

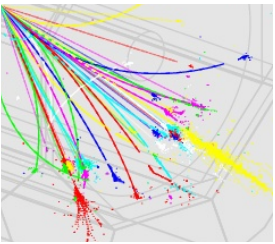
“Executive Summary”

SiD PFA Meeting

06.08.2008

M. Stanitzki





The new SiD ...

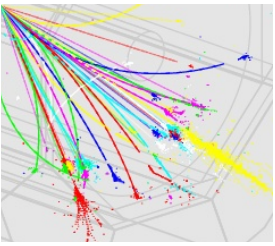
- The new baseline is very similar to the original SiD. It is slightly longer, a somewhat deeper HCAL with a few more layers

	<u>SiD</u>	<u>SiD'</u>
R	1.25m	1.25m
Z	1.70m	2.10m
B	5T	5T
λ	4.0	4.5
#layers	34	40
Cost*	620M\$	670M\$

Stolen from John's Talk



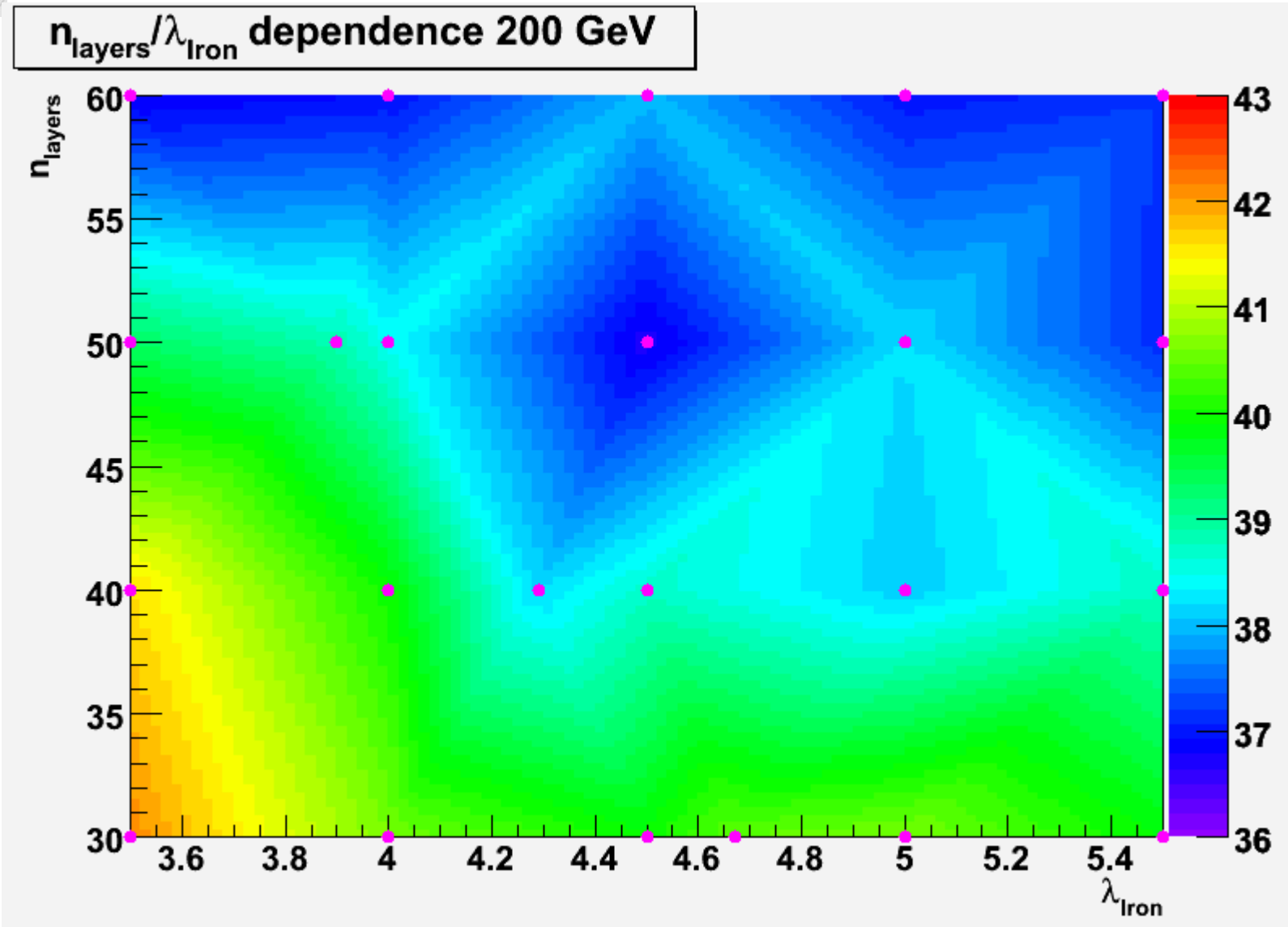
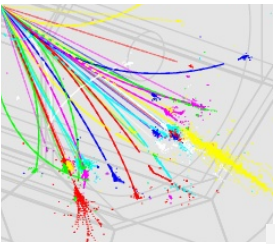
Comments



- This is based on the PFA group's work
 - Mainly on the two slides to follow
 - But general agreement that we need a deeper HCAL
 - And having the same jet resolution in barrel and forward is nice
- Engineering Group sees no show-stoppers



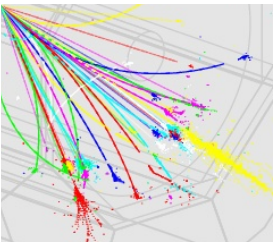
200 GeV



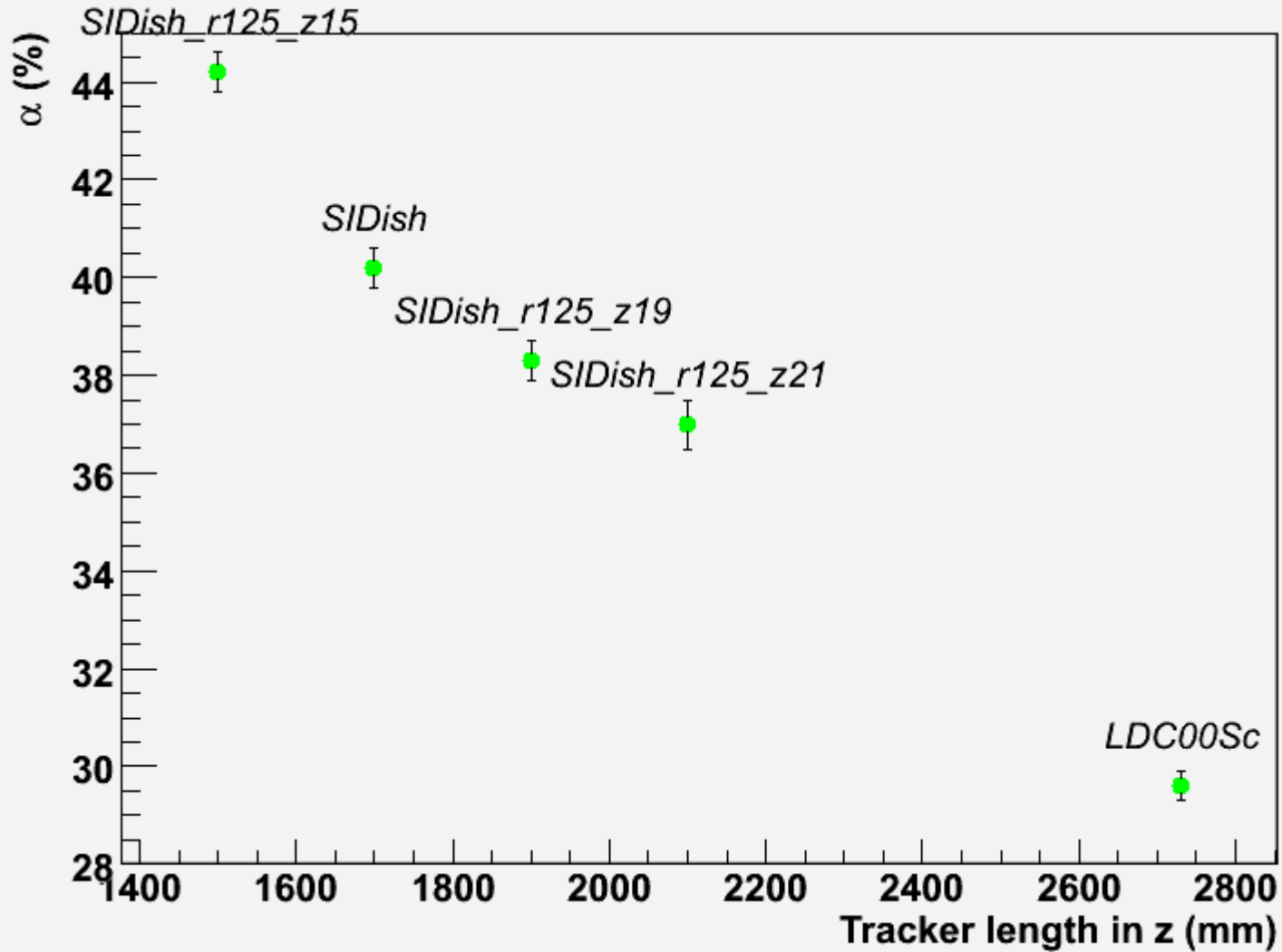
α

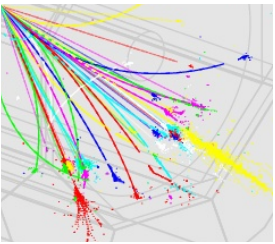


z dependence 100 GeV



z dependence for a 100 GeV u-jet ($\cos\theta = 0.92$)





Things we haven't answered

- How much physics do we gain ?
 - Haven't done all the benchmarking exercises
- RPC vs. Scintillator
 - A completely separate study
- HCAL Segmentation
 - 1x1 or 3x3 or
 - we need to do this at some point, but maybe not for the LoI



Practical points

- Whatever SiD, we likely to get going
 - a lot of MC to do
- If we decide to stay with SiD01
 - throwing away 6 month of studies
 - we putting a detector in the LoI, which we know could be better
 - Probably looks bad ...
- If we go with SiD02
 - Lot of work for engineering
 - Things could go wrong, but better find them now
 - SLIC by design should be stable against these changes
- To quote Norman: Get it written !

