

**J-PARC Hadron Hall : EXPERIMENTAL REPORT on RUN#29**

<b>Group</b>	<b>K1.8 (SKS)</b>	<b>Date (Submitted)</b>	<b>2010 Feb. 5</b>
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	<b>Summary and Results</b> <b>Data-taking for Pion Beam Through at 0.75/0.7/0.78 GeV/c with SKS=300A</b> <b>-1.25GeV/c beam tuning (pion) w/ ES2 (D3/D4 Scan) (Jan.20)</b> <b>-0.5GeV/c pion beam tuning (pion) w/o ES1 (D3/D4/CM)</b> <b>Measurement CH<sub>2</sub>(π<sup>-</sup>,p) reaction at 0.5GeV/c with SKS=300A</b> <b>with 10mm CH<sub>2</sub>/~90k/spill &amp; 3mm CH<sub>2</sub> 200k/spill beam</b> <b>-1.25GeV/c beam tuning (pion) w/ ES1=150kV &amp; ES2=200kV (Vert. Align/CM)</b> <b>CH<sub>2</sub>(π<sup>-</sup>,K<sup>+</sup>)Σ<sup>-</sup> RUN at 1.25GeV/c with 100,200,300k/spill Beam (Jan.22)</b> <b>CH<sub>2</sub>(π<sup>-</sup>,K<sup>+</sup>)Σ<sup>-</sup> RUN at 1.25GeV/c with 300-400k/spill Beam (Jan.27-28)</b> <b>CH<sub>2</sub>(π<sup>-</sup>,K<sup>+</sup>)Σ<sup>-</sup> RUN at 1.25GeV/c (Feb.2) 320k pions/spill (Ni) &amp; 540k pions/spill (Pt)</b> <b>We found Pt target is more efficient since e/pi ratio with Nt is larger than one with Pt. With the same slit condition, the multiplicity at BS upstream is similar even the pion intensity with Pt is 1.7 times high as one with Ni.</b> <b>Beam Through RUN with 0.75/0.7GeV/c at SKS=300A</b> <b>-1.92GeV/c(pion) beam tuning</b> <b>(π<sup>-</sup>,K<sup>-</sup>) trigger study at 1.92GeV/c and SKS=400A for E19 with CH<sub>2</sub> target</b>		
<b>SCHEDULED and EXECUTED MACHINE TIME, BEAM CONDITION, DOWN TIME, Priority etc.</b> <b>Jan.20 19:00-Jan.21 7:00 ( 21:25-23:00? Bump Study &amp; EQ/RQ Study)</b> <b>Jan.21 1:30 ES1 discharged, 1:50 give up ES1 operation</b> <b>Jan.21 16:45-Jan.22 7:00</b> <b>(22:47 MR D1 BM4 MPS 23:42 Recovered )</b> <b>Jan.27 22:00-Jan.28 13:30 (13:30 MR SX trouble)</b> <b>Feb.2 21:10-Feb.3 10:00 (2:35- LINAC SCTL trouble)</b>			
<b><u>Comments/Requests</u></b>			



# Difference of Ni/Pt Targets

MR 1.3E+12 ppp

IFH: $\pm 100$ mm
IFV: +0.9/+2.1mm
Mom: $\pm 60$ mm
MS1: $\pm 0.87$ mm
MS2: $\pm 0.97$ mm

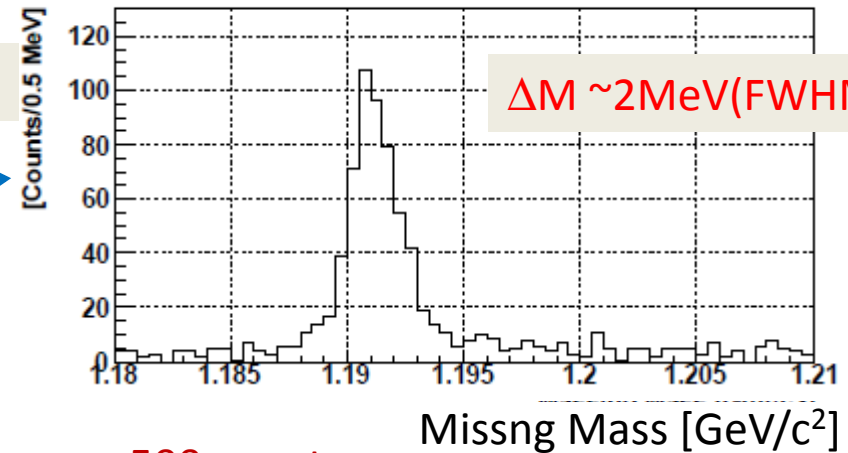
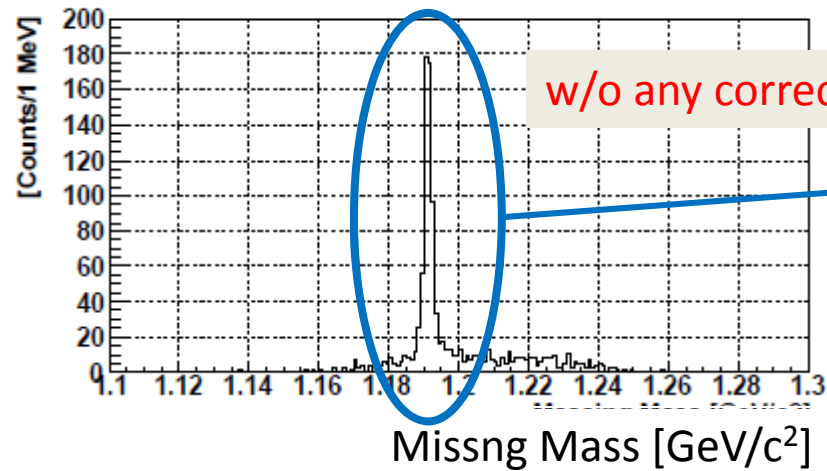
	Ni	Pt
BH1	722k	882k
BH2	545k	704k
$\pi$	358k	563k
e	155k	82k

← may be piled-up

multiplicity distribution of BC1 both for Ni & Pt

Pt target is more efficient than Ni.

# $\Sigma^-$ Production by $\text{CH}_2(\pi^-, \text{K}^+) @ 1.25 \text{ GeV/c}$



~500 counts

Consistent with 20 hours data taking  
with ~300k/spill beam

