

Update on MIT sid02 HCAL variants study

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MIT HCAL sid02 variants study

- This study covers
 - Lambda = 4.0, 4.5, 5.0, 5.5, 6.0
 - Number layers = 30, 40, 50, 60
 - Cell size 1x1 cm²
 - 10k qqbar events at 100, 200, 350, 500, and 1000 GeV
 - 9500 events at 1000 GeV
 - Problem with one event in one stdhep file
 - 10k ZZ→ nunubar, uds at 500 GeV
- Software
 - SLIC v2r5p4, LCPhys physics list, org.lcsim snapshot 1.4
- Run status
 - 6.0: sim done, reco done
 - See table on next page
 - 5.0: sim done, reco 90%
 - 4.0: sim done, reco in queue
 - 4.5: waiting
 - 5.5: waiting

Lambda = 6.0, barrel region

Variant	30 layers		40 layers		50 layers		60 layers		sid02 default*	
	m90	r90	m90	r90	m90	r90	m90	r90	m90	r90
qq100 Event energy	-1.7 (7278)	3.8%	-2.3 (7278)	3.6%	-2.1 (7278)	3.6%	-2.1 (7278)	3.5%	-1.8	3.7%
qq200 Event energy	-5.2 (7275)	3.0%	-6.7 (7275)	2.9%	-6.1 (7275)	2.9%	-5.8 (7275)	2.9%	-4.9	3.0%
qq350 Event energy	-7.8 (7177)	3.1%	-11.0 (7177)	2.9%	-9.2 (7177)	3.4%	-6.9 (7177)	3.2%	N/A	N/A
qq500 Event energy	-11.5	3.6%	-17.3	3.3%	-9.6	3.9%	-6.4	3.7%	-13.6	3.5%
qq1000 Event energy	-22.9 (6523)	5.8%	-38.3 (6876)	5.5%	-2.8 (6876)	6.2%	+1.4 (6876)	6.1%	N/A	N/A
ZZ Dijet mass	-1.3 (2370)	4.8%	-2.1 (2370)	4.6%	-1.6 (2370)	4.7%	-1.4 (2370)	4.7%	-1.2	4.7%

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variants

(nnnn) \equiv # entries in aida cloud
* = M. Charles, LCWS08