

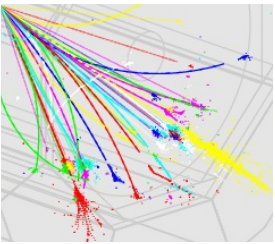
Fixing Parameters

SiD Advisory Meeting

23.06.2008

M. Stanitzki

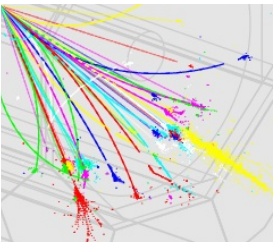




The Parameters

- B Field
- ECAL inner Radius
- ECAL inner z
- HCAL depth in λ_{iron}
- HCAL segmentation



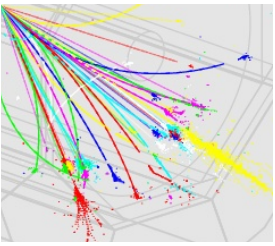


B field and radius

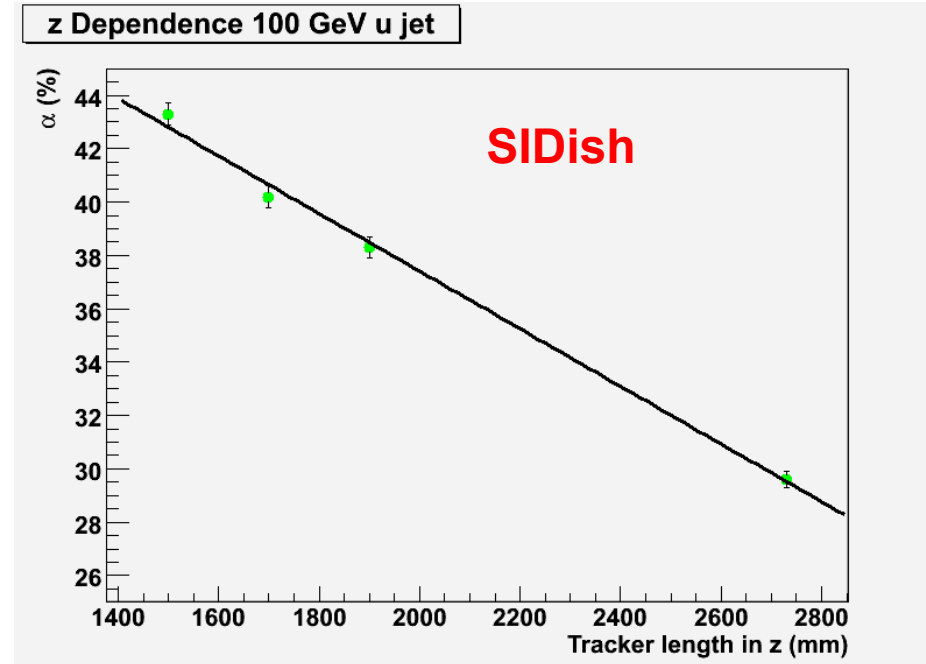
- B fields fixed by Tracking / Beam background requirements
- **5 T** chosen
- ECAL inner Radius kind of fixed by 5 T field
- Stay with min. **1.25** meters



Length in z

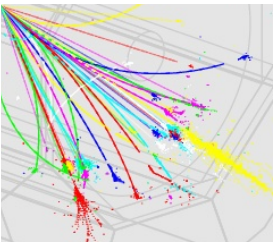


- Currently 1.7 meters
- Going to **2.1** meters suggested
- Same Jet energy resolution in barrel and forward
- Impact of Pixel size in forward will be studied



Single u quark Jet at $\cos(\theta)=0.92$

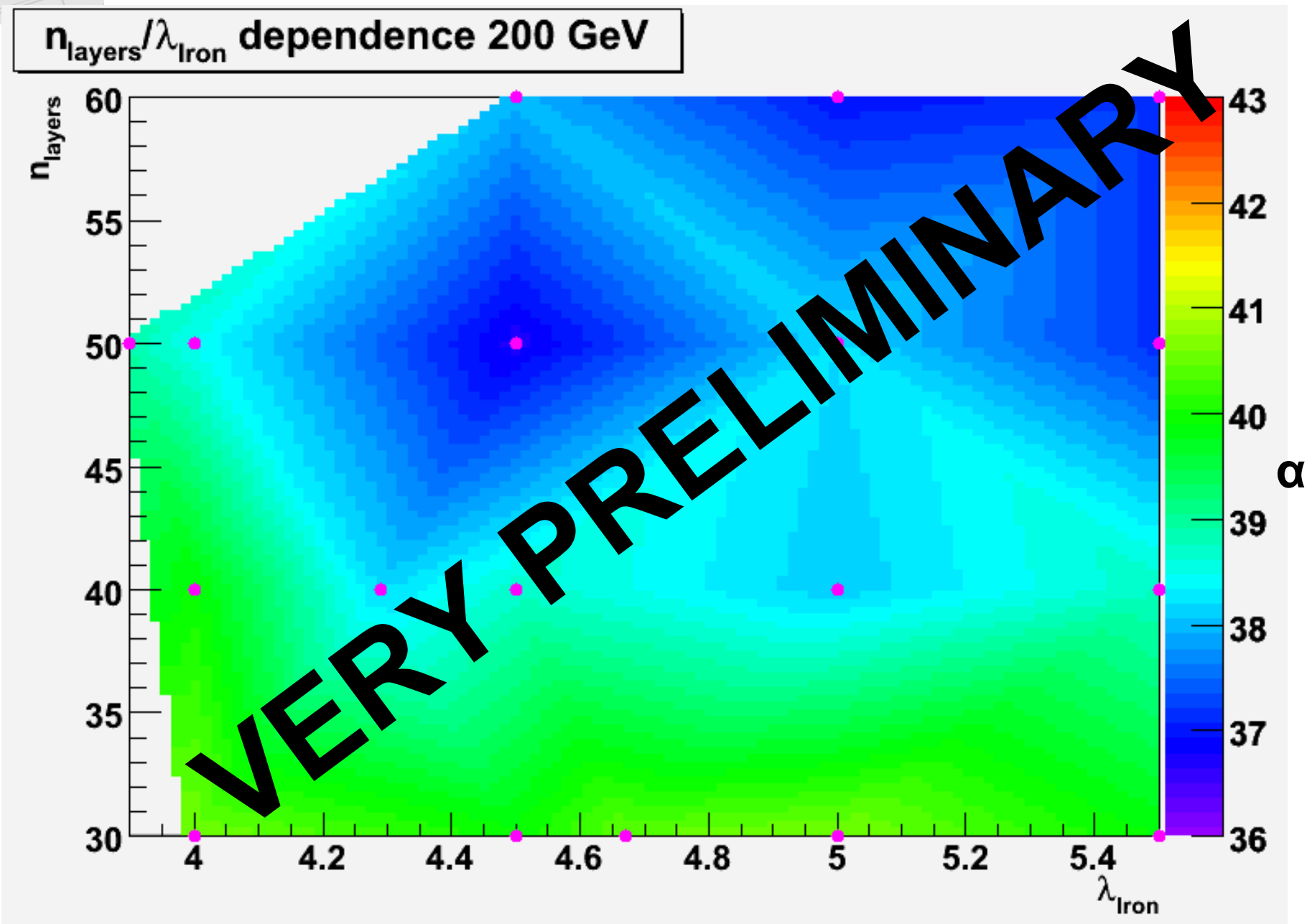
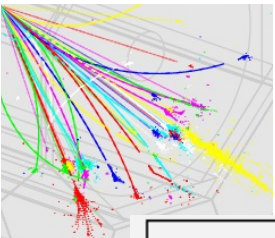
HCAL depth and n_{Layers}

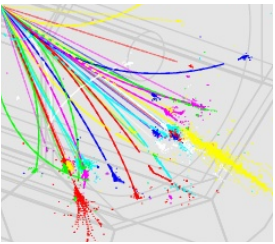


- **The current understanding ...**
- HCAL depth $\lambda_{\text{iron}} \geq 4.5$
- Optimize n_{Layers} as well
- Current wisdom: ~ 10 Layers per λ_{iron}
- $n_{\text{Layers}} = 45$
- Ongoing effort and study



200 GeV





Open issues & ToDO

- HCAL and ECAL pixel size
 - Barrel and Forward
- PFA Performance at 1 TeV
 - When does PFA break down ?
- Thanks to Marcel Demarteau
 - Providing CPU at FNAL
 - Only need to set up everything there
- Plenty of other items

