Cut Optimization

$B^+ \rightarrow \chi_{c0}(1P)K^+ \rightarrow ppK^+$

• Figure-Of-Merit Plots as a function of likelihood ratio of control samples

$$FOM(t) = rac{S(t)}{\sqrt{S(t) + B(t)}}$$



$$FOM(t) = rac{arepsilon(t)}{rac{a}{2} + \sqrt{B(t)}}$$
 5 σ



$B^+ \rightarrow \chi_{c0}(1P)K^+ \rightarrow ppK^+$ LR > 0.9



$B^+ \rightarrow \chi_{c0}(1P)K^+ \rightarrow ppK^+$ LR > 0.8



Summary of Results

Yield		Efficiency (%)		Significance (σ)	
LR > 0.9	LR > 0.8	LR > 0.9	LR > 0.8	LR > 0.9	LR > 0.8
6.9 ± 6.6	16.1 ± 7.2	15.9	22.4	-	3.95

Mass (MeV/c ²)			Product Branching Fraction (10 ⁻⁸)		
LR > 0.9	LR > 0.8	PDG 2014	LR > 0.9	LR > 0.8	PDG 2014
3423.92 ± 4.83	3411.23 ± 4.52	3414.75 ± 0.31	$5.65 \pm 5.40 \pm 0.15$	$9.32 \pm 4.19 \pm 0.24$	3.38 ± 0.36

KIMS Server

Server Status

서버	구입시기	교체 및 추가	용도
hep1	2009-05		mail server
hep1000	2009-05		data analysis, storage, q2c homepage
hep2009	2009-06		main analysis, storage connection
^L storage	2009-06 10тв	2009-11 5TB 추가	
dmrc	2013-09	2013-09	data transfer, bridge, homepage
hep2011	2011-07	2014-01	data storage
^L storage	2011-07		