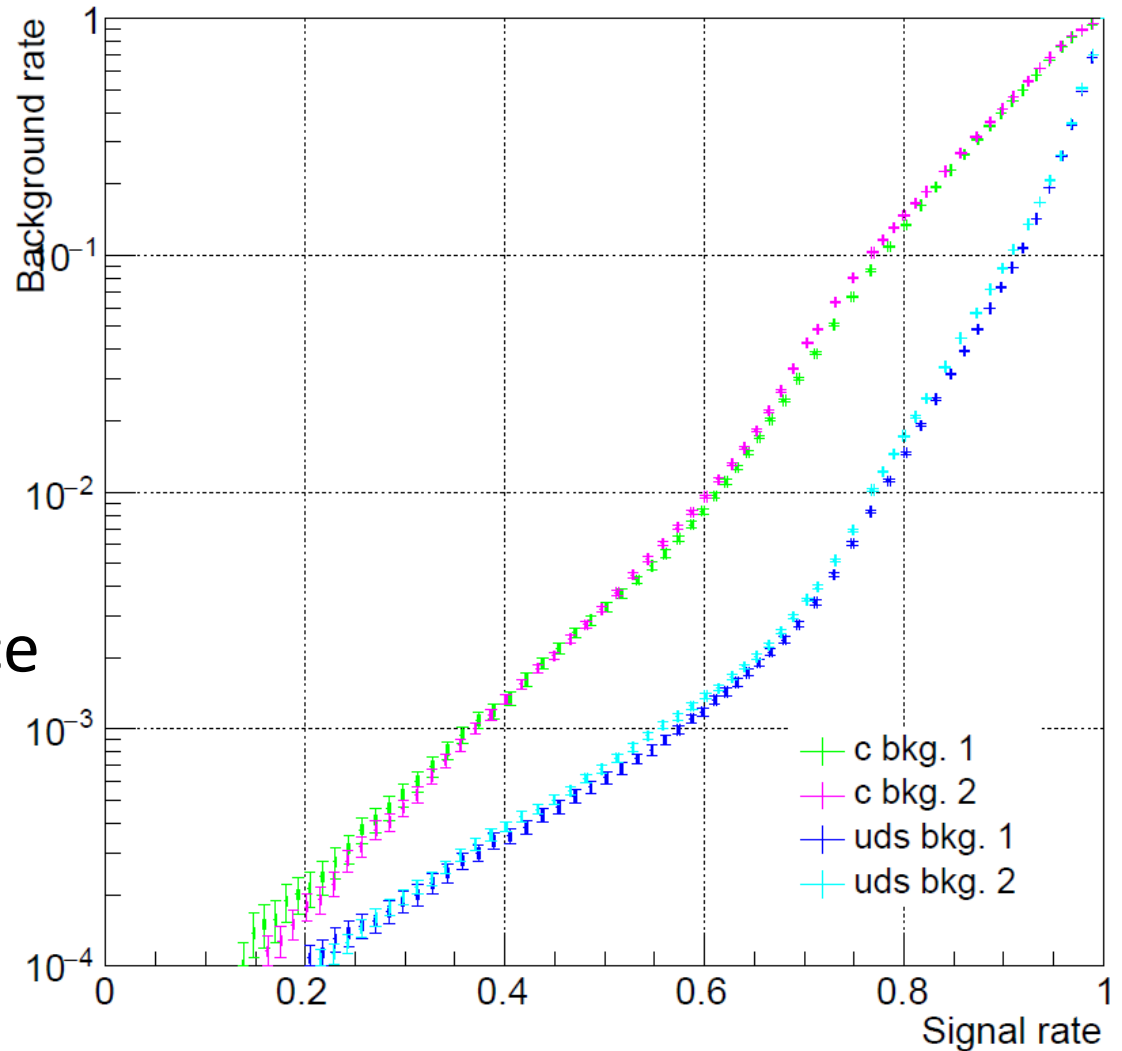# LCFIPlus check5

Masakazu Kurata

# Last week

- Change BDT parameters
  - 1: 50k
  - 2: 100k

- Vanished!

- Similar performance
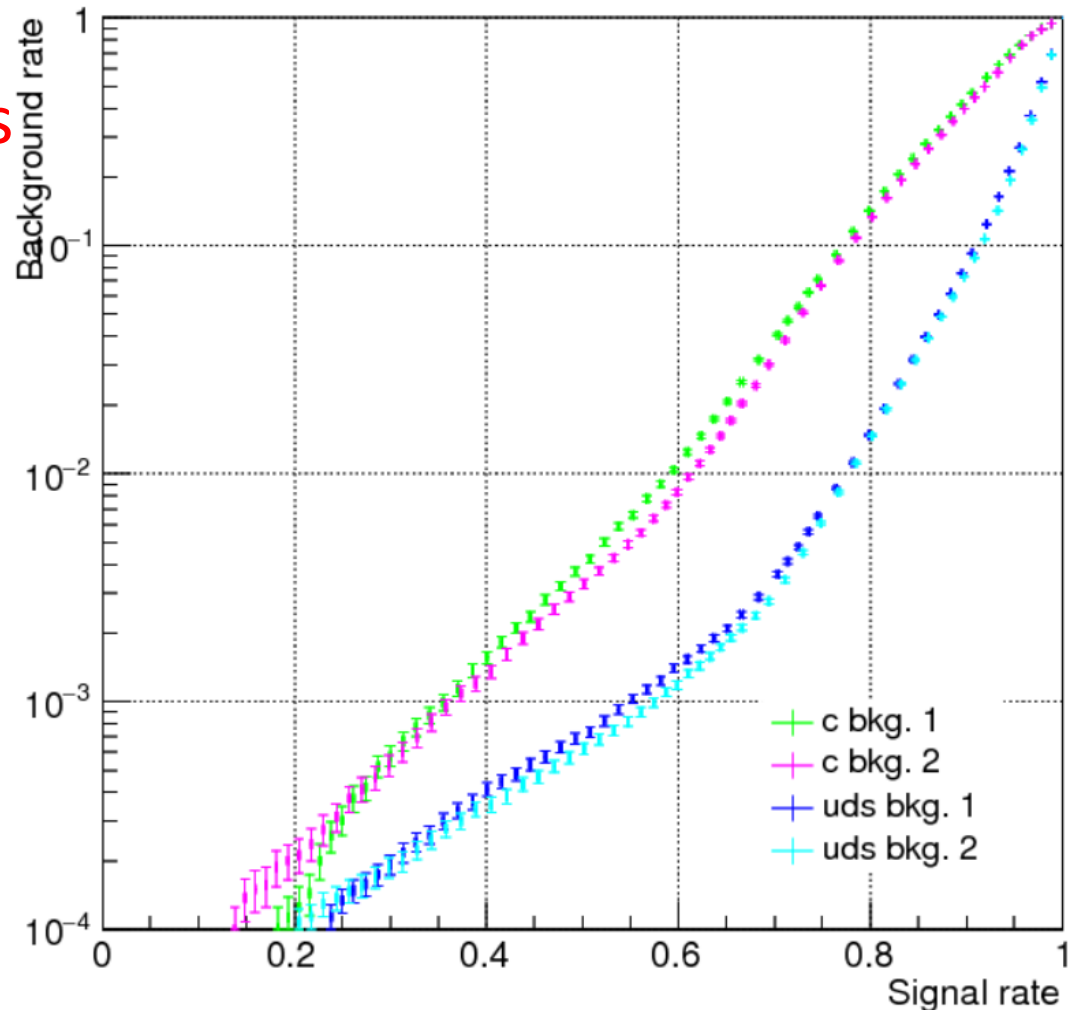  to DBD

# With background

- Comparison between different amount of data
  - 1: w beam background, 50k
  - 2: w/o, 50k

- Performance degrades

- MaxDepth=6
  - Try MaxDepth=8
  - No significant change
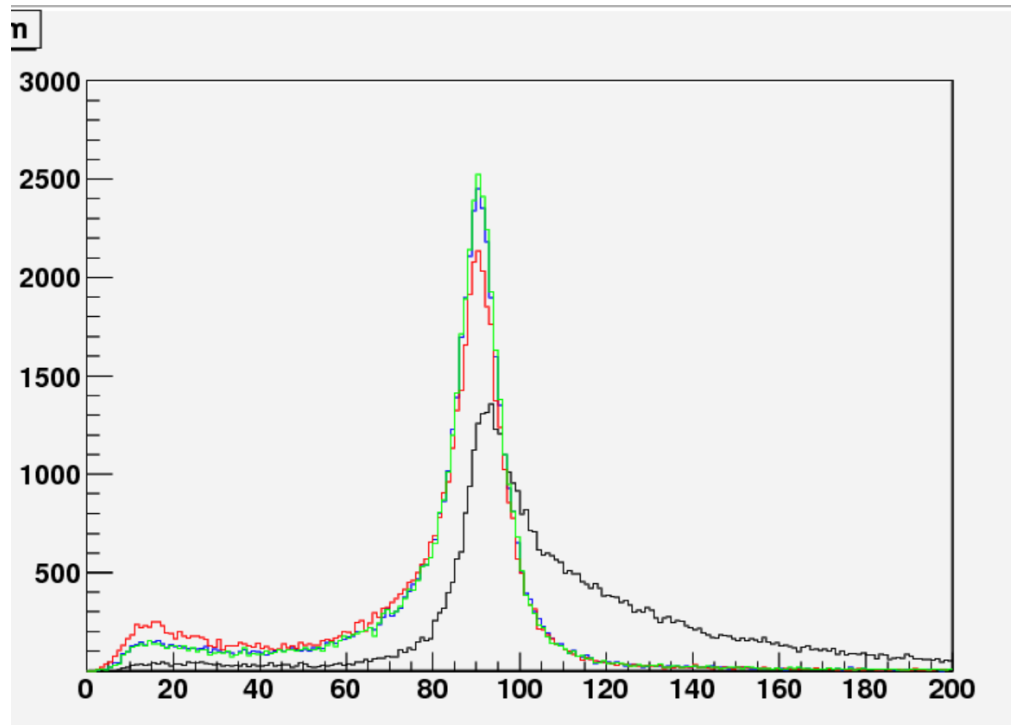  - Need to change other parameters?

# Try to recover performance

- $y_{ij} = \dfrac{\min(E_i^2, E_j^2)(1-\cos\theta)}{E_{vis}^2}, \; y_{beam} = \dfrac{2E_i^2\alpha^2(1-\cos\theta)}{E_{vis}^2}$

  α: beam rejection parameter

  smaller→ beam rejection becomes stronger
  - Particle i with $y_{ij} > y_{beam}$ is discarded



vvZ@500GeV
- 2 jet clustering
- Parameters are tuned for better result

w/o beam b.g. rejection
Kt
Durham
Valencia

# Try to recover performance

- Durham beam background rejection on
  - Parameter check

- Performance degrades mor
  - Still under investigation

- So,
  - Not yet finished
  - Cannot investigate cause(s)
  - This week busy for Nobel symposium…