

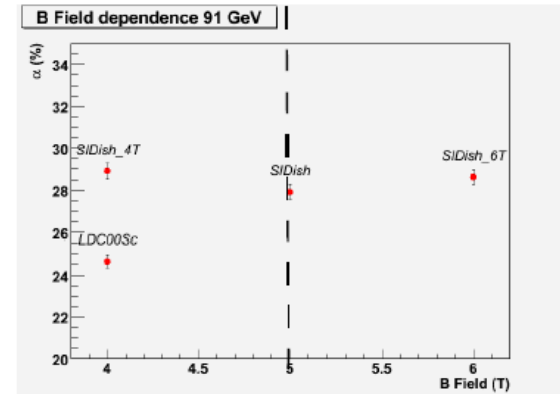
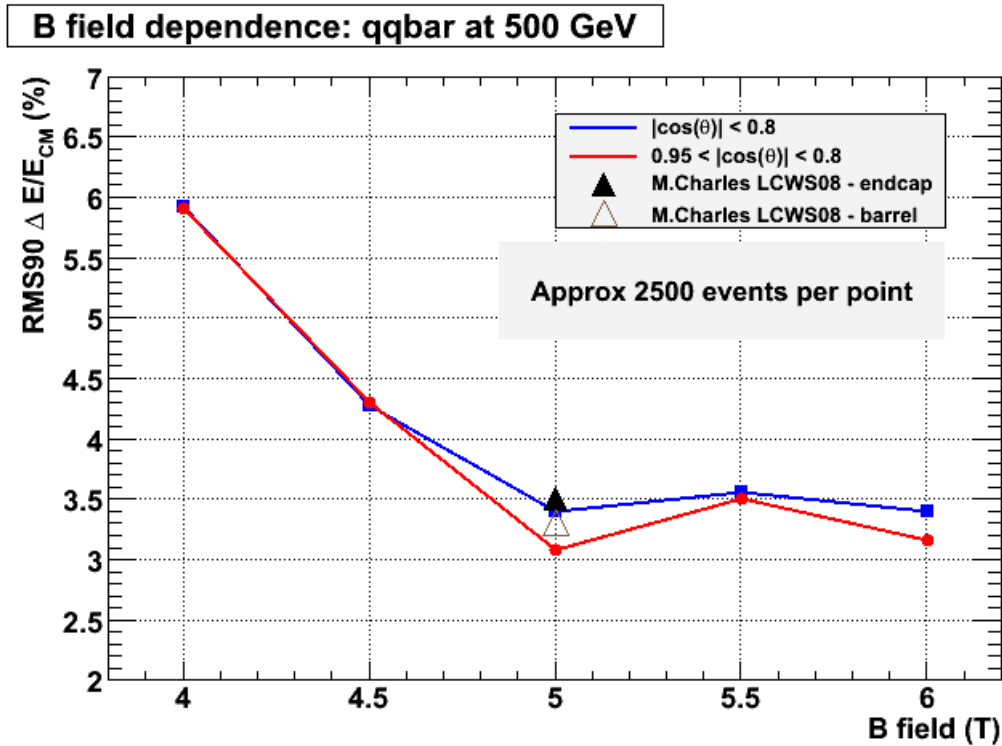
Status report on SiD global parameters study and PFA activities at MIT

Ray Cowan

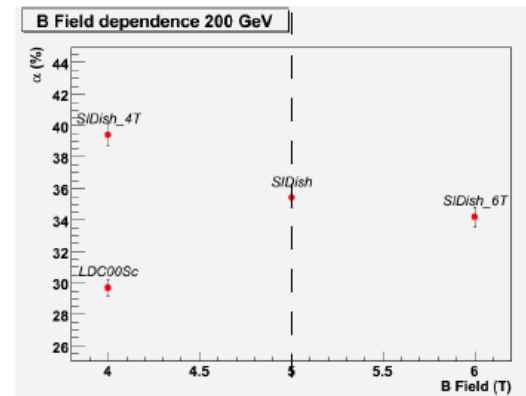
Peter Fisher

22 September 2009

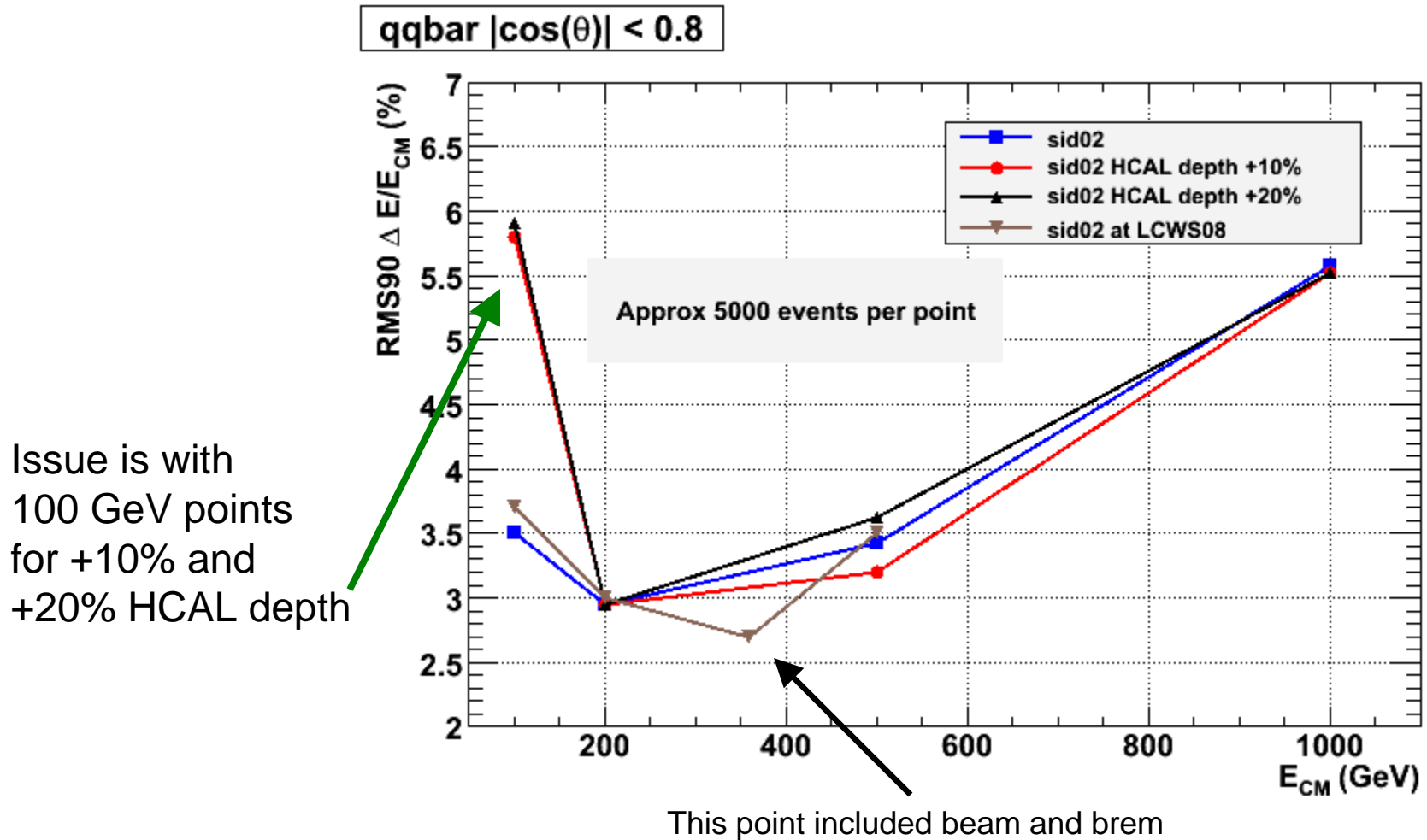
B-field study: sid02



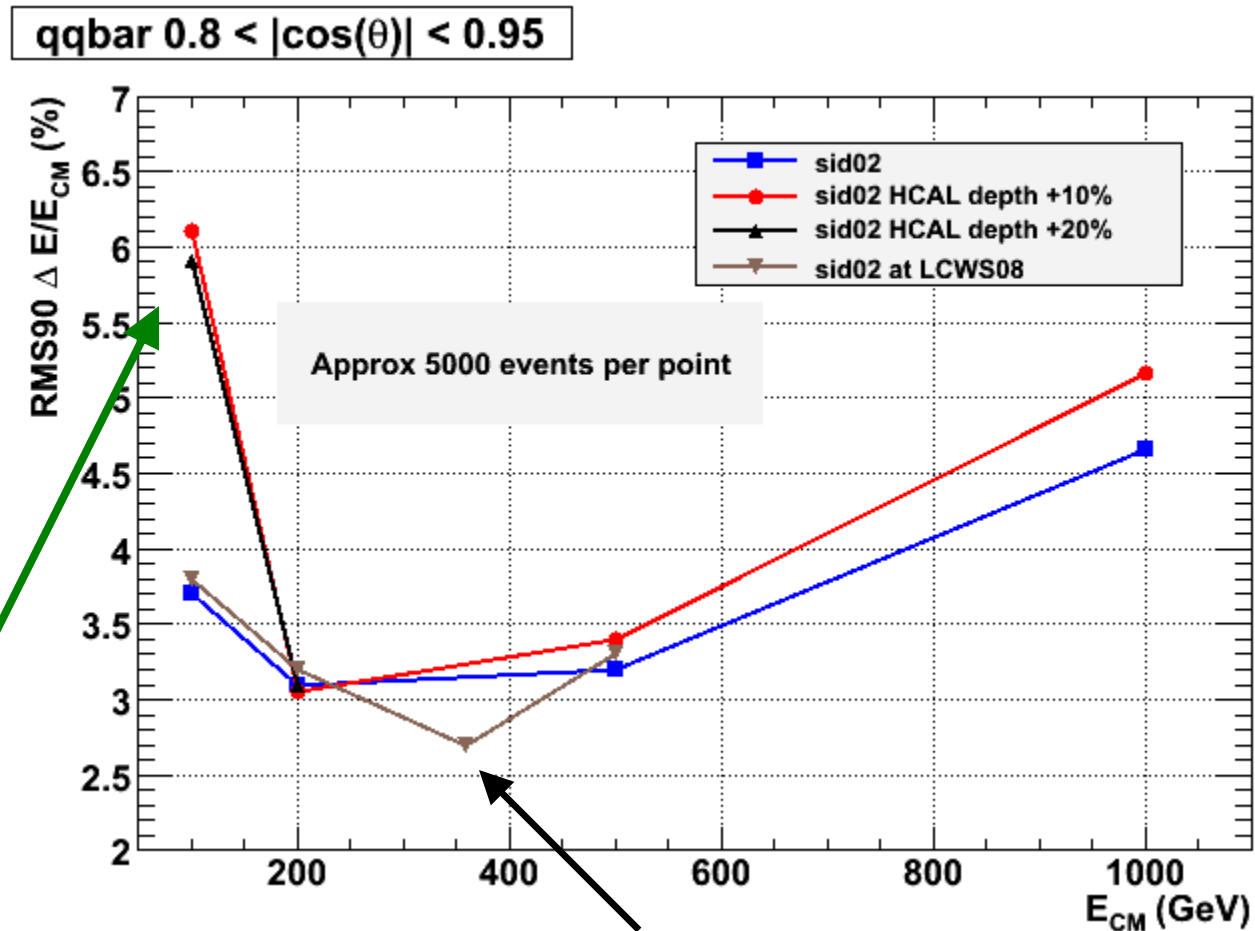
Marcel "sidish" LCWS08



Sid02 HCAL depth variants: barrel



Sid02 HCAL depth variants: endcap



Issue is with
100 GeV points
for +10% and
+20% HCAL depth

This point included beam and brem

In the pipeline at MIT

- Finish HCAL +20% running
- Sid02 “stretched” by 10% and 20% at ECAL endcap inner_Z
 - 1.7m, 1.9m, 2.1m
- HCAL segmentation study
 - $\frac{1}{2} \times \frac{1}{2}$ cm instead of 1x1 cm

Sid02 calibration changes

What are the reason(s) for differences between our calibration and official sid02 calibration?

A few big changes (red)

Other changes at the 1–10% level

	“Official” sid02	Our calibrations
EMBarrel	samplingFraction: .017501	.00182
	samplingFraction[21-30]: .0093678	.00980
EMEndcap	samplingFraction: .016495	.01706
	samplingFraction[21-30]: .0086669	.008585
HADBarrel	digital: true	true
	samplingFraction: 8.6503	7.867
HADEndcap	digital: true	true
	samplingFraction: 7.5778	6.996
MuonBarrel	digital: true	true
	samplingFraction: 1.7264	1.28085
MuonEdncap	digital: true	true
	samplingFraction: 0.6056	0.82171
Photon	old: SFs: 0.017956,0.0088999,0.017176,0.0081311	
	new: SFs: 0.018138,0.0085473,0.017165,0.0081964	
Hadron	old: SFs: 0.014944,0.0085513,0.014886,0.0085305,9.4114,8.4259	
	new: SFs: 0.014332,0.0087303,0.014975,0.0095047,9.3757,8.4769	