Silicon Standalone Efficiency in Monte Carlo

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Input files and code used

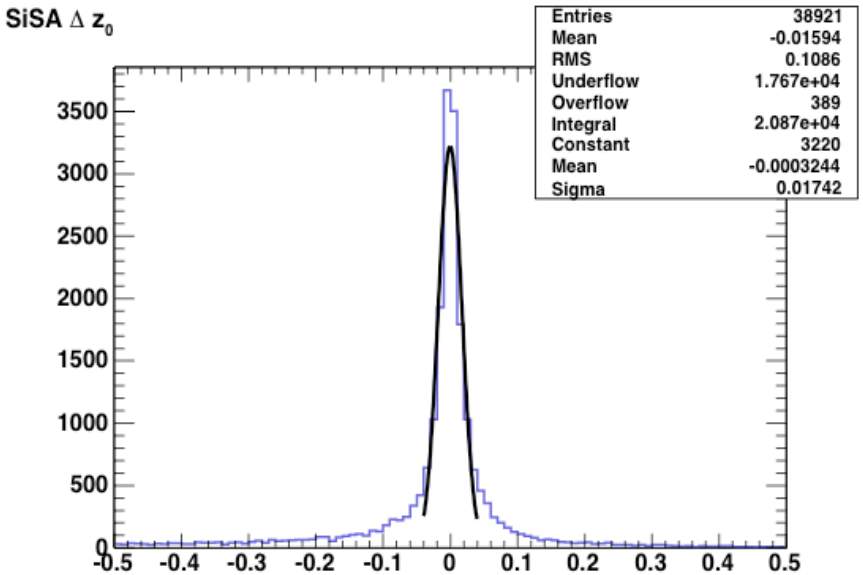
Input files

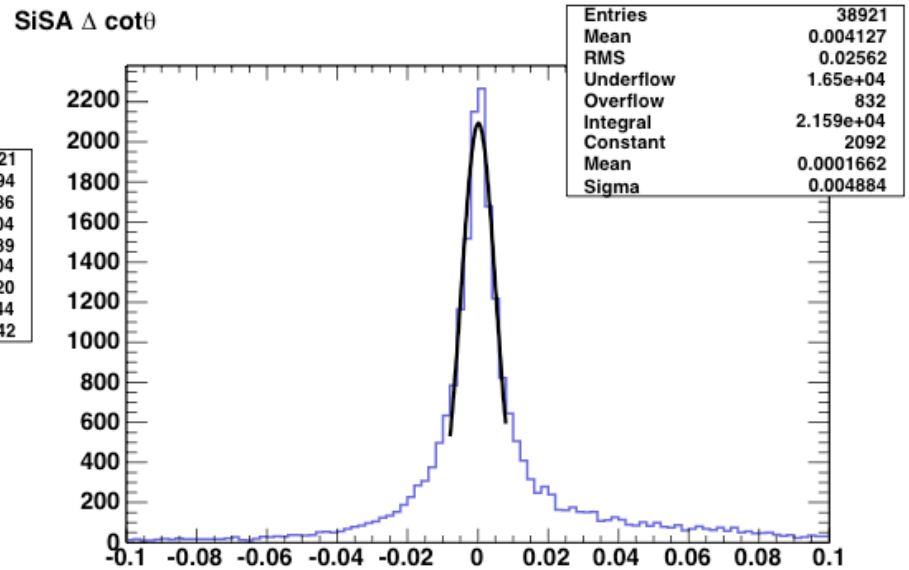
- Z->μμ
- Manfred's 10k events 5.3.1pre1
- 1k events used

Code

- Compared SiSA reconstruction between 5.2.0 and 5.3.1pre1
- OI was not run

SiSA - MC in 5.3.1pre1





There is still an asymmetry

SiSA - MC

	RMS SiSA 5.2.0	RMS SiSA 5.3.1pre1
Δc	0.0006	0.0006
Δp_t	0.0927	0.0988
Δd_0	0.0341	0.0345
$\Delta \varphi_0$	0.0090	0.0091
Δz_0	0.1017	0.1085
$\Delta \cot\theta$	0.0231	0.0256

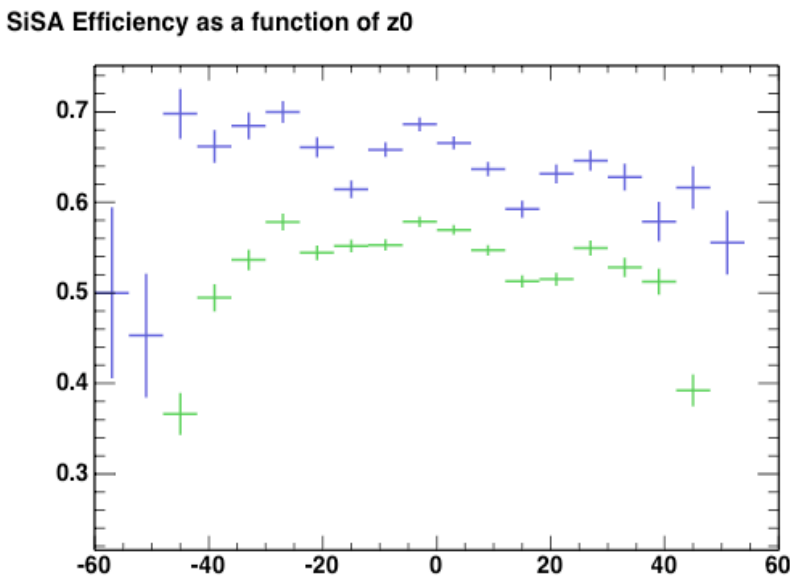
The quality of the tracks is similar

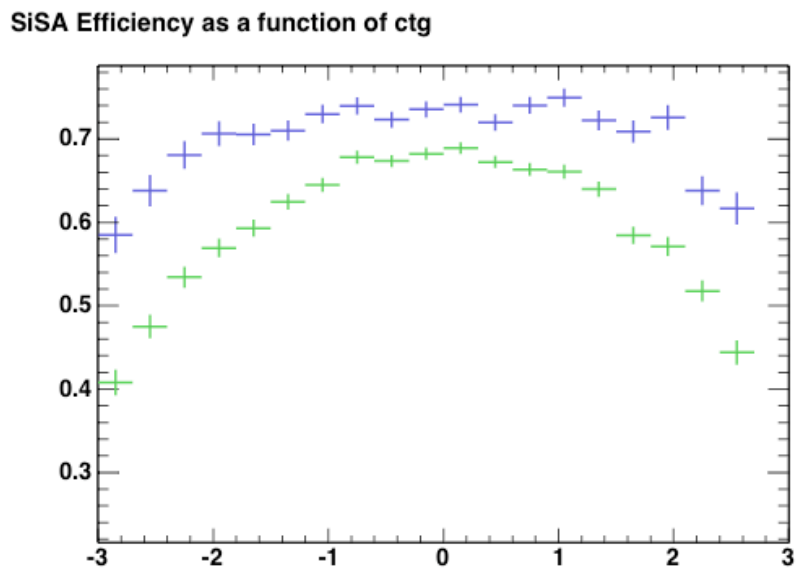
Overall efficiency:

5.3 code 64.75% ± 0.27%

5.2 code 54.64% ± 0.28%

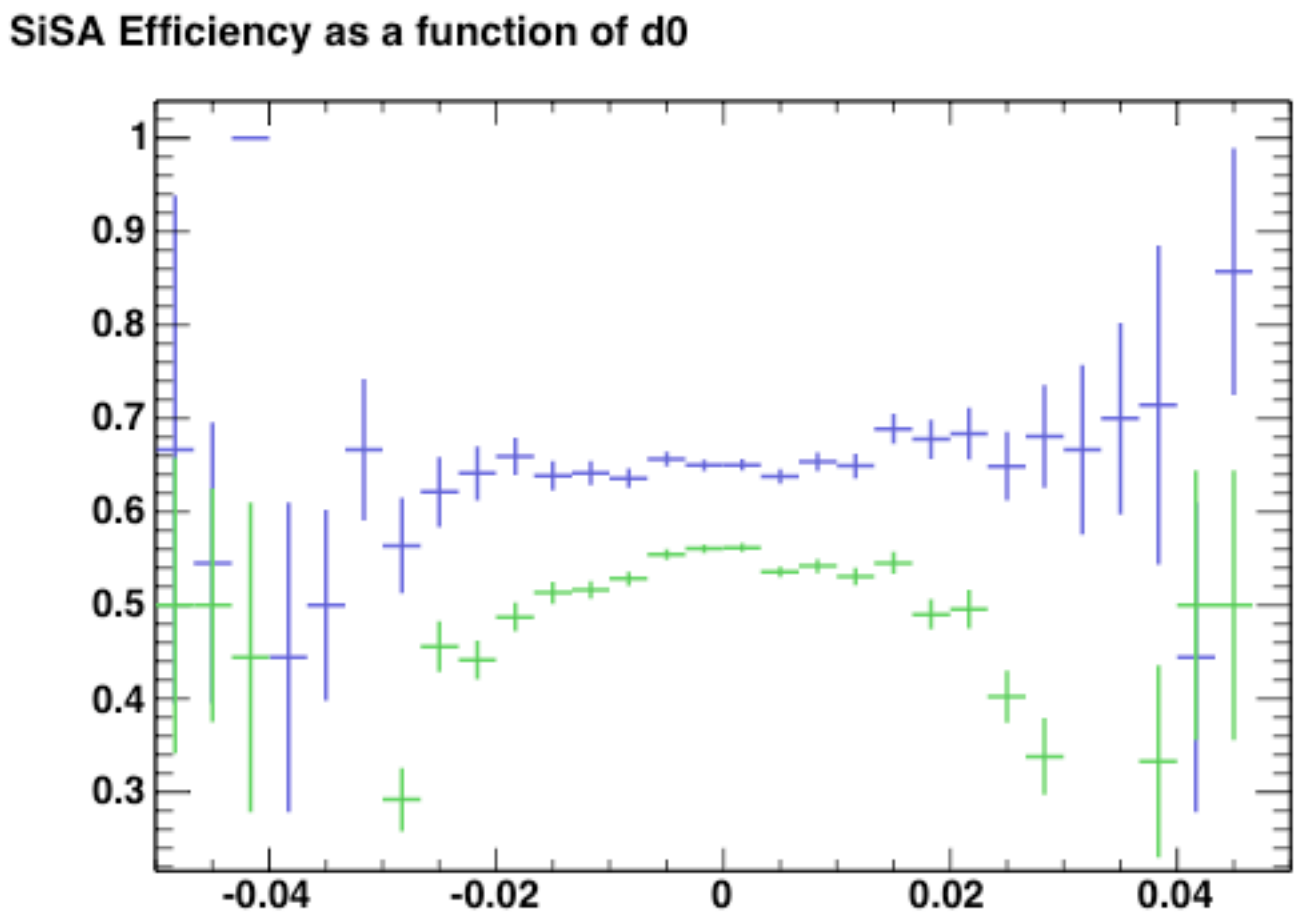
Efficiency as a function of Z_0 and ctgθ





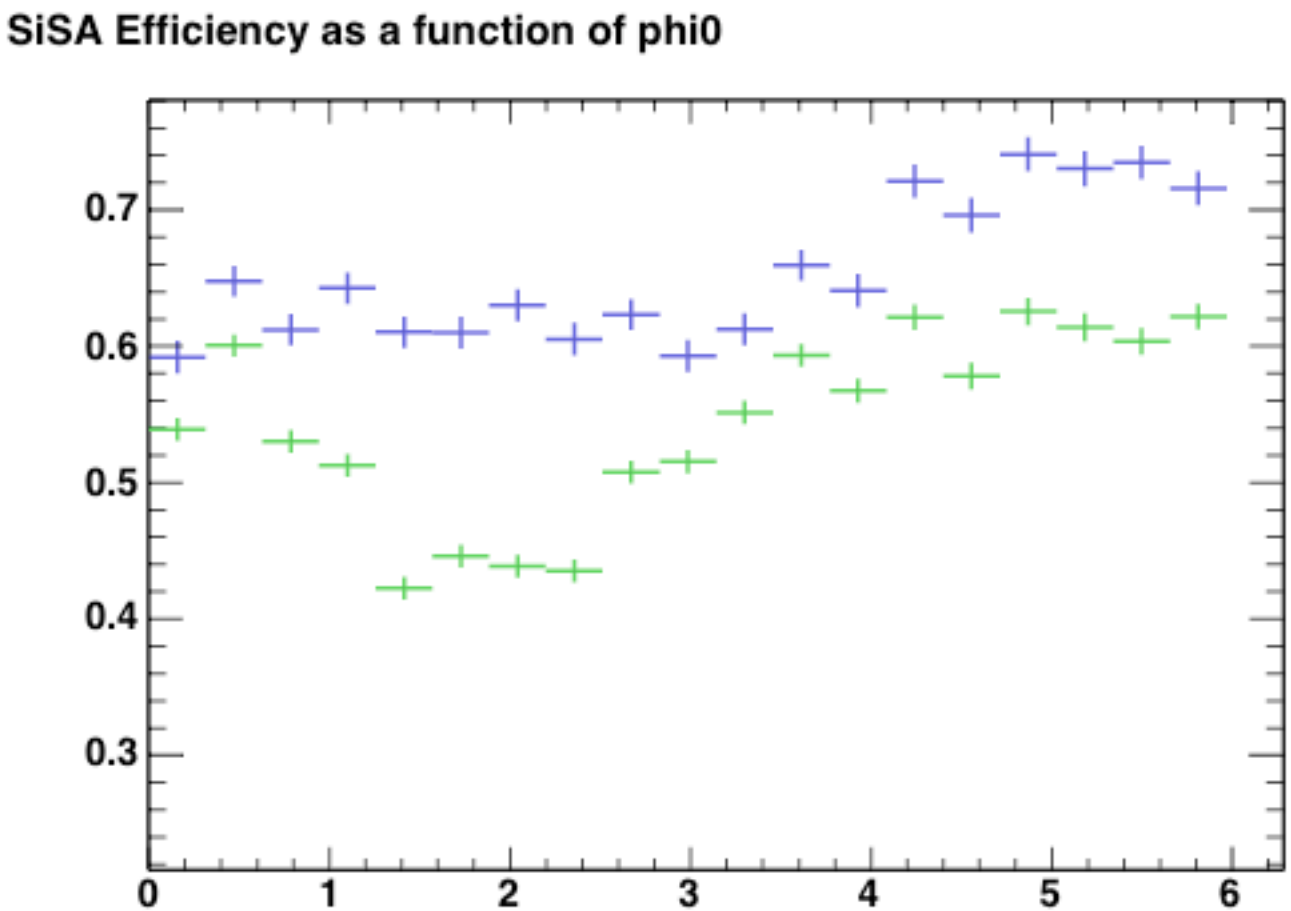
5.3 code 5.2 code

Efficiency as a function of d0



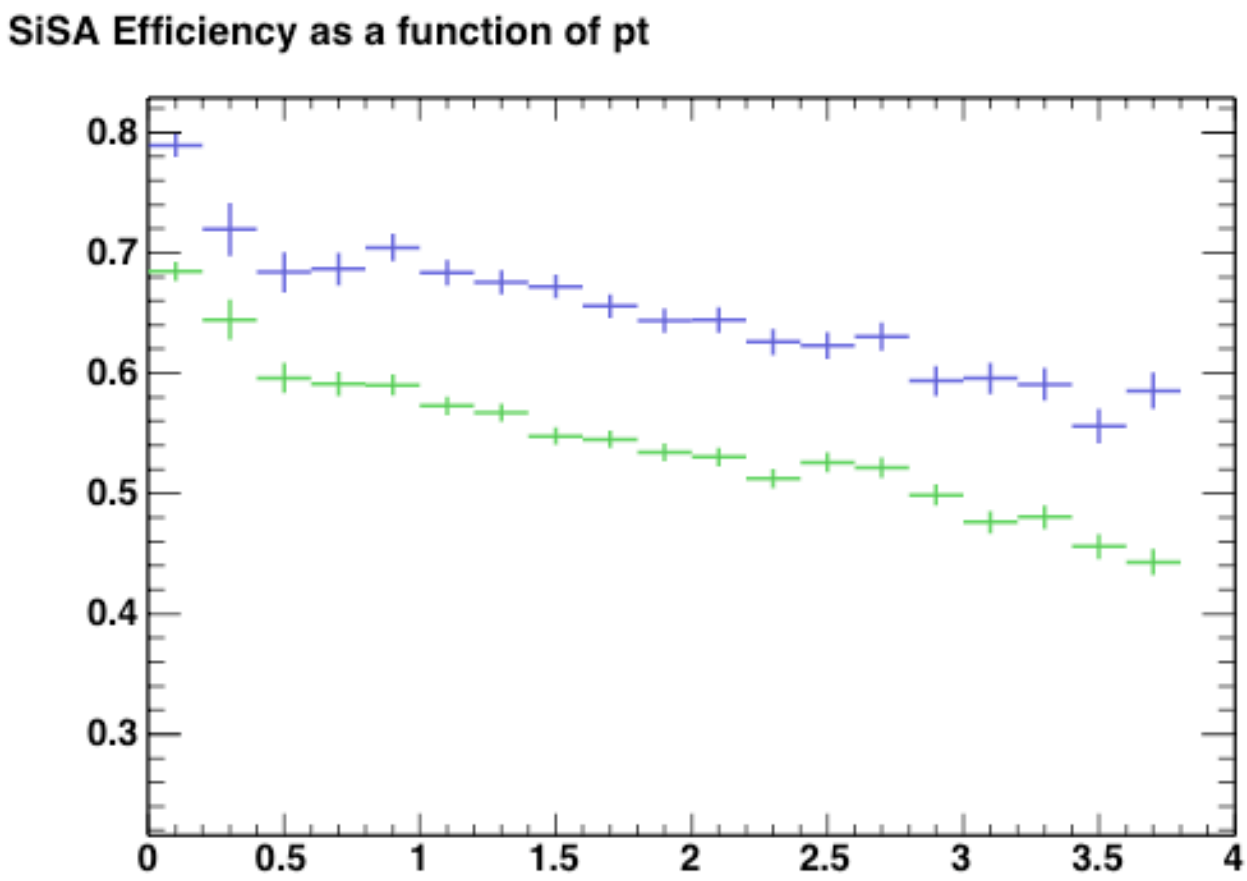
5.3 code 5.2 code

Efficinecy as a function of φ_0



5.3 code 5.2 code

Effiency as a function of $1/p_t$



5.3 code 5.2 code

Summary

- Overall improvement from 5.2.0 to 5.3.1pre1
- There is an increase of about 10% with respect of 5.2.0 but the quality of the tracks remain similar
- The efficiency in Monte Carlo is

$$64.75\% \pm 0.27\%$$