

母粒子的实验室系下的角分布严重影响子粒子实验室系下的角分布

- AngSam产生子： $a_0 + a_1 \cos^2 \theta + a_2 \cos^4 \theta + \dots$
其中 θ 为helicity角

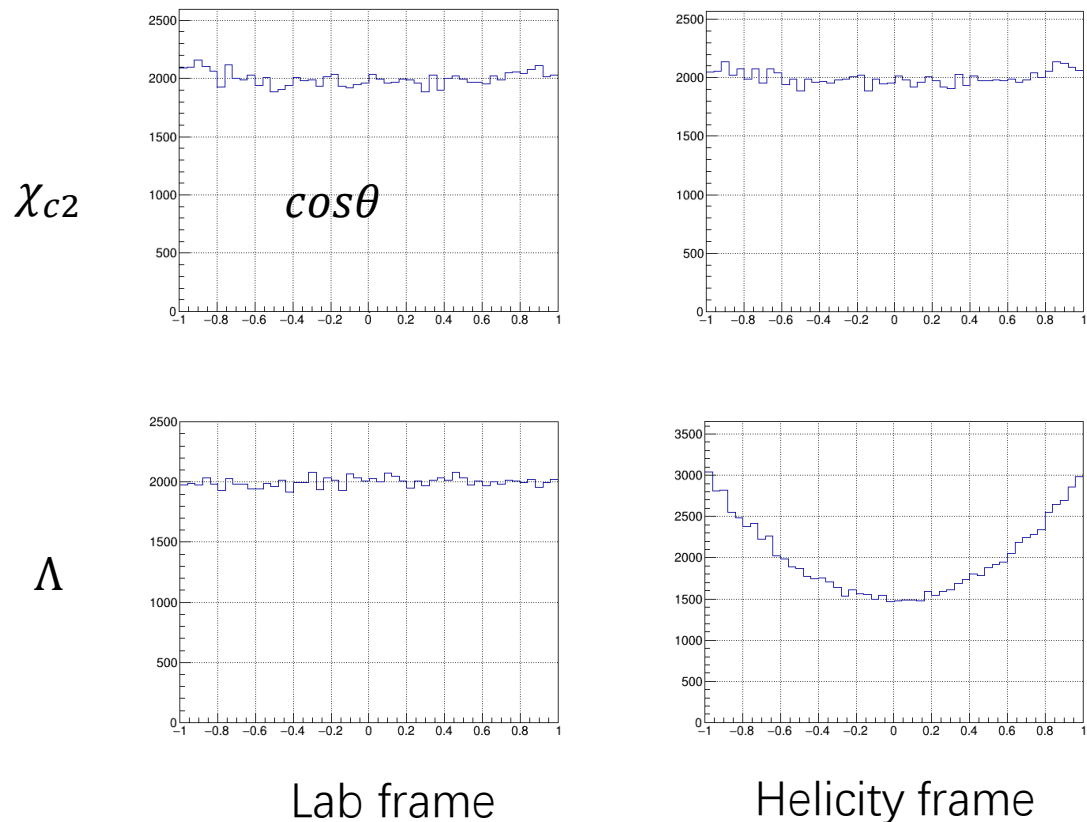
- $\psi(2S) \rightarrow \gamma \chi_{c2} \rightarrow \gamma \Lambda \bar{\Lambda}$

第一级产生子P2GC2

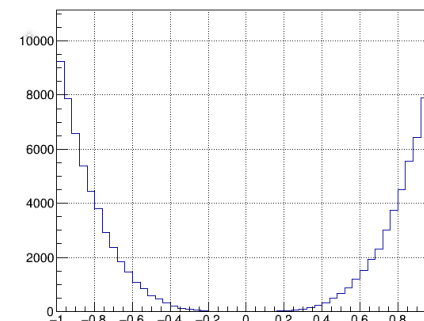
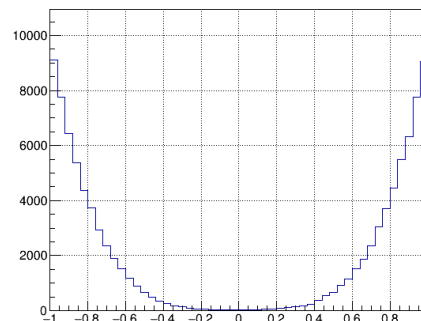
第二级产生子AngSam 1.0 1.0

第一级产生子AngSam 0 0 1.0

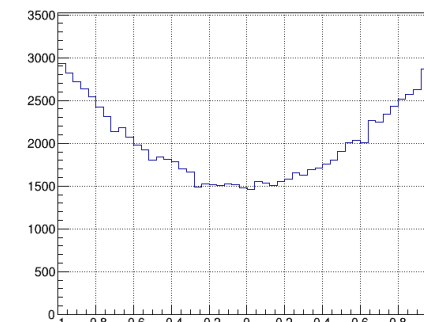
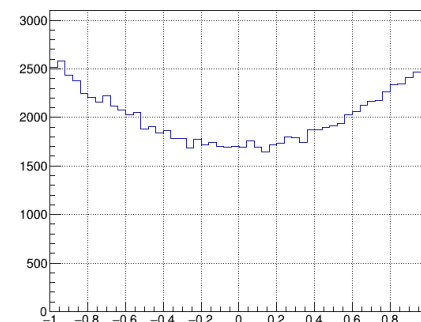
第二级产生子AngSam 1.0 1.0



χ_{c2}

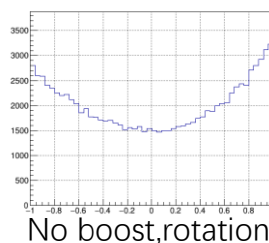


Λ



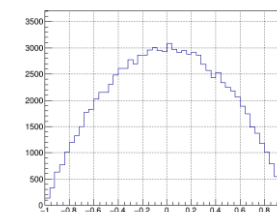
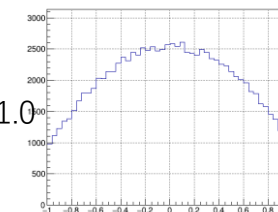
Lab frame

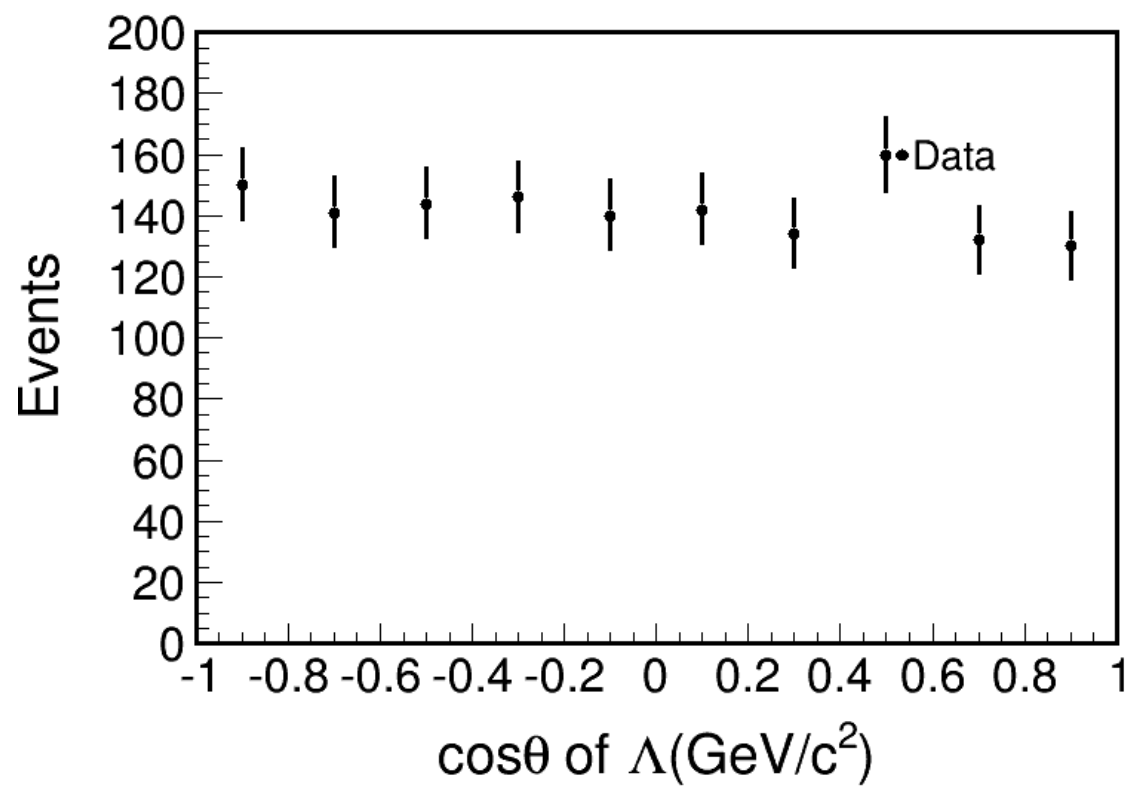
Helicity frame



No boost, rotation

AngSam 1.0 -1.0





$$\psi(2S) \rightarrow \gamma \chi_{cJ} \rightarrow \gamma \Lambda \bar{\Lambda} \rightarrow \gamma p \bar{p} \pi^+ \pi^-$$

χ_{c0}	PHSP	AngSam
eff	11.1%	14.4%

χ_{c2}	PHSP	AngSam
After initial selection	18.9%	19%