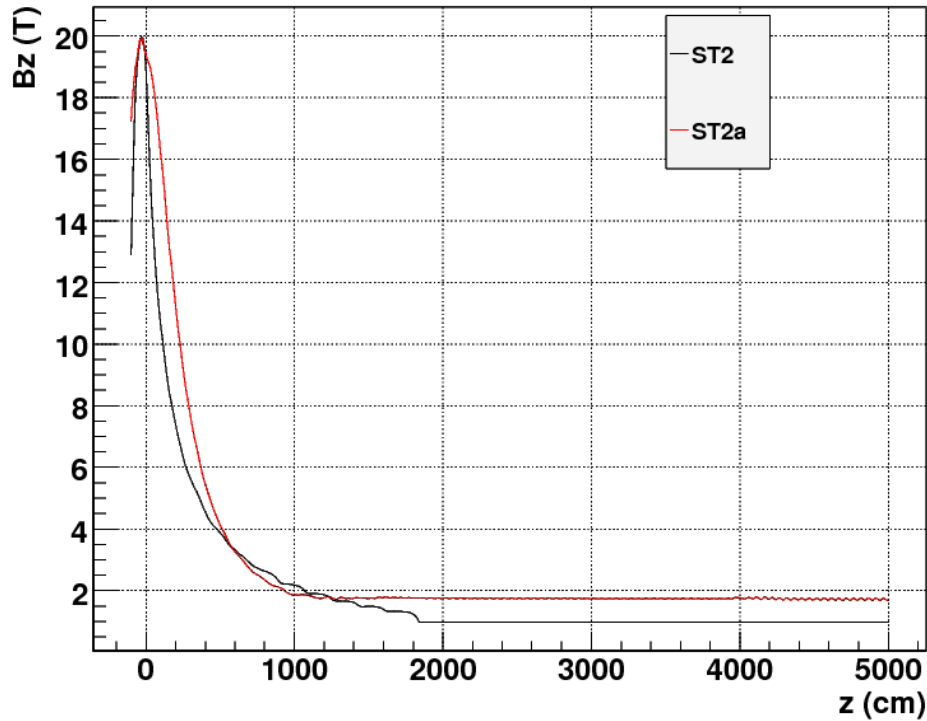


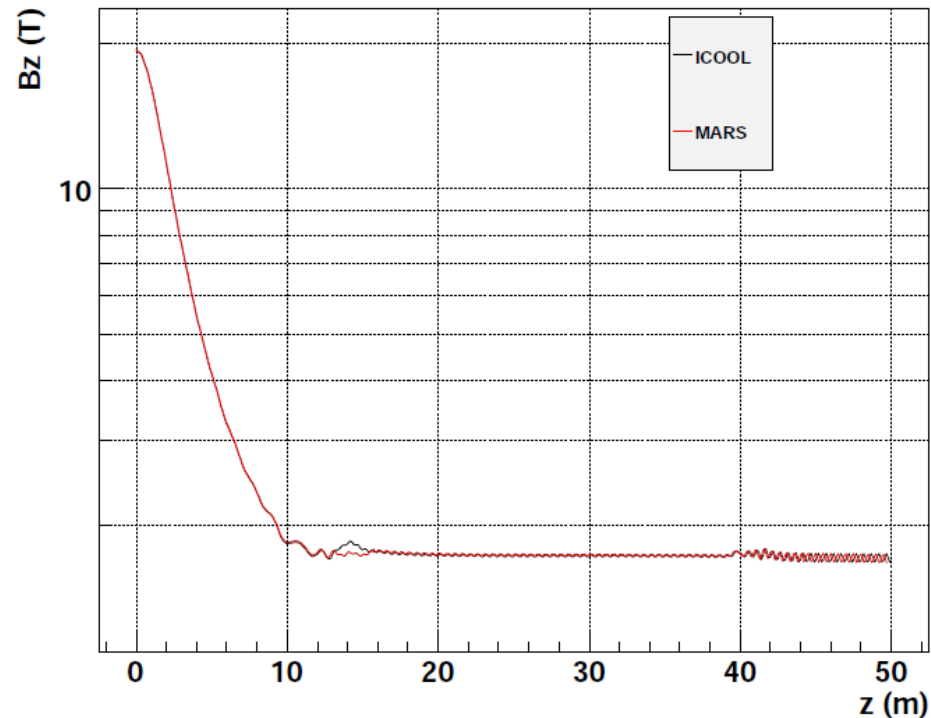
# ST2 & ST2a field map

B field on axis from MARS



**Field on axis in ICOOL:  
small difference at 12 m**

B field on axis (ST2a)



**Field on axis:**

**1.25 T/1.75 T for the taper**

**Higher B field for ST2a**

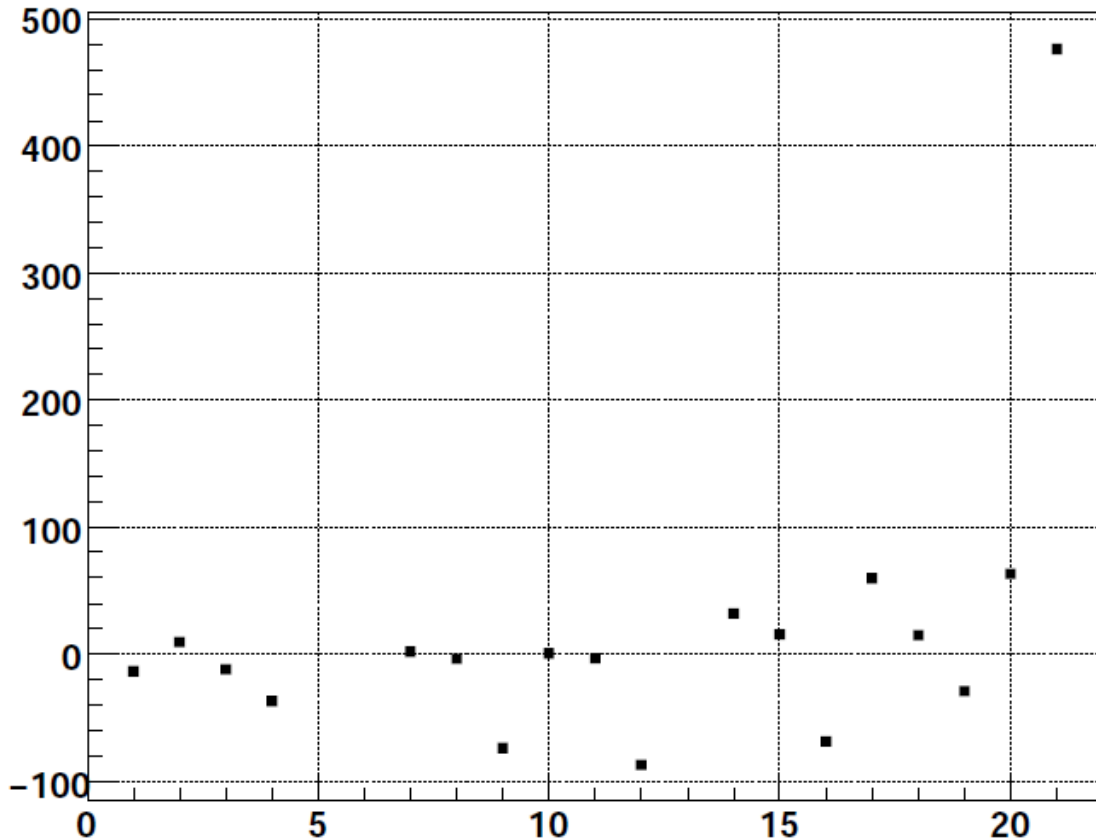
July 22<sup>th</sup> 2009

# Particle production using ST2/ST2a

ST2a small increase of  $\mu^+$  and loss of  $\mu^-$  except @ 14 GeV.

-> no big advantage in using ST2a over ST2.

$(N_{ST2a} - N_{ST2})/N_{ST2}$  (%) at  $z = 50$  and  $40 < E_{kin} < 180$  MeV - 8 GeV beam



PID	Typ	5 GeV	8 GeV	14 GeV
1	p	-7	-13	-24
2	n	9	6	22
3	$\pi^+$	-36	-12	19
4	$\pi^-$	30	-37	-31
5	$K^+$	-	-	-
6	$K^-$	-	-	-
7	$\mu^+$	5	2	6
8	$\mu^-$	-1	-3	3
10	$e^-$	0	0.5	-0.5
11	$e^+$	-6	-3	-2
12	$\bar{p}$	-	-	200
18	$\nu_\mu$	3	15	43
19	$\bar{\nu}_\mu$	-12	-29	28
20	$\nu_e$	-	69	-80
21	$\bar{\nu}_e$	200	487	47