

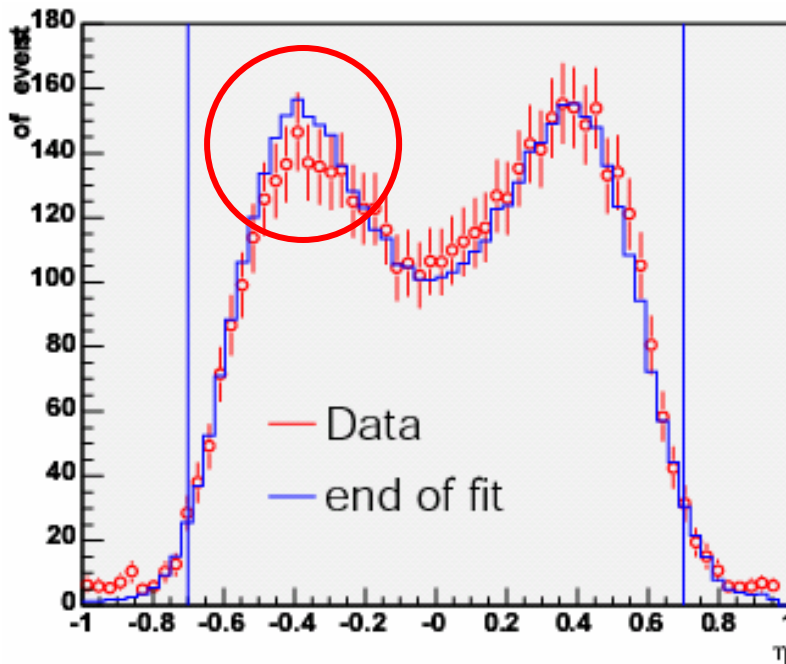
# Short status report on the multi-parameter fitting

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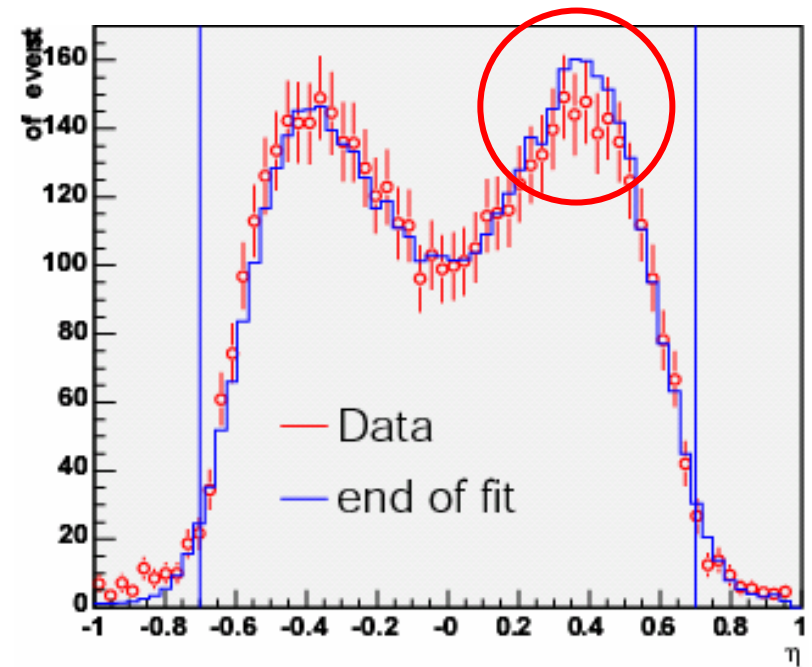
- Histograms & Pull
- Summary

- Motivation
  - Check to see if the fitting is good or not.
- Compare histogram “Data” with “end of fit” from laser left, right-handed.
- Pull = (DATA-FIT) /  $\delta$  (DATA) @ each eta bin.
- Some conditions
  - Eta range for the fitting.
    - Between +/-0.7.
  - Energy range for the histogram.
    - 5.2GeV < E < 11.4GeV ← same as online analysis.
  - Eta-y parameters
    - Table scan.

# Fit results



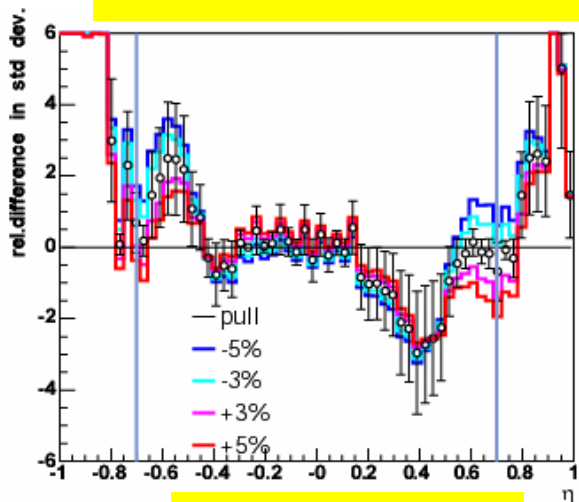
**Left-handed**



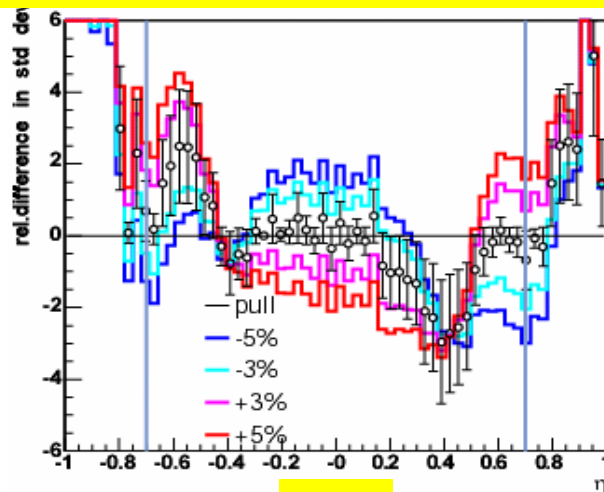
**Right-handed**

The fitting can not reproduce asymmetry of the data.  
→ which parameter is most sensitive to this region?

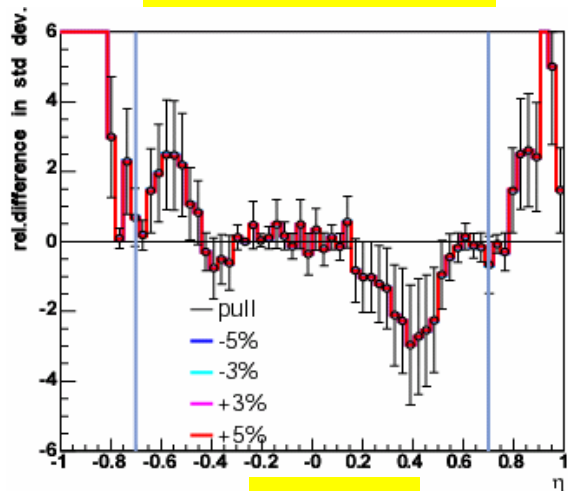
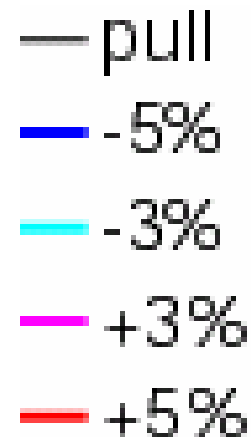
# Right-handed



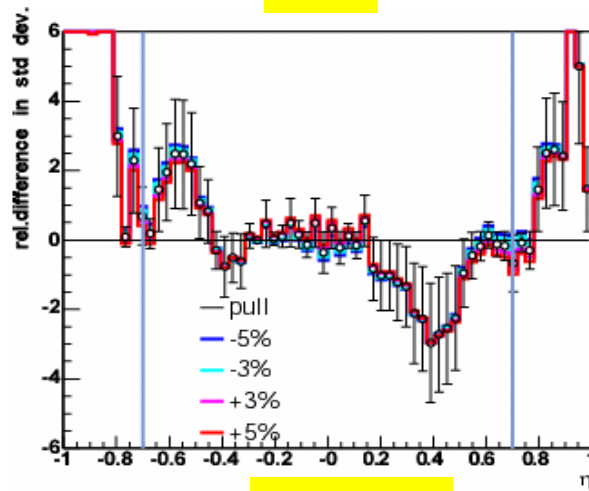
**Beam size**



**Fe**



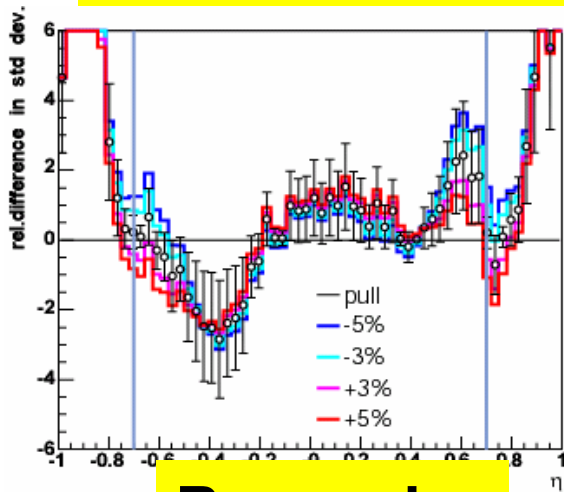
**Feta**



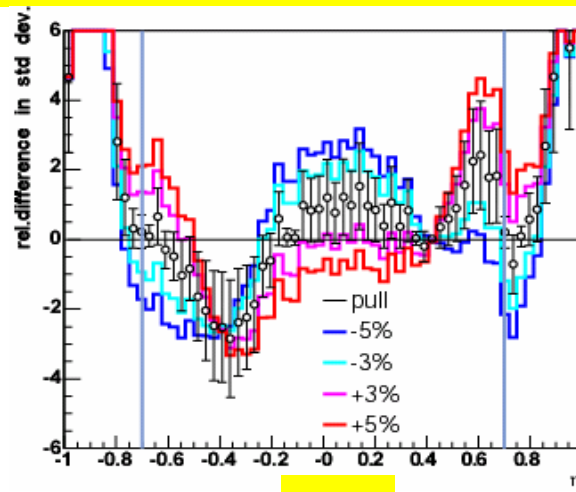
**Skew**

**Beam size and Fe are sensitive to eta, but do not reproduce the asymmetry.**

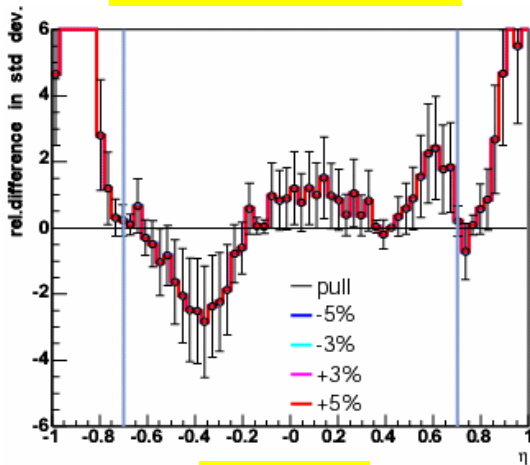
# Left-handed



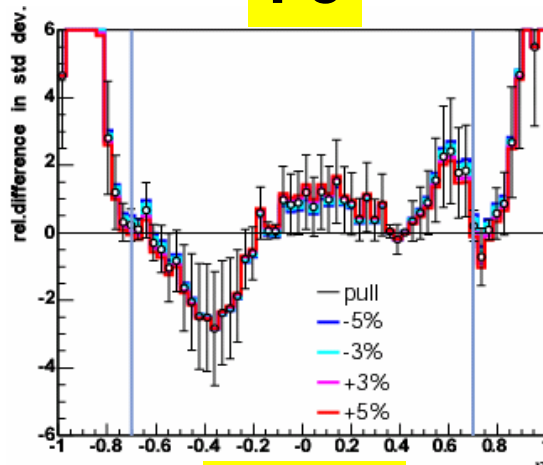
**Beam size**



**Fe**



**Feta**



**Skew**

— pull  
— -5%  
— -3%  
— +3%  
— +5%

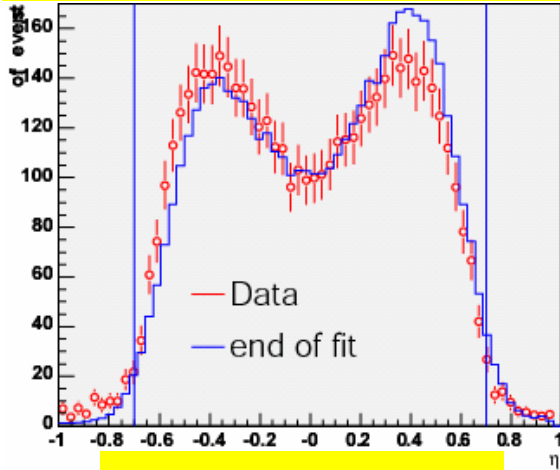
**Right and Left have similar trend.  
→ does not reproduce the asymmetry.**

# Summary

- From the view point of PULL, the fitting does not work well.
  - does not reproduce the asymmetry eta distribution. (left-handed, right-handed)
- Checked some parameters to look for this strange trend.
  - At present, can not find an effective parameter to the asymmetry.
- Will check the eta-y transformation.
  - Symmetric function  $\rightarrow$  is it possible to change asymmetric function?

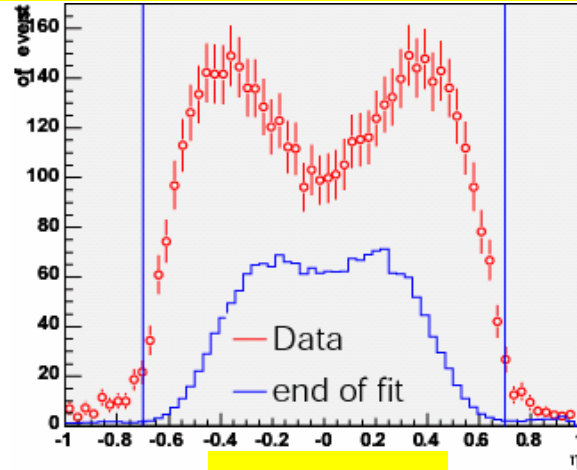
# Extra

# Laser right-handed



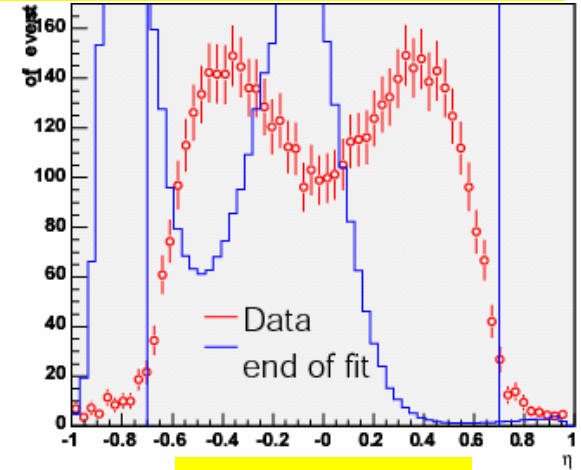
**Yoff=0.1mm**

**-0.004mm**



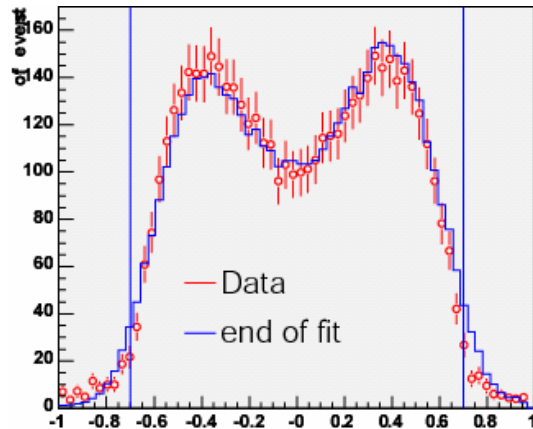
**Fe=2.0**

**1.0**



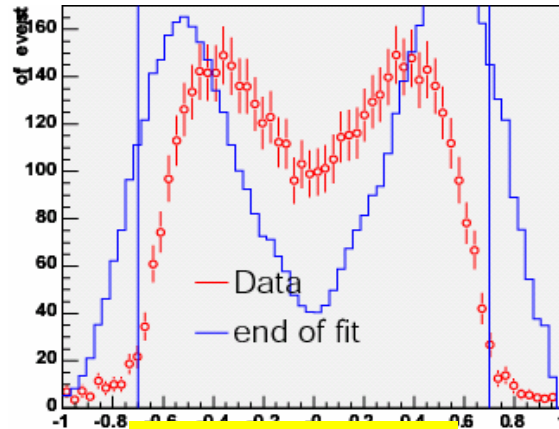
**Feta=0.5**

**0.003**



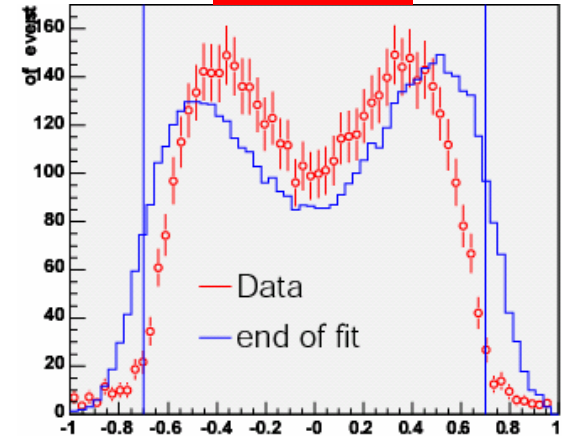
**Resolution = 30%**

**25.4%**



**Skew=0.5**

**0.08**

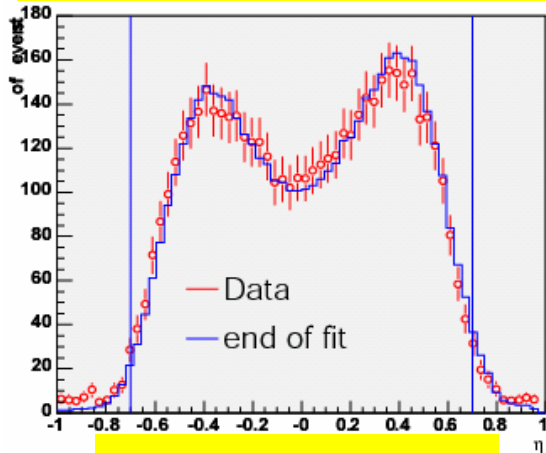


**Beam size=1.5mm**

**0.8mm**

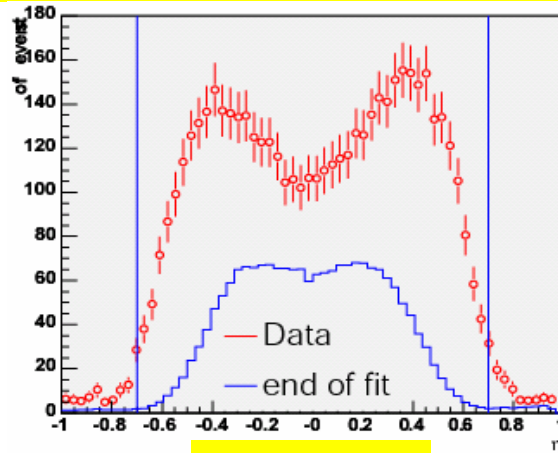


# Laser left-handed



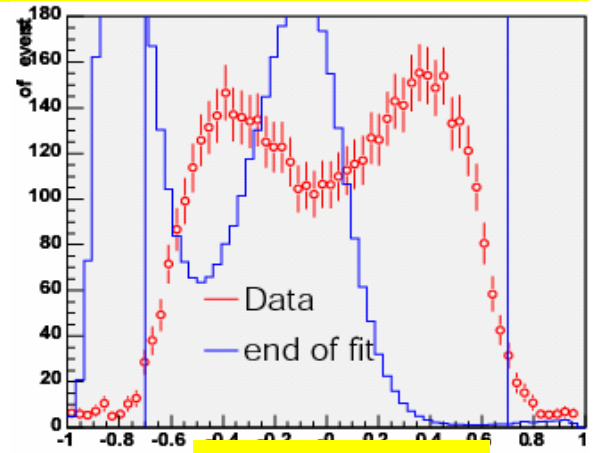
**Yoff=0.1mm**

**-0.004mm**



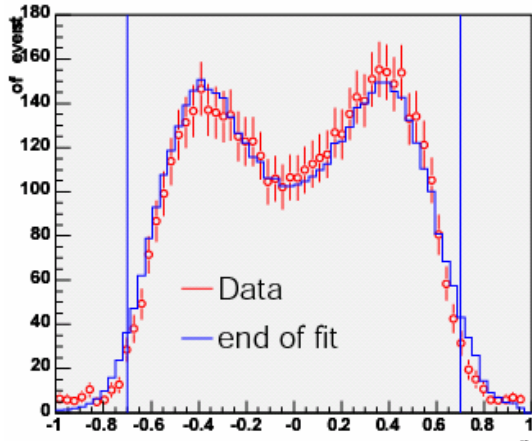
**Fe=2.0**

**1.0**



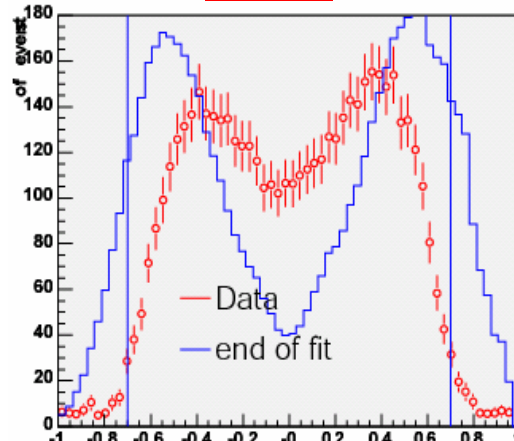
**Feta=0.5**

**0.003**



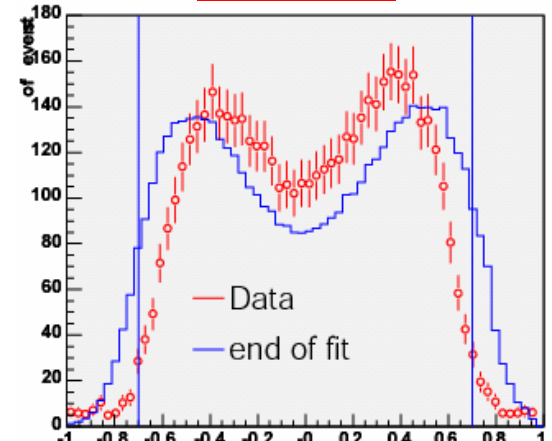
**Resolution =30%**

**25.4%**



**Skew=0.5**

**0.08**



**Beam size=1.5mm**

**0.8mm**