

# LCFIPlus check4

Masakazu Kurata

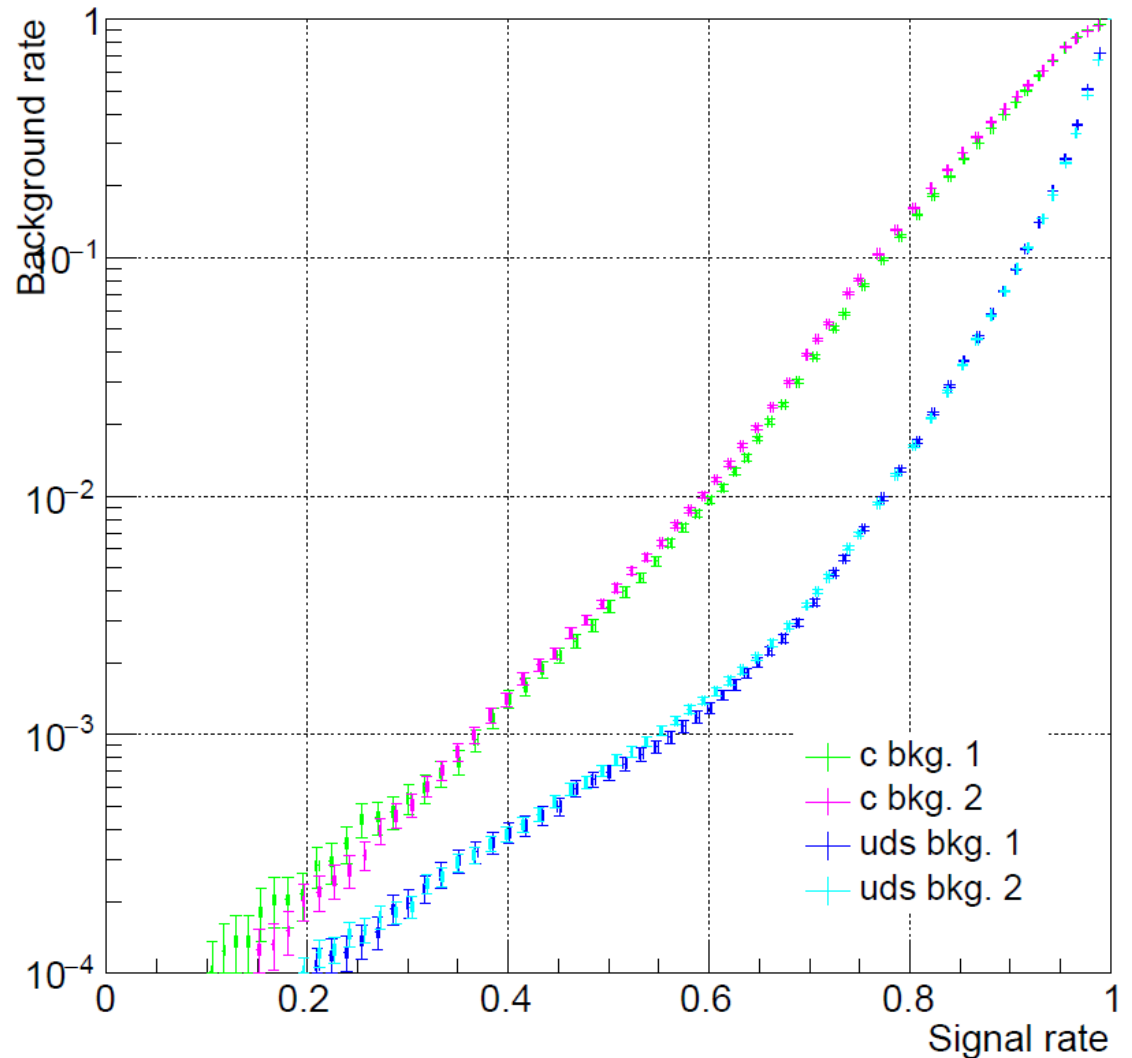
# Result last week

- Comparison between different amount of data

- 1: 25k
- 2: 50k

• Become stable!

• Looks OK?





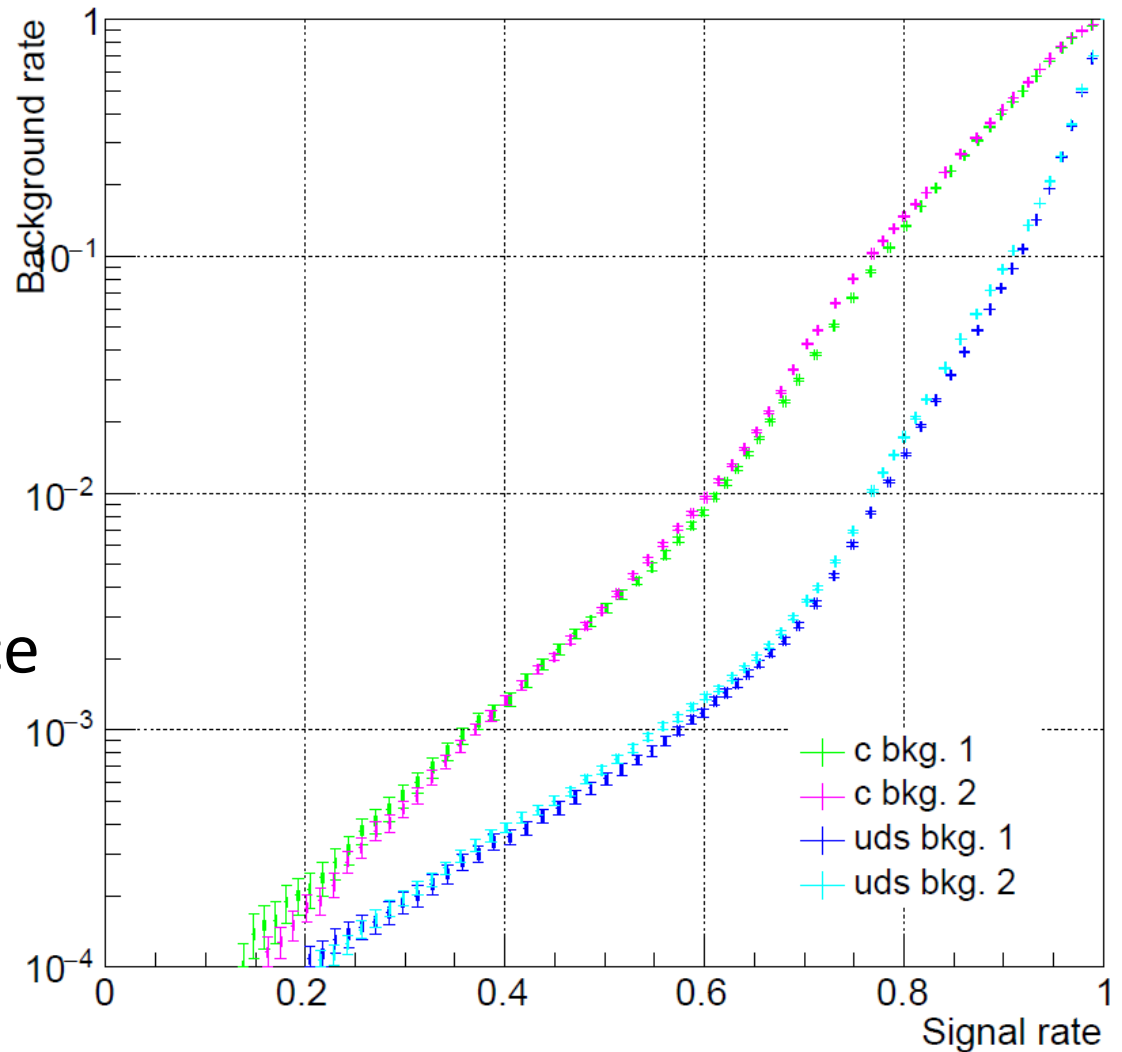
# But

- Change BDT parameters

- 1: 50k
- 2: 100k

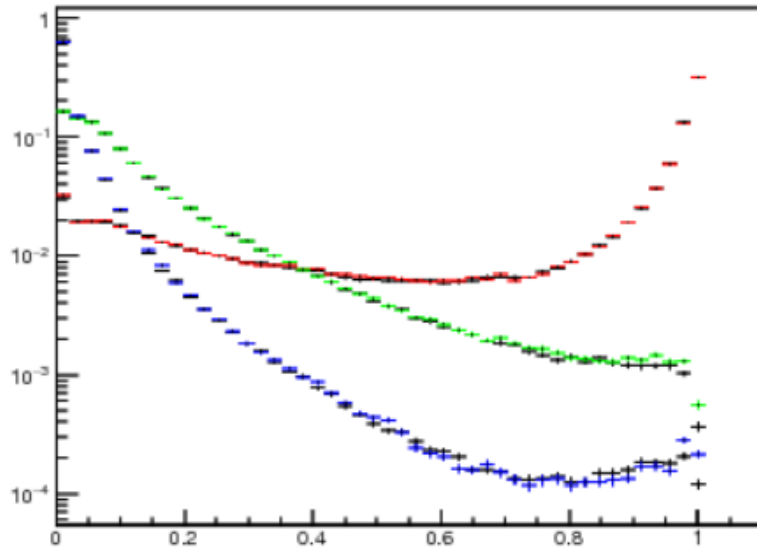
- Vanished!

- Similar performance to DBD

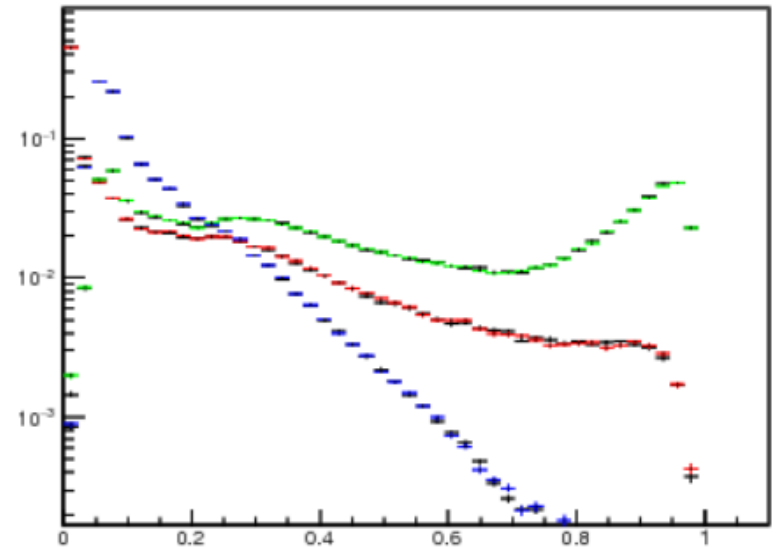


# Over training check

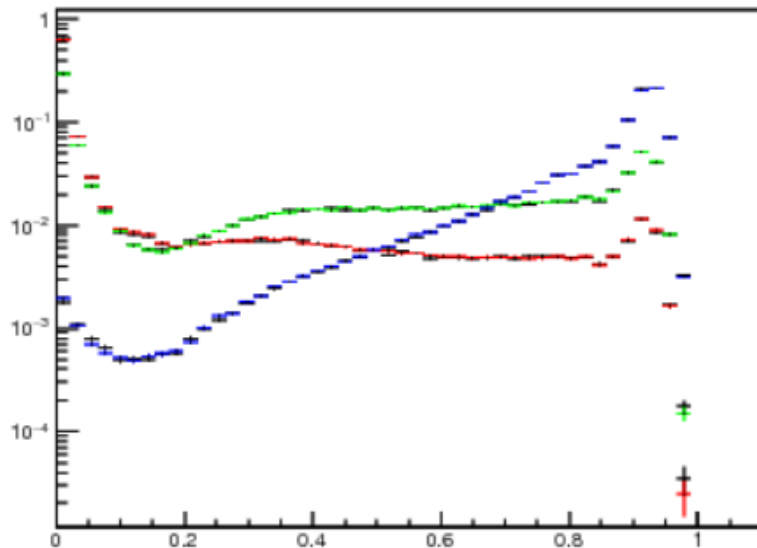
**b likelihood**



**c likelihood**



**o likelihood**



Black dots: 50k training output

Color dots: 50k test output

red: b jets

green: c jets

blue: light flavor

Log scale

**No over training**

**100k will be same**

So,

- We can erase statistical fluctuation
- We can recover performance to DBD level
  
- Some people will not satisfied with that
  - Why need to change BDT hyper parameters
    - Should be same result with same parameters in DBD/new sample
  - Need to investigate the cause...