

Overview

Input files

- Z->$\mu\mu$ (with UE)
- Manfred's 10k events 5.3.1pre1
- 1k events used

Efficiency of SiSA with respect of SiPT: cuts for denominator and numerator include number of axial hits >3 and stereo > 1

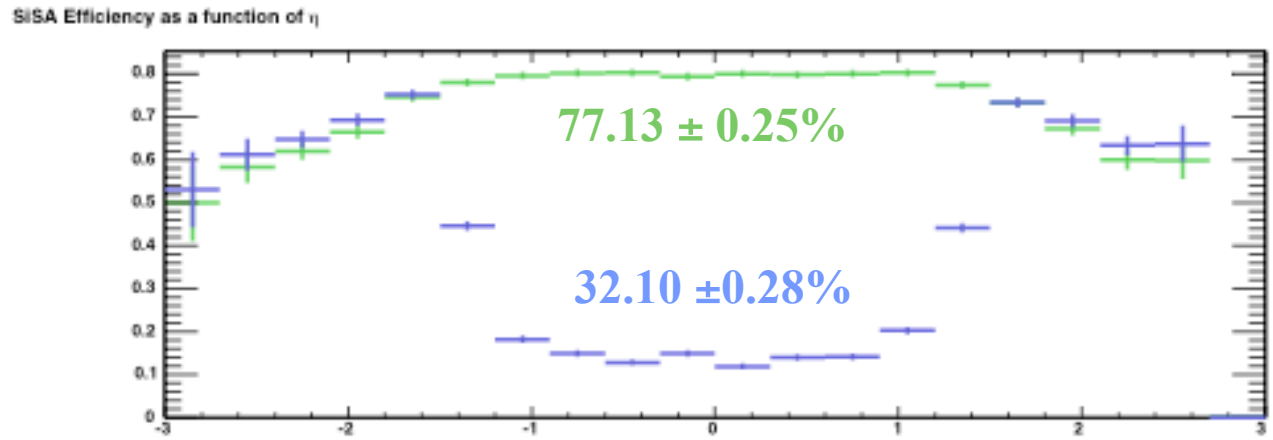
Comparisons:

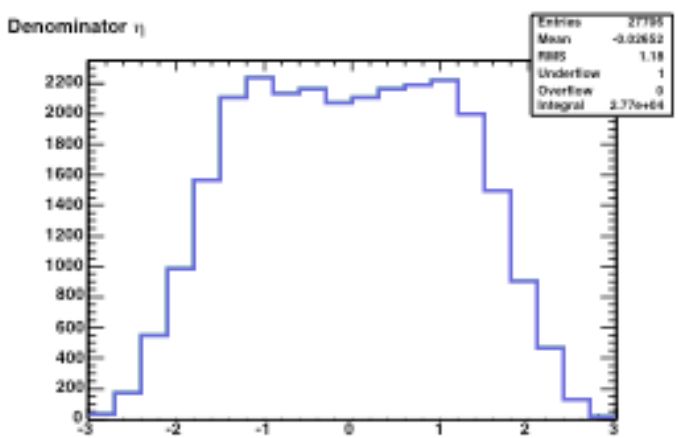
- Use standard tracking tcl (includes OI)
- Use standard tracking tcl **not** including OI:
  - removing SiPatternRecModule from path
- Use standard tracking tcl inlcuding OI but
  - In SiPatternRecModule-StVert: UseAllHitsInKalStandalone set t (new switch by Thornsten)

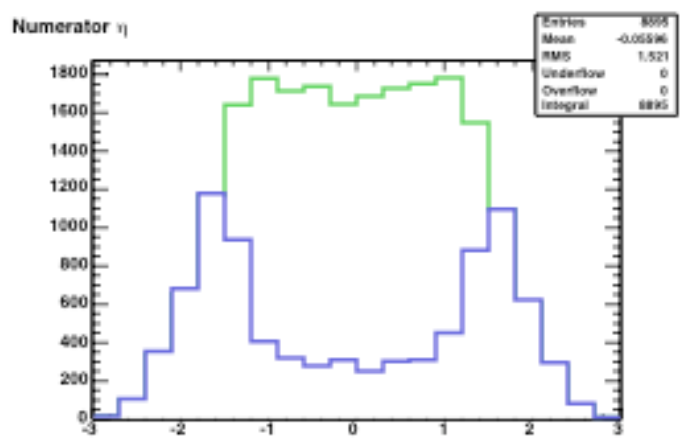
Efficiency as a function of η

Green: standard tracking tcl with NO OI

Blue: standard tracking tcl with OI



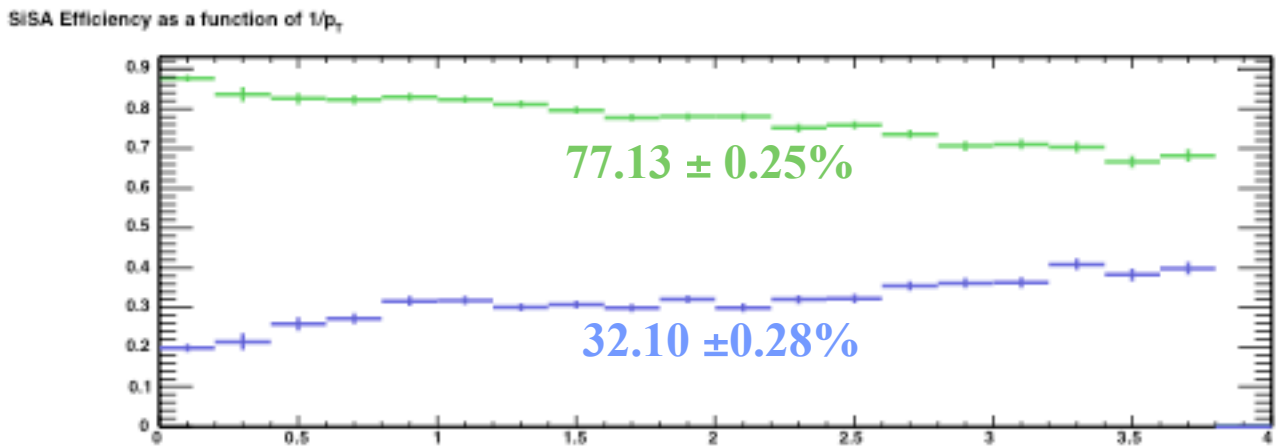


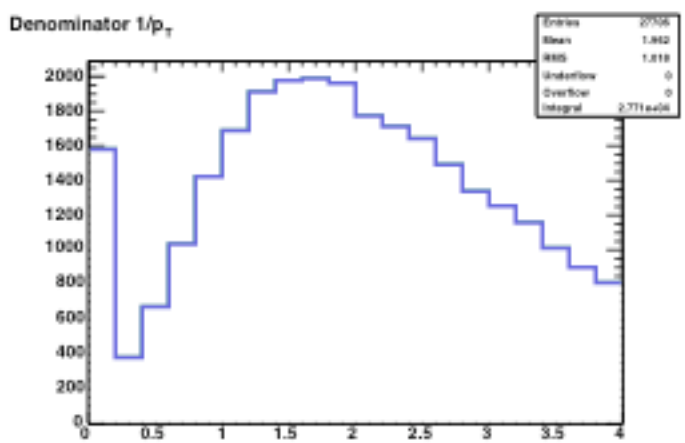


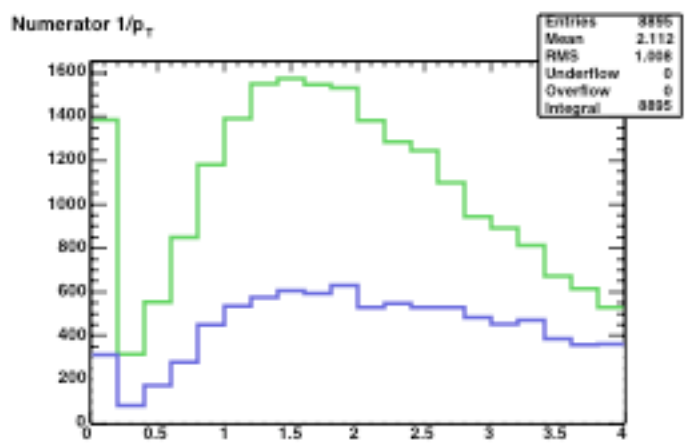
Efficiency as a function of $1/p_t$

Green: standard tracking tcl with NO OI

Blue: standard tracking tcl with OI





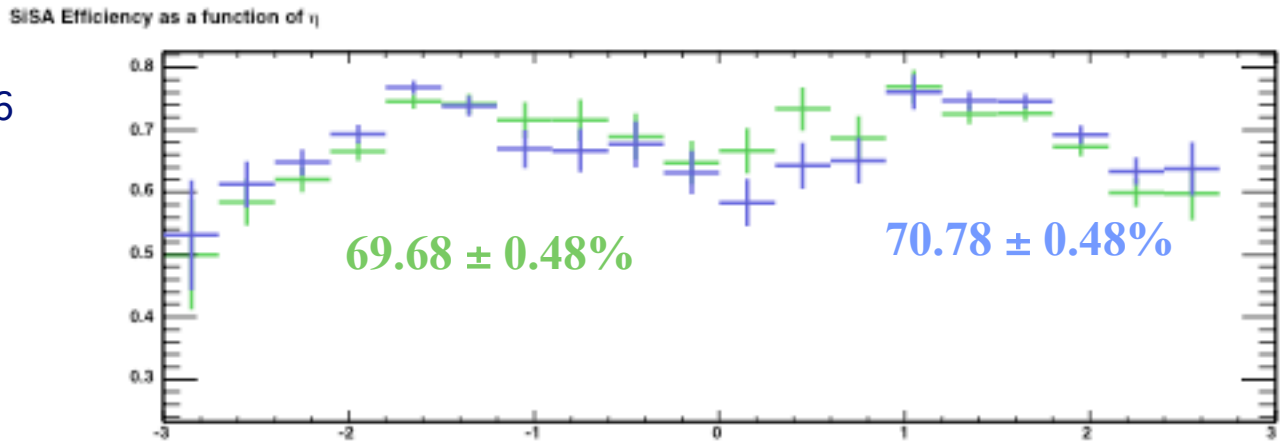


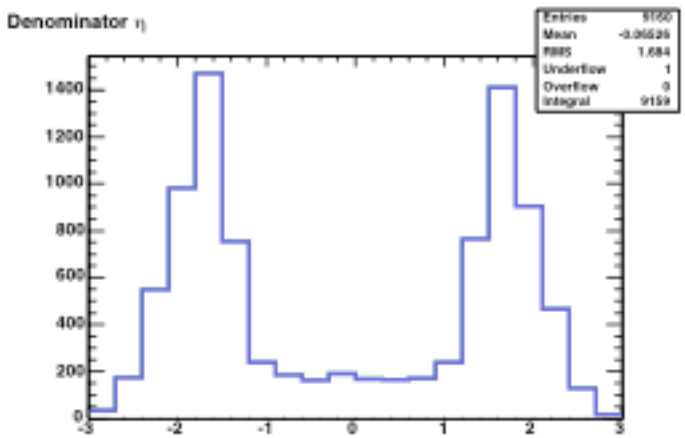
Efficiency as a function of η - forward region

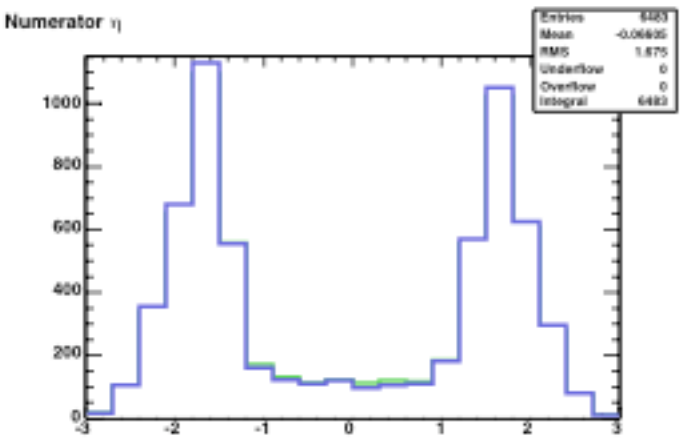
Only MC hits >36

Green: standard tracking tcl with NO OI

Blue: standard tracking tcl with OI





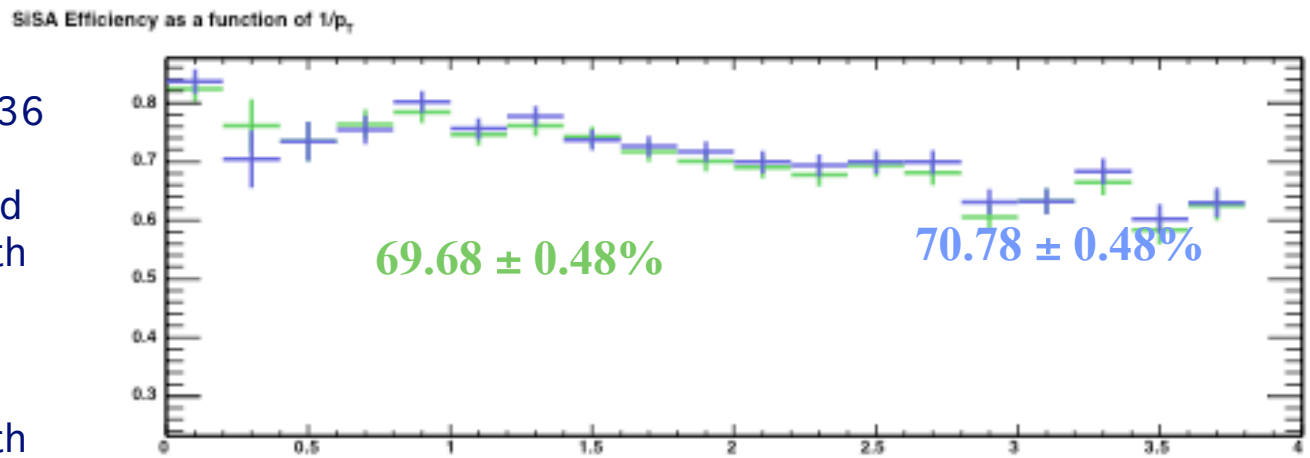


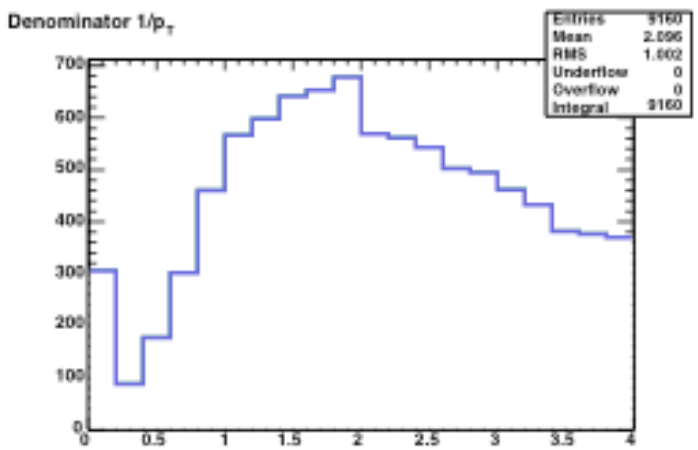
Efficiency as a function of $1/p_t$ - forward region

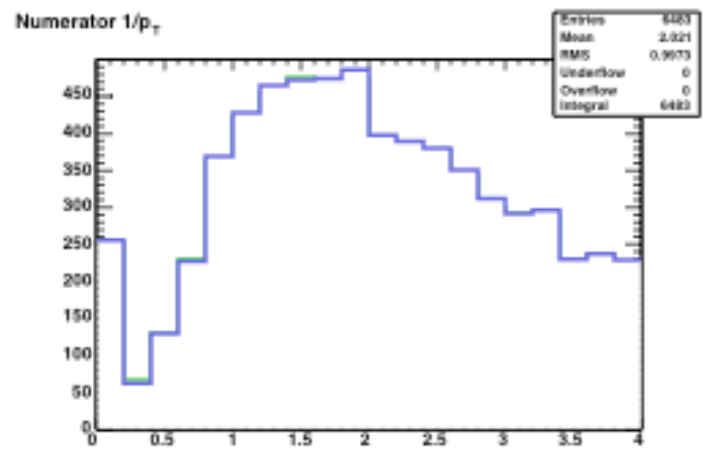
Only MC hits >36

Green: standard tracking tcl with NO OI

Blue: standard tracking tcl with OI



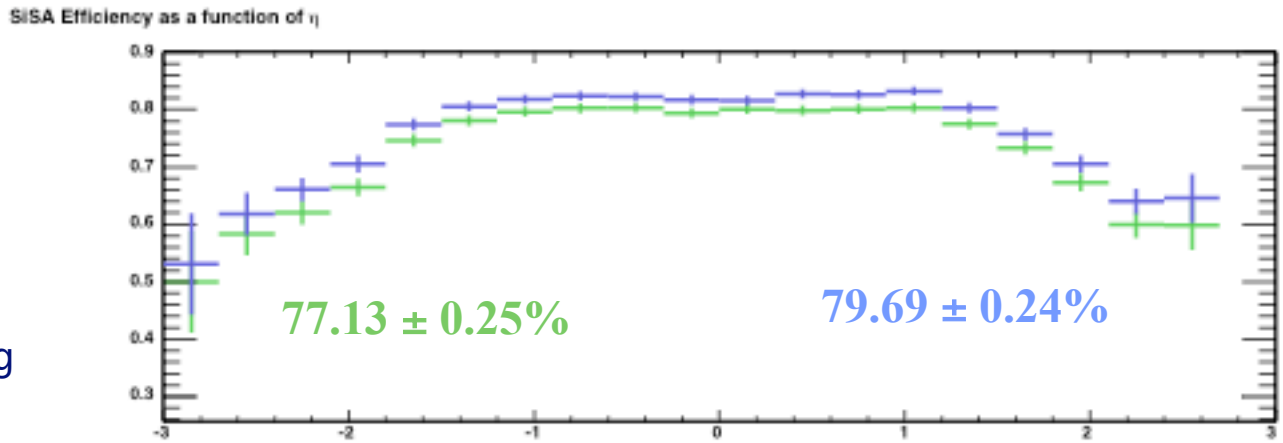


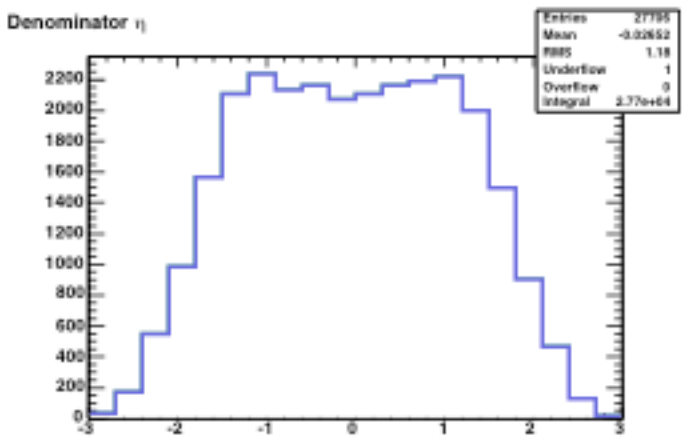


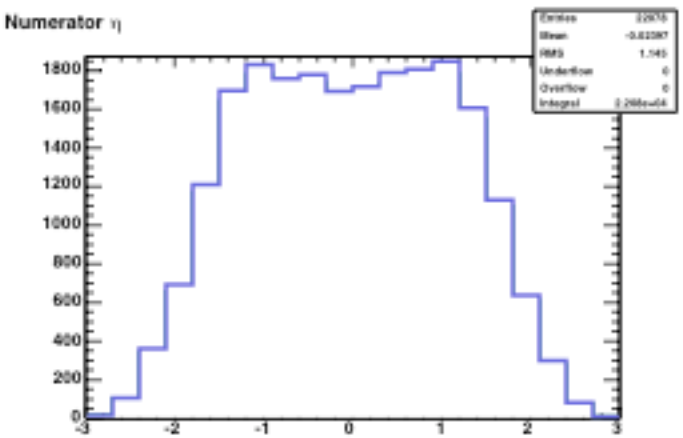
Efficiency as a function of η - new switch

Green: standard tracking tcl with NO OI

Blue: standard tracking tcl using all hits in SiSA



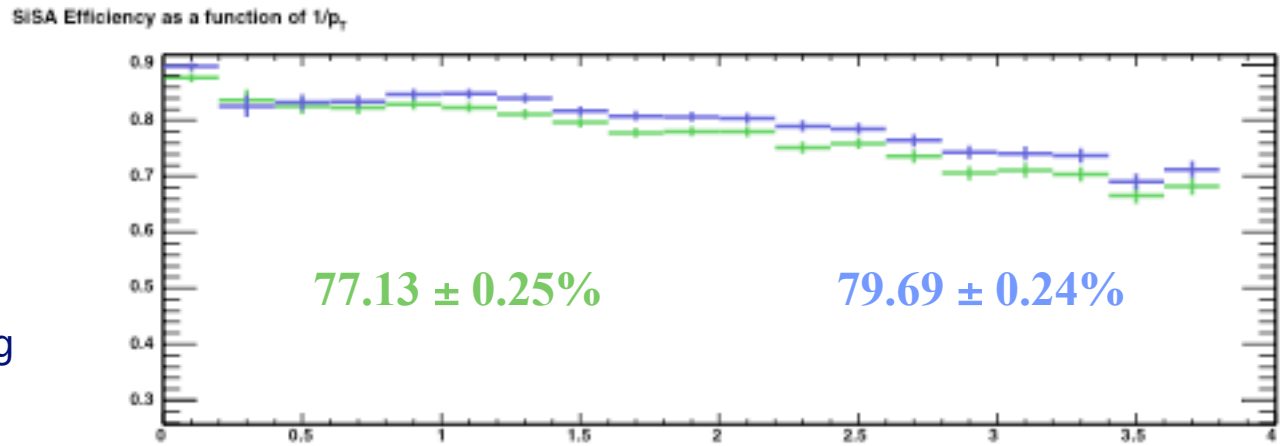


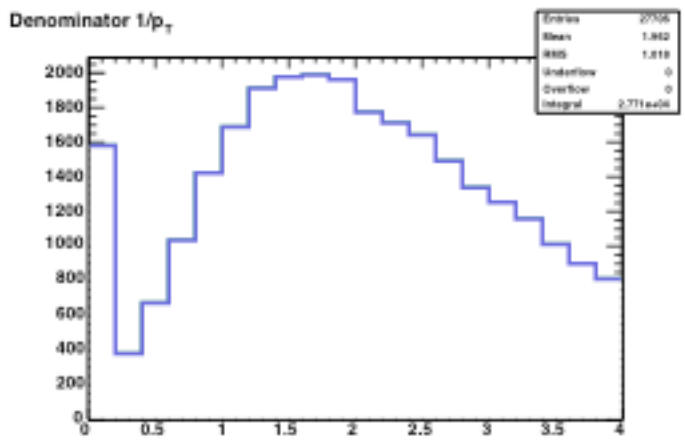


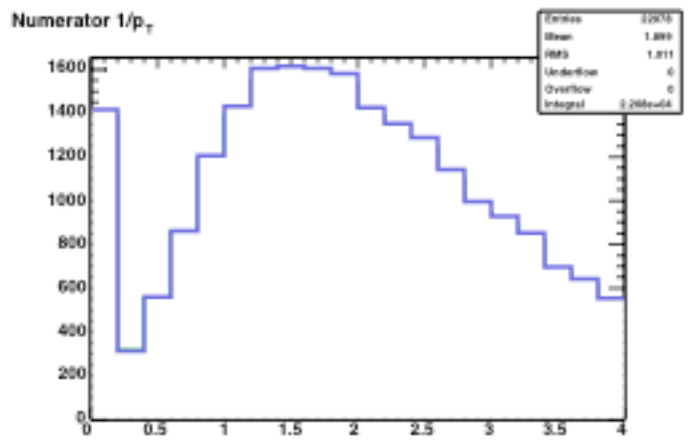
Efficiency as a function of $1/p_t$ - new switch

Green: standard tracking tcl with NO OI

Blue: standard tracking tcl using all hits in SiSA







Conclusions

	All hits	MC hits > 36
Standard tcl	32.10 ± 0.28%	70.78 ± 0.48%
Standard tcl no OI	77.13 ± 0.25%	69.68 ± 0.48%
Standard tcl + marked hits	79.69 ± 0.24%	