ANKE spectrometer

Subthreshold K$^+$ production
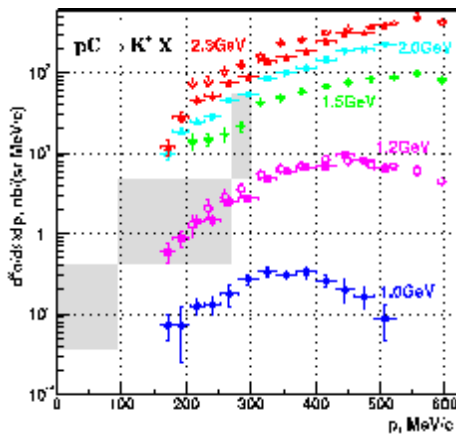
2001
Cross sections
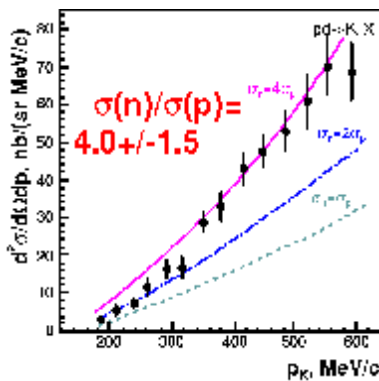
2002 - 2003
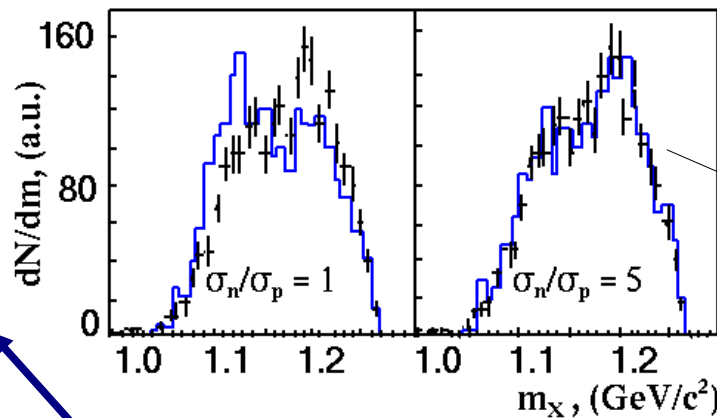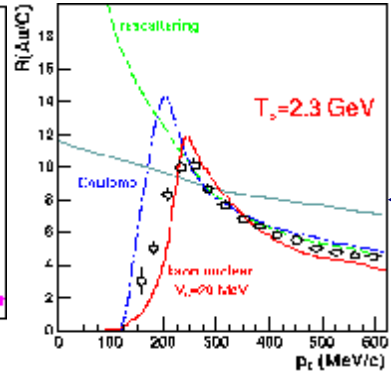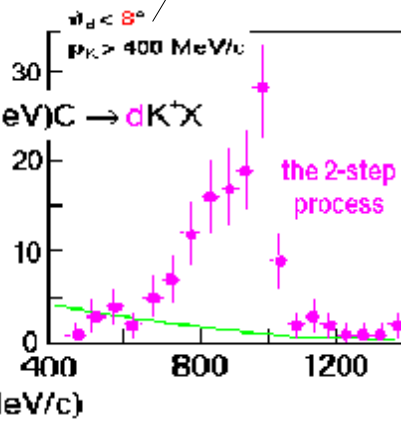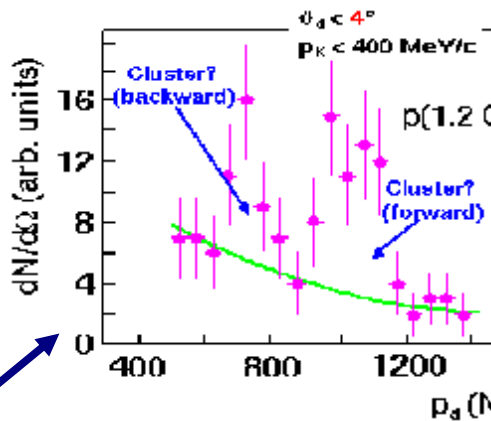
2003

2004 pp->K$^+$X/pd->K$^+$X at
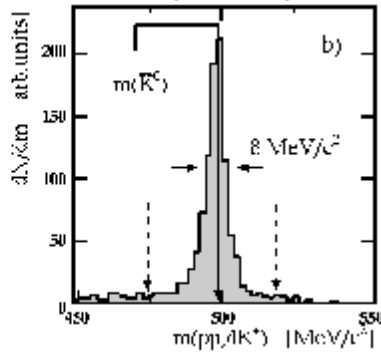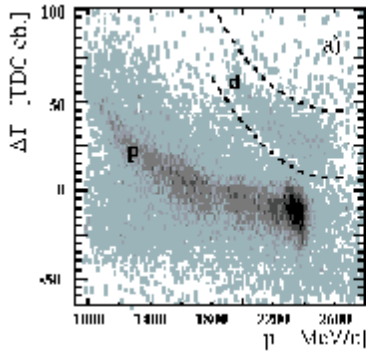   1.35, 2.0, 2.65, 2.83GeV
2004 K$^+$p, K$^+$d at 1.2 GeV   high statistics
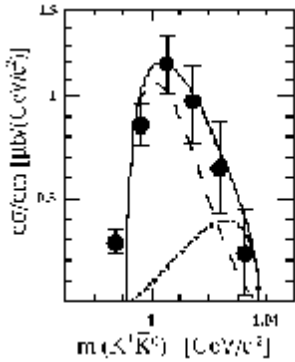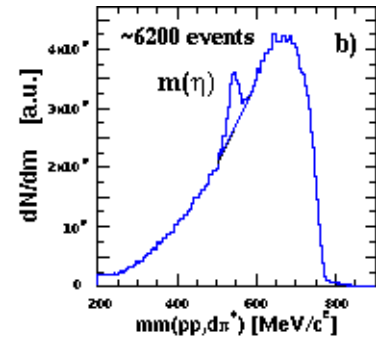2005 K$^+$p, K$^+$d, K$^+$t at 1.0 GeV
2005 R^{K-}(Au/C), R$^\phi$(Au/C)

a_0/f_0 study

T_p=2.65 GeV—
pp->d(a_0^+->K^+K^0)
2001 - 2002
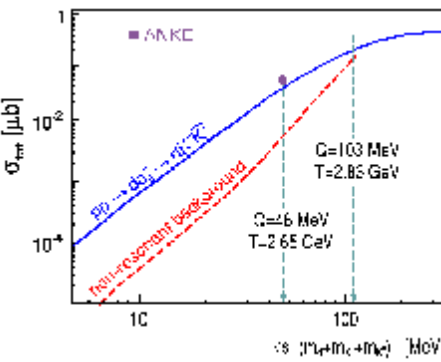
2002 – 2003
$\sigma(a_0^+$->K^+K^0)=
38±12 nb
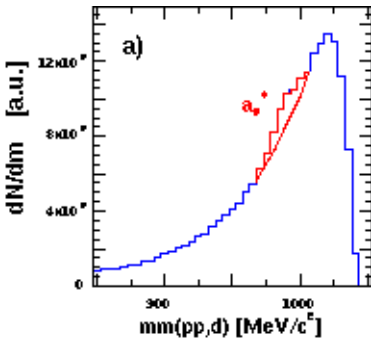
pp->d(a_0^+->$\pi^+\eta$)
$\sigma(a_0^+$->$\pi^+\eta$)=
1.1±0.7 μb
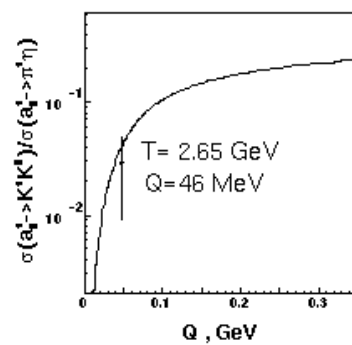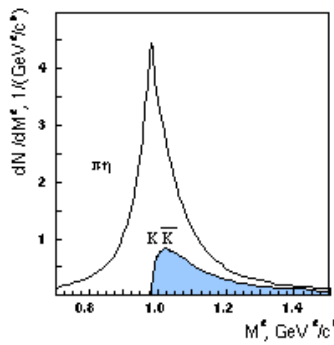
R=
0.029±0.020
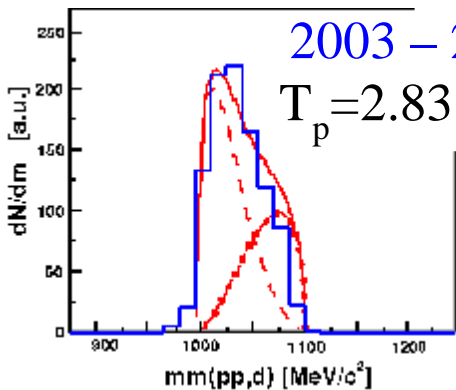
2003 – 2004
T_p=2.83 GeV
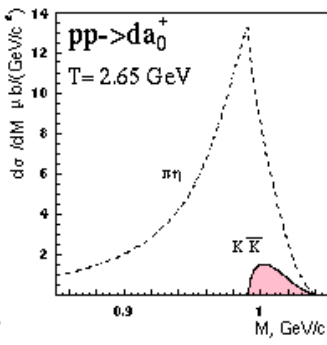
pn->K^+K^-d
pd->K^+K^-He^3
pd->K^+K^0t   2004
pn->K^0pΛ
pd->K^+K^-He^4 2005

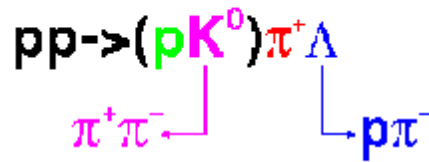# Pentaquark

January-March '04

$pp \rightarrow (pK^0)\pi^+\Lambda$

$\pi^+\pi^- \quad p\pi^-$

7 days

$\sigma(\theta^*) \sim 0.5\ \mu b$

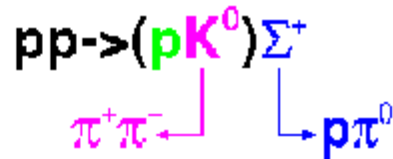$pp \rightarrow (pK^0)\Sigma^+$

$\pi^+\pi^- \quad p\pi^0$

5 days

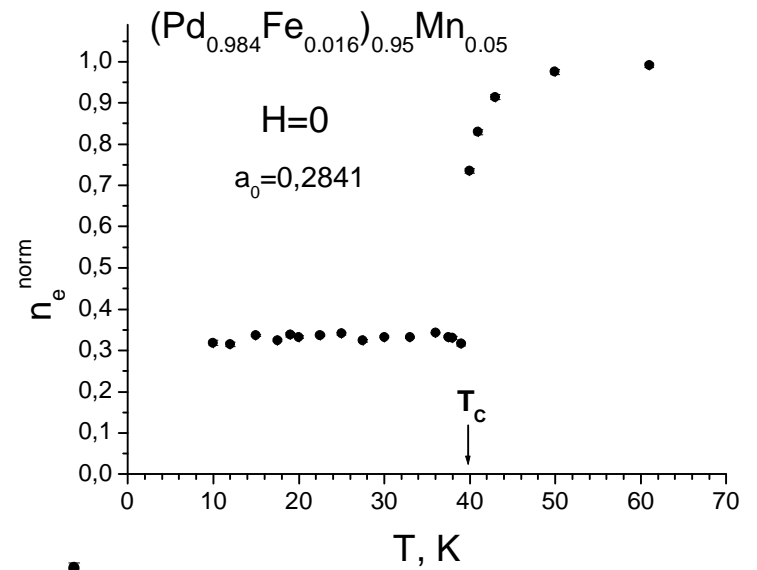$\sigma(\theta^+) \sim 0.4\ \mu b$
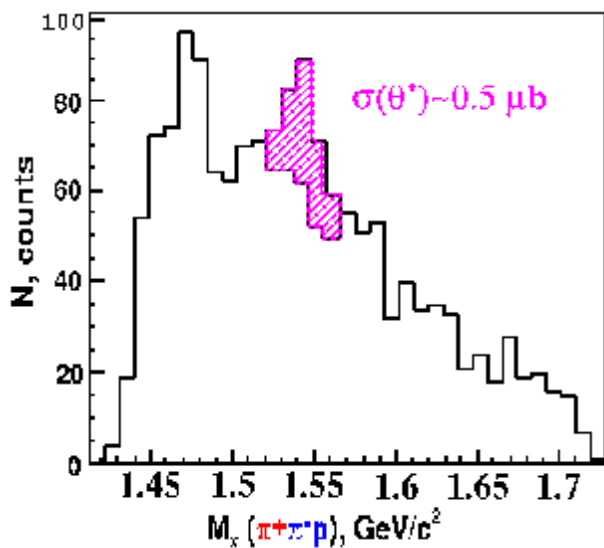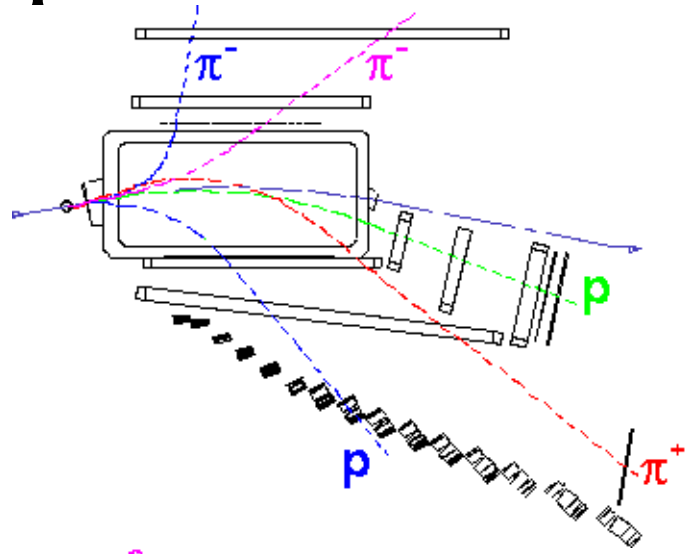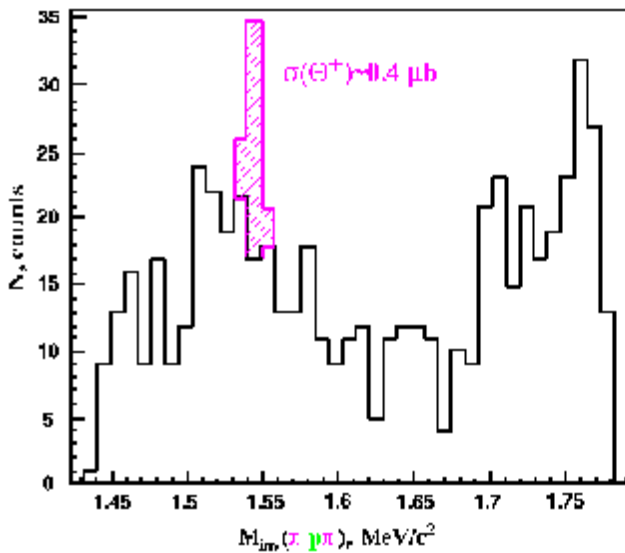
$pn \rightarrow (K^0 p)\Lambda$ is expected
500 ev/day with nuclear target

μSR

$Cu_{1-x}Mn_x$

PdFeMn
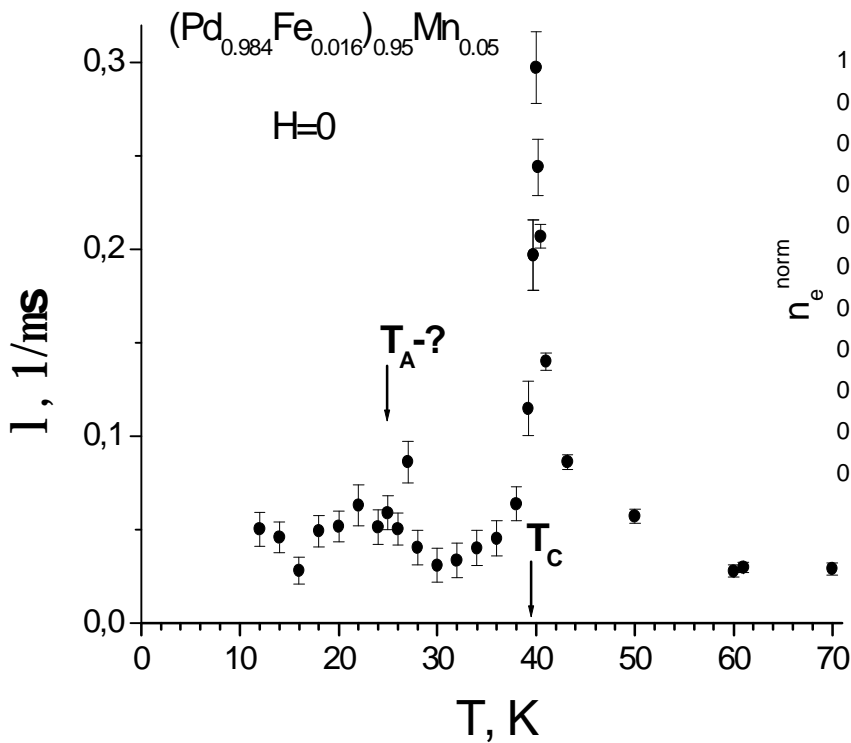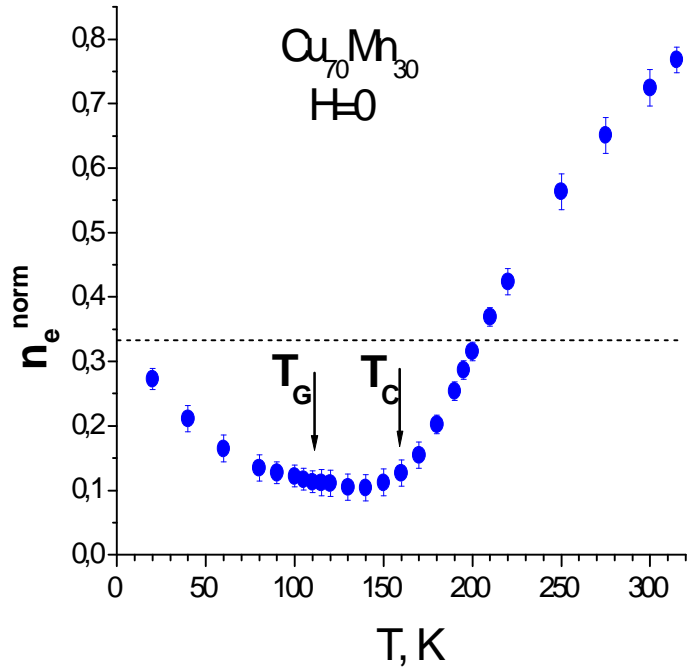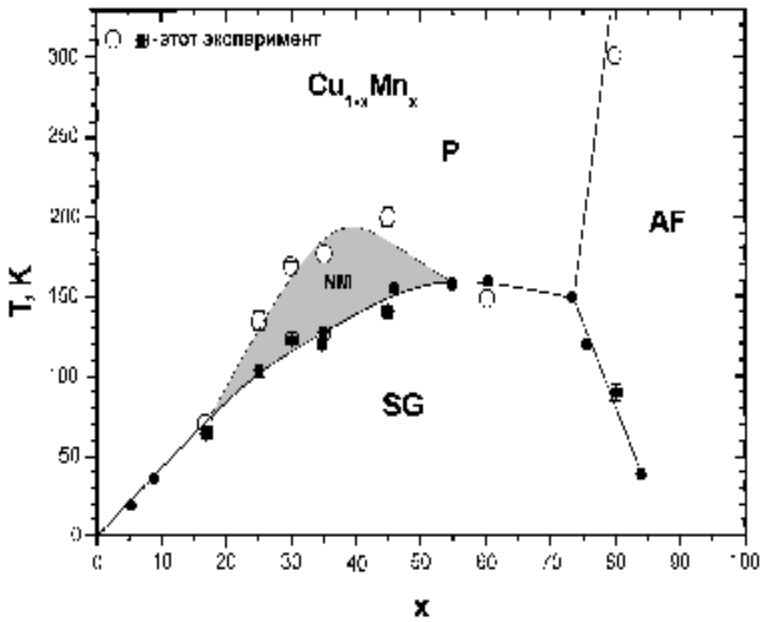
2004 - $Cu_{1-x}Mn_x$, x=0.7, 0.55, 0.37

- $(Pd_{0.984}Fe_{0.03})_{0.95}Mn_{0.05}$ magnetic field dependence