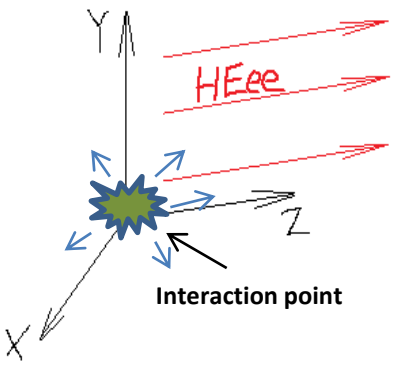
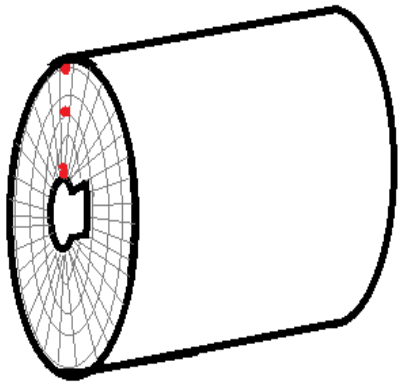
In process of work it has seen that simulation shower from HEe (*high energy electron*) for RS (*radial segmentation*) goes longer than for US*(uniform segmentation*). It was found a defect in program and fixed. For significant results there are no changes after simulation, but program works faster now and size of output files is smaller.

Now I am working on SNR. I look at the ration of signal from HEe shower and rms of background in every pad. First let`s look at 10th layer of calorimeter(maximum energy deposition for shower).

It was needed to get the shower's core in every ring(radius). I sent HEe parallel to the magnetic field and change only Y-coordinate:





With different parameters HEelectrons were generated:

- for 6 different energies: {500, 200, 100, 50, 20,10} GeV
- for every ring(in total 20 rings)

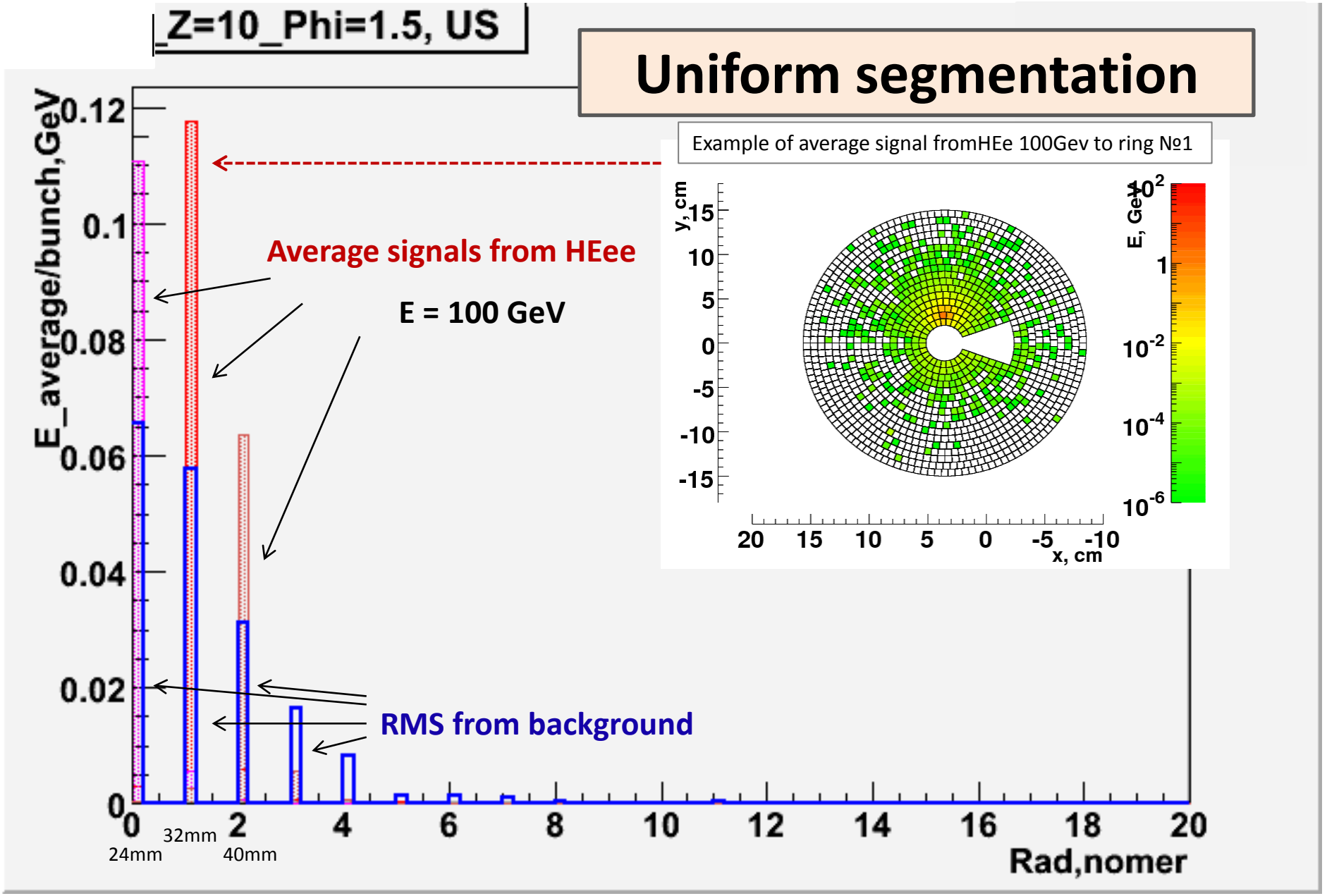
They were simulated 10 times each for statistics.

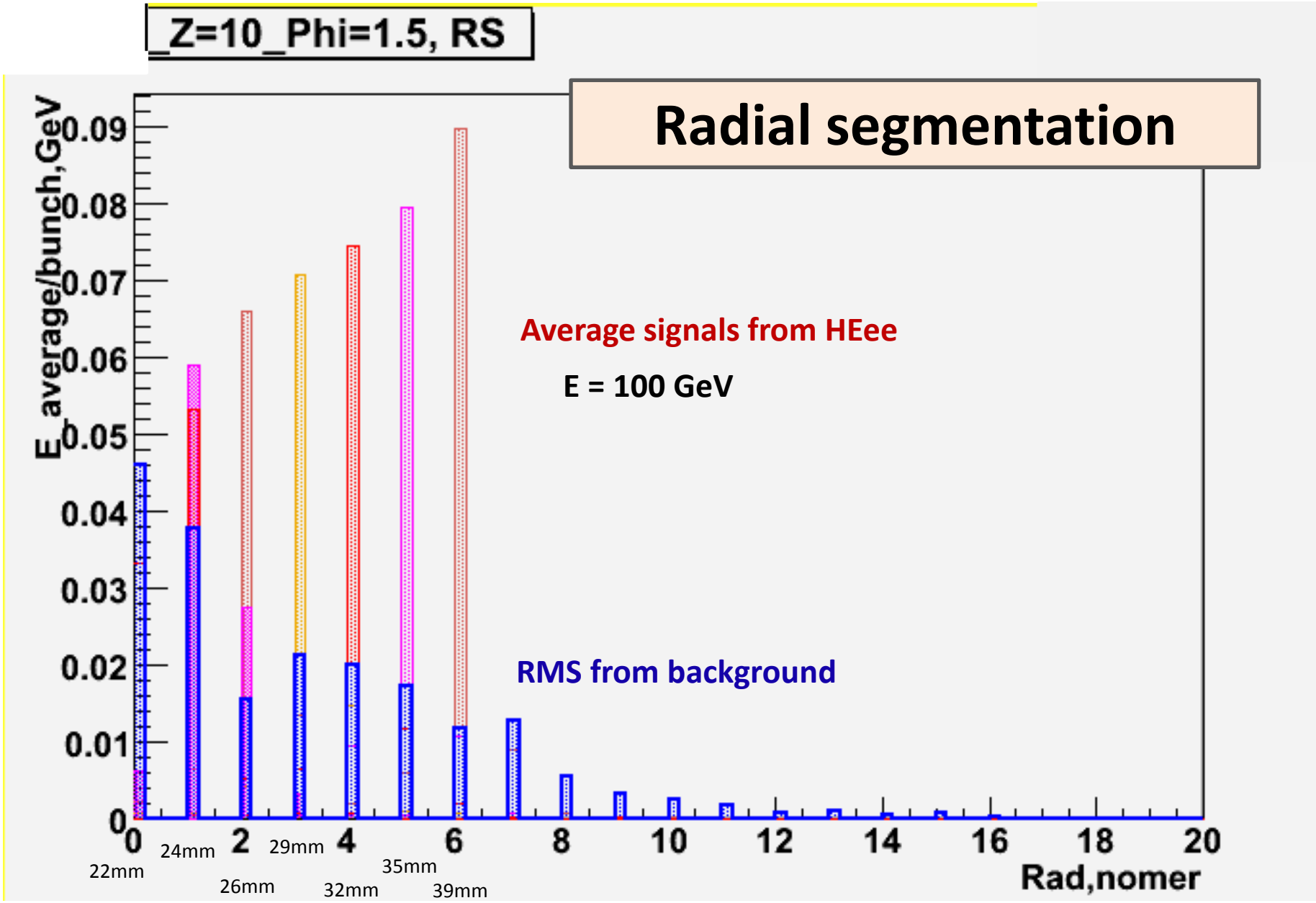
Thus 1200 showers for each segmentation were simulated.

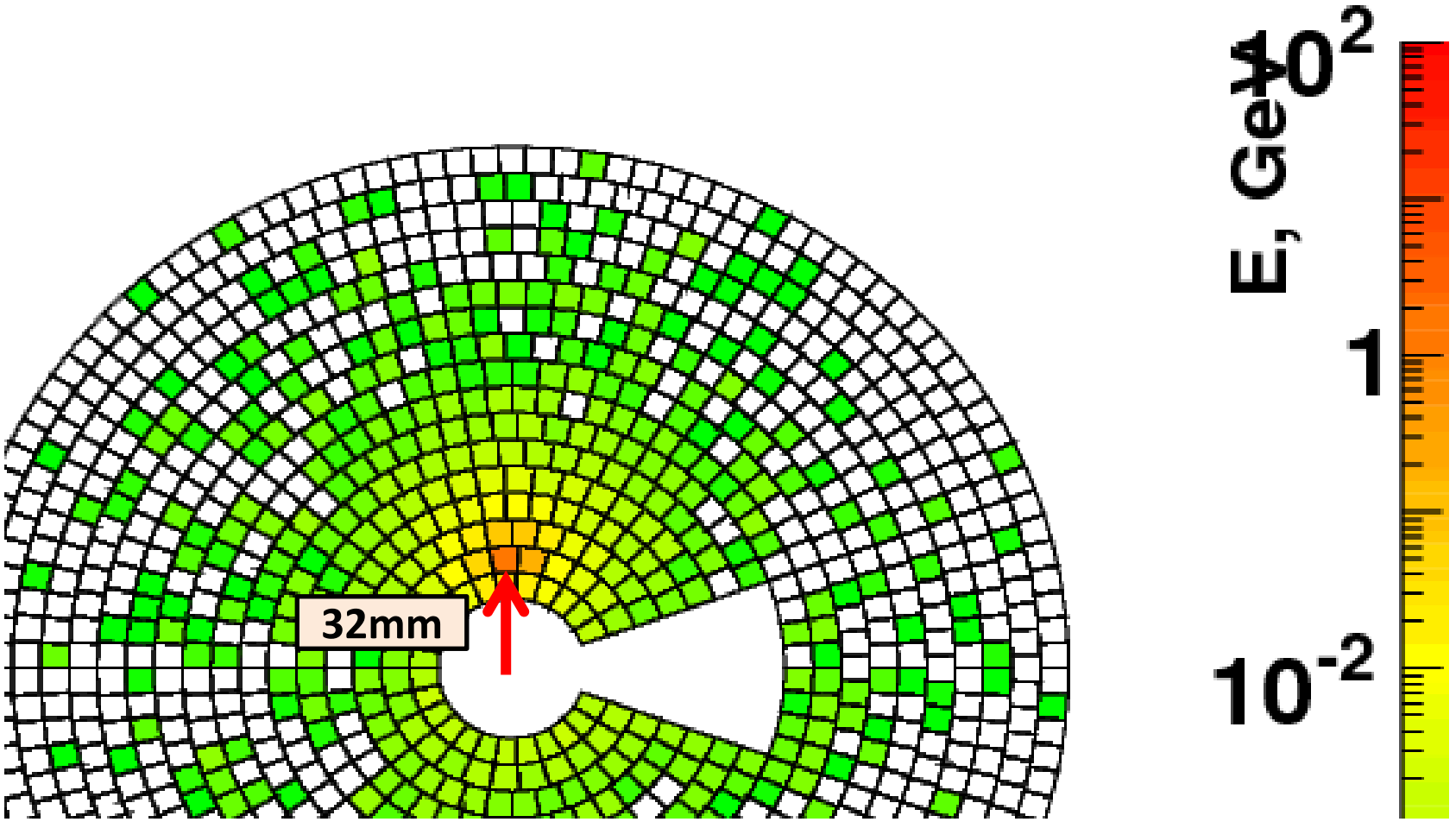
Now I am working on program which calculates ratio between signal and background.

Examples for first rings are shown in the following slides:

Uniform segmentation




_Z=10_Phi=1.5, RS
Radial segmentation
E_average/bunch,GeV
0.09
0.08
0.07
0.06
0.05
0.04
0.03
0.02
0.01
0
Average signals from HEee
E = 100 GeV
RMS from background
0
2
4
6
8
10
12
14
16
18
20
Rad,nomer
22mm
24mm
26mm
29mm
32mm
35mm
39mm


32mm
E, GeV
10^2
1
10^-2